



SK Inc. and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2022 and 2021
with the independent auditor's report

Table of contents

Independent auditor's report	
Consolidated financial statements	Page
Consolidated statements of financial position	1
Consolidated statements of comprehensive income	2
Consolidated statements of changes in equity	3
Consolidated statements of cash flows	5
Notes to the consolidated financial statements	6

Independent auditors' report

Independent auditor's report (English Translation of a Report Originally Issued in Korean)

The Shareholders and Board of Directors SK Inc.

Opinion

We have audited the accompanying consolidated financial statements of SK Inc. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2022 and 2021, 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 accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2022 and 2021, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS").

Basis for opinion

We conducted our audits in accordance with the Korean Standards on Auditing ("KSA"). 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 audit opinion thereon, and we do not provide a separate opinion on these matters.

(1) Impairment testing of goodwill and intangible assets with indefinite useful lives

As described in Notes 14 and 15 to the consolidated financial statements, the Group recognizes goodwill of ₩7,475,558 million and intangible assets with indefinite useful life (including brand-related assets of ₩2,681,683 million) as of December 31, 2022, all of which has incurred through a number of business combinations happened in the past.

Among the total goodwill and intangible assets recognized by the Group, SK brand-related assets of ₩1,975,000 million arising from the merger with the Company in 2015 and goodwill of ₩1,155,037 million arising from the acquisition of the physical security service business in 2018 have significant volume of amounts. In accordance with KIFRS 1036 *Impairment of Assets*, impairment test is required for goodwill acquired in a business combination and intangible assets with indefinite useful lives annually. Since we consider assumptions and judgment which the Group's management used in estimating value-in-use related to impairment testing of goodwill and intangible assets with indefinite useful lives as significant, we determined impairment testing of goodwill related to the acquisition of physical security service business and SK brand-related assets to be a key audit matter.

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

- We obtained an understanding of assets subject to impairment testing and reviewed the Group's accounting policies related to impairment testing.
- We assessed the qualification, experience and expertise of external valuation specialists and checked their objectivity and independence.
- We evaluated the impairment review report of the Group by involving internal valuation specialists.
- We compared the financial forecasts used in estimating value-in-use and those approved by management.
- We compared the major assumptions used in the evaluation with the past financial performance, industry indicators and market data.
- We evaluated the impact of changes in key assumptions on management's assessment through sensitivity analysis of discount rates and perpetual growth rates that are used in estimating value-in-use.

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

Management is responsible for the preparation and fair presentation of the 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 KSA 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 KSA, 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 Bok-Han Lee.



March 14, 2023

This audit report is effective as of March 14, 2023, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the 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.

SK Inc. and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2022 and 2021

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

Tae-Won Chey, Dong-Hyun Jang
Chief Executive Officers
SK Inc.

SK Inc. and its subsidiaries
Consolidated statements of financial position
as of December 31, 2022 and 2021

(Korean won in millions and U.S. dollar in thousands)

	Notes	Korean won		Translation into U.S. dollar (Note 2)	
		2022	2021	2022	2021
Assets					
Current assets:					
Cash and cash equivalents	6,35,37,38	₩ 21,393,853	₩ 12,317,555	\$ 16,881,443	\$ 9,719,526
Short-term financial instruments	6,35,37	3,727,273	6,124,750	2,941,113	4,832,912
Trade receivables, net	6,7,35,38	14,334,532	11,387,442	11,311,080	8,985,593
Other receivables, net	6,38	3,559,791	2,419,559	2,808,957	1,909,224
Inventories, net	8,38	15,552,284	10,680,704	12,271,983	8,427,921
Short-term investment securities	6,9,35,38	240,621	353,355	189,869	278,825
Other current assets	6,20,21,32,35,37,38	5,589,702	4,879,645	4,410,717	3,850,426
Assets held for sale	31	595,523	1,030,196	469,915	812,906
Total current assets		64,993,579	49,193,206	51,285,077	38,817,333
Non-current assets:					
Long-term financial instruments	6,35,37	112,484	48,092	88,759	37,948
Long-term trade receivables, net	6,7,38	517,701	391,739	408,507	309,113
Long-term other receivables, net	6,38	380,964	318,884	300,611	251,625
Long-term investment securities	6,9,35,38	7,950,497	9,546,185	6,273,571	7,532,695
Investments in associates and joint ventures	10,35	27,457,005	26,050,445	21,665,750	20,555,863
Properties, plant and equipment, net	11,32,35	59,921,872	51,393,741	47,283,100	40,553,729
Right-of-use assets, net	12	5,437,414	5,034,316	4,290,550	3,972,474
Investment properties, net	13,35	1,866,106	967,128	1,472,505	763,141
Goodwill	14	7,475,558	5,618,511	5,898,807	4,433,450
Intangible assets, net	15	12,709,019	12,681,890	10,028,422	10,007,015
Defined benefit asset	19	660,282	56,150	521,015	44,307
Deferred tax assets	27	1,166,846	765,000	920,734	603,646
Other non-current assets	6,19,20,21,32,37,38	3,856,533	3,303,076	3,043,110	2,606,388
Total non-current assets		129,512,281	116,175,157	102,195,441	91,671,394
Total assets		₩ 194,505,860	₩ 165,368,363	\$ 153,480,518	\$ 130,488,727
Liabilities and equity					
Liabilities					
Current liabilities:					
Short-term borrowings	6,7,16,33,35,38	₩ 17,457,297	₩ 7,657,381	\$ 13,775,189	\$ 6,042,280
Trade payables	6,38	14,024,892	9,519,544	11,066,750	7,511,674
Other payables	6,17,38	7,204,577	7,049,872	5,684,981	5,562,907
Provisions	18	640,198	530,049	505,167	418,251
Current portion of long-term debt	6,16,33,34,35,38	11,373,120	7,828,071	8,974,292	6,176,968
Other current liabilities	6,20,21,32,38	12,285,360	11,991,798	9,694,121	9,462,478
Liabilities held for sale	31	67,760	398,144	53,468	314,167
Total current liabilities		63,053,204	44,974,859	49,753,968	35,488,725
Non-current liabilities:					
Bonds payable and long-term borrowings	6,16,33,34,35,38	45,641,745	42,620,141	36,014,949	33,630,664
Long-term other payables	6,17,33,34,38	1,513,207	1,854,343	1,194,040	1,463,223
Defined benefit liabilities	19	170,368	283,938	134,434	224,050
Provisions	18	866,826	706,452	683,994	557,447
Deferred tax liabilities	27	4,435,594	3,807,437	3,500,035	3,004,369
Other non-current liabilities	6,20,21,32,38	7,016,126	5,568,542	5,536,280	4,394,019
Total non-current liabilities		59,643,866	54,840,853	47,063,732	43,273,772
Total liabilities		122,697,070	99,815,712	96,817,700	78,762,497
Equity					
Equity attributable to owners of the parent:					
Issued capital	1,22	16,143	16,143	12,738	12,738
Other paid-in capital	22	6,401,912	6,445,296	5,051,615	5,085,849
Retained earnings	22	14,918,613	14,061,050	11,771,966	11,095,281
Other components of equity	22	258,878	721,262	204,275	569,133
Total equity attributable to owners of the parent		21,595,546	21,243,751	17,040,594	16,763,001
Non-controlling interests		50,213,244	44,308,900	39,622,224	34,963,229
Total equity		71,808,790	65,552,651	56,662,818	51,726,230
Total liabilities and equity		₩ 194,505,860	₩ 165,368,363	\$ 153,480,518	\$ 130,488,727

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

SK Inc. and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2022 and 2021

(Korean won in millions and U.S. dollar in thousands, except for earnings per share)

	Notes	Korean won		Translation into U.S. dollar (Note 2)	
		2022	2021	2022	2021
Sales	4	₩ 134,551,641	₩ 97,203,653	\$ 106,171,894	\$ 76,701,375
Cost of sales	26	119,452,622	86,422,753	94,257,573	68,194,392
Gross profit		15,099,019	10,780,900	11,914,321	8,506,983
Selling and administrative expenses	23,26	7,094,309	5,921,140	5,597,971	4,672,248
Operating profit	4	8,004,710	4,859,760	6,316,350	3,834,735
Finance income	6,24	9,171,749	3,558,379	7,237,236	2,807,843
Finance costs	6,24	12,084,218	4,994,899	9,535,404	3,941,371
Gain on investments in associates and joint ventures, net	10	84,241	1,923,072	66,473	1,517,456
Other non-operating income	6,25	2,136,555	2,545,912	1,685,910	2,008,926
Other non-operating expenses	6,25	1,404,340	1,909,896	1,108,135	1,507,059
Profit from continuing operations before income tax expense	4	5,908,697	5,982,328	4,662,430	4,720,530
Income tax expense from continuing operations	27	2,373,950	641,580	1,873,235	506,257
Profit for the year from continuing operations	4	3,534,747	5,340,748	2,789,195	4,214,273
Gain from discontinued operations	30	431,429	365,178	340,432	288,154
Profit for the year		₩ 3,966,176	₩ 5,705,926	\$ 3,129,627	\$ 4,502,427
Attributable to:					
Owners of the parent		1,098,683	1,965,612	866,948	1,551,023
Non-controlling interests		2,867,493	3,740,314	2,262,679	2,951,404
Other comprehensive income (loss):					
Items that will not be reclassified to profit or loss in subsequent periods (net of tax):					
Remeasurement gain on defined benefit plans		258,742	15,153	204,167	11,957
Net gain (loss) on valuation of financial assets at FVOCI		(2,076,572)	968,949	(1,638,580)	764,577
Items that may be reclassified to profit or loss in subsequent periods (net of tax):					
Equity adjustments of investments in associates and joint ventures		238,715	449,875	188,365	354,987
Gain on valuation of derivative financial instruments		148,993	152,878	117,567	120,633
Net gain on translation of foreign operations		840,265	1,397,842	663,035	1,103,008
		(589,857)	2,984,697	(465,446)	2,355,162
Total comprehensive income for the year		₩ 3,376,319	₩ 8,690,623	\$ 2,664,181	\$ 6,857,589
Attributable to:					
Owners of the parent		852,490	3,013,836	672,680	2,378,155
Non-controlling interests		2,523,829	5,676,787	1,991,501	4,479,434
Earnings per share (Korean won and U.S. dollar):	28				
Basic earnings per share		₩ 19,547	₩ 37,321	\$ 15	\$ 29
Diluted earnings per share		19,506	37,245	15	29
Basic earnings per share from continuing operations		16,317	34,297	13	27
Diluted earnings per share from continuing operations		16,283	34,227	13	27

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

SK Inc. and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2022 and 2021
(Korean won in millions)

	Issued capital	Other paid-in capital	Retained earnings	Other components of equity	Total equity attributable to owners of the parent	Non-controlling interests	Total equity
	₩ 15,385	₩ 5,250,146	₩ 12,496,676	₩ (327,163)	₩ 17,435,044	₩ 34,424,874	₩ 51,859,918
As of January 1, 2021							
Total comprehensive income:							
Profit for the year	-	-	1,965,612	-	1,965,612	3,740,314	5,705,926
Remeasurement loss on defined benefit plans	-	-	5,212	-	5,212	9,941	15,153
Net gain (loss) on valuation of financial assets at FVOCI	-	-	(5,413)	132,261	126,848	842,101	968,949
Equity adjustments of investments in associates and joint ventures	-	-	-	136,763	136,763	313,112	449,875
Net gain (loss) on valuation of derivative financial instruments	-	-	-	(11,510)	(11,510)	164,388	152,878
Net gain on translation of foreign operations	-	-	-	790,911	790,911	606,931	1,397,842
Transaction with shareholders recognized directly to equity:							
Dividends	-	-	(396,563)	-	(396,563)	(986,617)	(1,383,180)
Paid-in capital increase	758	1,003,336	-	-	1,004,094	-	1,004,094
Equity transactions within the Group	-	186,506	-	-	186,506	5,195,959	5,382,465
Changes in the scope of consolidation	-	-	-	-	-	6,363	6,363
Others	-	5,308	(4,474)	-	834	(8,466)	(7,632)
As of December 31, 2021	₩ 16,143	₩ 6,445,296	₩ 14,061,050	₩ 721,262	₩ 21,243,751	₩ 44,308,900	₩ 65,552,651
As of January 1, 2022							
Total comprehensive income:							
Profit for the year	-	-	1,098,683	-	1,098,683	2,867,493	3,966,176
Remeasurement gain on defined benefit plans	-	-	117,959	-	117,959	140,783	258,742
Net gain (loss) on valuation of financial assets at FVOCI	-	-	98,232	(1,233,039)	(1,134,807)	(941,765)	(2,076,572)
Equity adjustments of investments in associates and joint ventures	-	-	-	129,027	129,027	109,688	238,715
Net gain on valuation of derivative financial instruments	-	-	-	47,986	47,986	101,007	148,993
Net gain on translation of foreign operations	-	-	-	593,642	593,642	246,623	840,265
Transaction with shareholders recognized directly to equity:							
Dividends	-	-	(453,321)	-	(453,321)	(1,244,522)	(1,697,843)
Stock-based payment	-	31,799	-	-	31,799	132,442	164,241
Equity transactions within the Group	-	(69,684)	-	-	(69,684)	3,059,966	2,990,282
Changes in the scope of consolidation	-	-	-	-	-	1,433,037	1,433,037
Others	-	(5,499)	(3,990)	-	(9,489)	(408)	(9,897)
As of December 31, 2022	₩ 16,143	₩ 6,401,912	₩ 14,918,613	₩ 258,878	₩ 21,595,546	₩ 50,213,244	₩ 71,808,790

(Continued)

SK Inc. and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2022 and 2021 (cont'd)
(U.S. dollar in thousands)

	Issued capital	Other paid-in capital	Retained earnings	Other components of equity	Total equity attributable to owners of the parent	Non-controlling interests	Total equity
	\$	\$	\$	\$	\$	\$	\$
As of January 1, 2021	12,140	4,142,781	9,860,866	(258,157)	13,757,630	27,163,950	40,921,580
Total comprehensive income:							
Profit for the year	-	-	1,551,023	-	1,551,023	2,951,404	4,502,427
Remeasurement loss on defined benefit plans	-	-	4,113	-	4,113	7,844	11,957
Net gain (loss) on valuation of financial assets at FVOCI	-	-	(4,271)	104,364	100,093	664,484	764,577
Equity adjustments of investments in associates and joint ventures	-	-	-	107,917	107,917	247,070	354,987
Net gain (loss) on valuation of derivative financial instruments	-	-	-	(9,082)	(9,082)	129,715	120,633
Net gain on translation of foreign operations	-	-	-	624,091	624,091	478,917	1,103,008
Transaction with shareholders recognized directly to equity:							
Dividends	-	-	(312,920)	-	(312,920)	(778,519)	(1,091,439)
Paid-in capital increase	598	791,712	-	-	792,310	-	792,310
Equity transactions within the Group	-	147,168	-	-	147,168	4,100,023	4,247,191
Changes in the scope of consolidation	-	-	-	-	-	5,021	5,021
Others	-	4,188	(3,530)	-	658	(6,680)	(6,022)
As of December 31, 2021	12,738	5,085,849	11,095,281	569,133	16,763,001	34,963,229	51,726,230
As of January 1, 2022	12,738	5,085,849	11,095,281	569,133	16,763,001	34,963,229	51,726,230
Total comprehensive income:							
Profit for the year	-	-	866,948	-	866,948	2,262,679	3,129,627
Remeasurement gain on defined benefit plans	-	-	93,079	-	93,079	111,088	204,167
Net gain (loss) on valuation of financial assets at FVOCI	-	-	77,513	(972,966)	(895,453)	(743,127)	(1,638,580)
Equity adjustments of investments in associates and joint ventures	-	-	-	101,813	101,813	86,552	188,365
Net gain on valuation of derivative financial instruments	-	-	-	37,865	37,865	79,702	117,567
Net gain on translation of foreign operations	-	-	-	468,430	468,430	194,605	663,035
Transaction with shareholders recognized directly to equity:							
Dividends	-	-	(357,706)	-	(357,706)	(982,026)	(1,339,732)
Stock-based payment	-	25,092	-	-	25,092	104,507	129,599
Equity transactions within the Group	-	(54,986)	-	-	(54,986)	2,414,555	2,359,569
Changes in the scope of consolidation	-	-	-	-	-	1,130,780	1,130,780
Others	-	(4,340)	(3,149)	-	(7,489)	(320)	(7,809)
As of December 31, 2022	12,738	5,051,615	11,771,966	204,275	17,040,594	39,622,224	56,662,818

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

SK Inc. and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2022 and 2021
(Korean won in millions and U.S. dollar in thousands)

	Notes	Korean won		Translation into U.S. dollar (Note 2)	
		2022	2021	2022	2021
Cash flows from operating activities:					
Profit for the year		₩ 3,966,176	₩ 5,705,926	\$ 3,129,627	\$ 4,502,427
Non-cash adjustments	33	13,725,523	7,472,186	10,830,524	5,896,146
Working capital adjustments	33	(6,422,242)	(4,101,511)	(5,067,657)	(3,236,417)
Interest received		438,070	183,838	345,672	145,063
Interest paid		(2,141,140)	(1,442,700)	(1,689,529)	(1,138,404)
Dividends received		581,958	303,314	459,211	239,339
Income tax paid		(2,470,596)	(2,008,378)	(1,949,496)	(1,584,769)
Net cash provided by operating activities		7,677,749	6,112,675	6,058,352	4,823,385
Cash flows from investing activities:					
Decrease (increase) in short-term and long-term financial instruments, net		2,431,937	(1,597,804)	1,918,991	(1,260,794)
Decrease in short-term and long-term loans, net		36,198	29,949	28,563	23,632
Decrease (increase) in short-term investment securities, net		162,282	(151,803)	128,053	(119,785)
Proceeds from disposal of long-term investment securities		944,715	555,038	745,455	437,969
Proceeds from disposal of investments in associates and joint ventures		354,631	319,916	279,832	252,439
Proceeds from disposal of property, plant and equipment		1,358,039	350,211	1,071,600	276,344
Proceeds from disposal of intangible assets		30,294	87,058	23,904	68,696
Proceeds from disposal of assets held for sale		1,353,321	642,999	1,067,877	507,377
Acquisition of long-term investment securities		(1,534,340)	(3,544,378)	(1,210,716)	(2,796,795)
Acquisition of investments in associates and joint ventures		(2,018,959)	(2,703,016)	(1,593,118)	(2,132,894)
Acquisition of property, plant and equipment		(14,000,065)	(8,737,170)	(11,047,159)	(6,894,319)
Acquisition of intangible assets		(612,179)	(722,584)	(483,058)	(570,176)
Net changes in cash due to changes in the scope of consolidation		(2,342,767)	(1,509,843)	(1,848,629)	(1,191,386)
Others, net		(1,122,241)	1,561,466	(885,537)	1,232,120
Net cash used in investing activities		(14,959,134)	(15,419,961)	(11,803,942)	(12,167,572)
Cash flows from financing activities:					
Increase in short-term borrowings, net		10,426,397	1,279,570	8,227,252	1,009,682
Increase in bonds payable and borrowings		14,379,806	13,616,204	11,346,805	10,744,263
Decrease in bonds payable and borrowings		(9,178,991)	(7,637,133)	(7,242,950)	(6,026,302)
Decrease in long-term other payables		(407,780)	(426,462)	(321,771)	(336,512)
Decrease in lease liabilities		(1,099,618)	(1,070,625)	(867,686)	(844,808)
Payment of dividends		(1,708,407)	(1,394,332)	(1,348,068)	(1,100,238)
Cash inflows from equity transactions within the Group		3,684,636	7,317,819	2,907,469	5,774,338
Others, net		(83,307)	(87,119)	(65,735)	(68,744)
Net cash provided by financing activities		16,012,736	11,597,922	12,635,316	9,151,679
Net increase in cash and cash equivalents		8,731,351	2,290,636	6,889,726	1,807,492
Net foreign exchange effects		366,453	136,402	289,161	107,633
Cash and cash equivalents included in assets held for sale		(21,506)	(206,423)	(16,970)	(162,884)
Cash and cash equivalents at the beginning of the year		12,317,555	10,096,940	9,719,526	7,967,285
Cash and cash equivalents at the end of the year		₩ 21,393,853	₩ 12,317,555	\$ 16,881,443	\$ 9,719,526

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

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1. Corporate information

1.1 Parent Company

SK Inc. (the “Company” or “Parent Company”) was established on April 13, 1991 and has been engaged in providing systems integration, software design and development, information processing and consulting services, and is headquartered at 26, Jong-ro, Jongno-gu, Seoul. The Company’s ordinary shares have been listed on the Korea Exchange since November 11, 2009.

Upon the acquisition of SK Inc. by SK C&C Co., Ltd. effective on August 1, 2015, the Company added the investment business to its existing operations for the purpose of holding the securities of its subsidiaries. Furthermore, the Company changed its name to its current form as of the acquisition date.

As of December 31, 2022, the issued capital of the Company amounts to ₩16,143 million (including ₩113 million of preferred shares). Major shareholders and their equity ownership are Tae-won Chey, National Pension Service and Ki-won Choi each holding 17.50%, 8.27%, and 6.50%, respectively, as of December 31, 2022.

1.2 Consolidated subsidiaries

The Company and its subsidiaries (collectively, the “Group”) are engaged in petroleum refining, telecommunications, wholesale and retail, chemicals, construction and other industries. Subsidiaries whose accounts are included in the consolidated financial statements as of December 31, 2022 are as follows:

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (%)
SK Innovation Co., Ltd. (*2)	Korea	Resource development	SK Inc.	33.77%
SK Energy Co., Ltd.	Korea	Crude oil refining and sales	SK Innovation Co., Ltd.	100.00%
Netruck Co., Ltd.	Korea	Gas station operation	SK Energy Co., Ltd.	100.00%
Jeju United FC Corporation	Korea	Sports association sponsoring	SK Energy Co., Ltd.	100.00%
Happy Didim Co., Ltd.	Korea	Service	SK Energy Co., Ltd.	100.00%
Green & Co. Asia Ltd.	Myanmar	Manufacturing	SK Energy Co., Ltd.	80.00%
SK Energy Hong Kong Co., Ltd.	Hong Kong	Investment	SK Energy Co., Ltd.	100.00%
SK Energy Road Investment Co., Ltd.	Cayman	Investment	SK Energy Co., Ltd.	100.00%
SK Energy Road Investment (HK) Co., Ltd.	Hong Kong	Investment	SK Energy Road Investment Co., Ltd.	100.00%
SK Asphalt (Shanghai) Co., Ltd.	China	The sale of asphalt	SK Energy Road Investment (HK) Co., Ltd.	100.00%
goodsFLOW Co., Ltd. (*2)	Korea	The information and communication and transportation industry	SK Energy Co., Ltd.	41.00%
goodsCORE Co., Ltd.	Korea	Business Support Service Industry	goodsFLOW Co., Ltd.	100.00%
goodsPOST Co., Ltd.	Korea	Transportation industry	goodsFLOW Co., Ltd.	100.00%
SK Geo Centric Co., Ltd.	Korea	Chemicals manufacturing and sales	SK Innovation Co., Ltd.	100.00%
SK Geo Centric (Beijing) Holding Co., Ltd. (formerly, SK Global Chemical (China) Holding Co., Ltd.)	China	Investment	SK Geo Centric Co., Ltd.	100.00%
SK Geo Centric China, Ltd.	Hong Kong	Investment	SK Geo Centric Co., Ltd.	100.00%
Sino-Korea Green New Material (JiangSu) Ltd.	China	Petrochemicals manufacture and sales	SK Geo Centric China, Ltd.	100.00%
SK Geo Centric International Trading (Shanghai) Co., Ltd. (formerly, SK Global Chemical International Trading (Shanghai) Co., Ltd.)	China	Petrochemicals sales	SK Geo Centric China, Ltd.	100.00%
SK Geo Centric International Trading (Guangzhou) Co., Ltd. (formerly, SK Global Chemical International Trading (Guangzhou) Co., Ltd.)	China	Petrochemicals sales	SK Geo Centric China, Ltd.	100.00%
SK GC Americas, Inc.	USA	Petrochemicals sales	SK Geo Centric Co., Ltd.	100.00%
SK Primacor Americas LLC	USA	Petrochemicals manufacture and sales	SK GC Americas, Inc.	100.00%
SK Primacor Europe, S.L.U.	Spain	Petrochemicals manufacture and sales	SK GC Americas, Inc.	100.00%
SK Saran Americas LLC	USA	Petrochemicals manufacture and sales	SK GC Americas, Inc.	100.00%
SK Geo Centric Brazil LTDA	Brazil	Petrochemicals sales	SK GC Americas, Inc.	100.00%
SK Geo Centric Japan Co., Ltd.	Japan	Petrochemicals sales	SK Geo Centric Co., Ltd.	100.00%
SK Geo Centric Singapore Pte. Ltd.	Singapore	Petrochemicals sales	SK Geo Centric Co., Ltd.	100.00%
SK Geo Centric Investment Hong Kong Ltd.	Hong Kong	Investment	SK Geo Centric Co., Ltd.	100.00%
Ningbo SK Performance Rubber Co., Ltd.	China	Manufacturing	SK Geo Centric Investment Hong Kong Ltd.	80.00%
Happymoeum Co., Ltd.	Korea	Service	SK Geo Centric Co., Ltd.	100.00%
SK Functional Polymer, S.A.S	France	Petrochemicals manufacture and sales	SK Geo Centric Co., Ltd.	100.00%
Green & Connect Capital, Inc.	USA	Investment	SK Geo Centric Co., Ltd.	100.00%
Won Poll Co., Ltd.	Korea	Petrochemicals manufacture and sales	SK Geo Centric Co., Ltd.	100.00%
SK Incheon Petrochem Co., Ltd.	Korea	Chemicals manufacturing and sales	SK Innovation Co., Ltd.	100.00%
SK Trading International Co., Ltd.	Korea	Trading business	SK Innovation Co., Ltd.	100.00%
SK Energy International Pte. Ltd.	Singapore	Trading business	SK Innovation Co., Ltd.	100.00%
SK Energy Europe, Ltd.	UK	Trading business	SK Trading International Co., Ltd.	100.00%
SK Energy Americas, Inc.	USA	Trading business	SK Energy International Pte. Ltd.	100.00%
SK Terminal B.V.	Netherlands	Investment	SK Energy International Pte. Ltd.	100.00%
SK Enmove Co., Ltd. (formerly, SK Lubricants Co., Ltd.)	Korea	Lubricants oil manufacturing and sales	SK Innovation Co., Ltd.	60.00%
Yubase Manufacturing Asia Corporation	Korea	Lubricants oil processing	SK Enmove Co., Ltd.	70.00%
SK Energy Lubricants (Tianjin) Co., Ltd.	China	Lubricants oil manufacturing and sales	SK Enmove Co., Ltd.	100.00%
SK Lubricants Americas, Inc.	USA	Lubricants oil sales	SK Enmove Co., Ltd.	100.00%
SK Lubricants Europe B.V.	Netherlands	Lubricants oil sales	SK Enmove Co., Ltd.	100.00%
SK Lubricants Japan Co., Ltd.	Japan	Lubricants oil sales	SK Enmove Co., Ltd.	100.00%
SK Enmove India Pvt. Ltd. (formerly, SK Lubricants & Oils India Pvt. Ltd.)	India	Lubricants oil sales	SK Enmove Co., Ltd.	100.00%
Iberian Lube Base Oils Company, S.A.	Spain	Lubricants oil manufacturing and sales	SK Enmove Co., Ltd.	70.00%
SK Lubricants Russia, LLC	Russia	Lubricants oil sales	SK Enmove Co., Ltd.	100.00%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (*1)
SK ie technology Co., Ltd.	Korea	Manufacture of Separators for secondary Cells	SK Innovation Co., Ltd.	61.20%
SK Hi-tech Battery Materials(Jiang Su) Co., Ltd.	China	Manufacture of Separators for secondary Cells	SK ie technology Co., Ltd.	100.00%
SK Hi-tech Battery Materials Poland Sp. Zo.o.	Poland	Manufacture of Separators for secondary Cells	SK ie technology Co., Ltd.	100.00%
SK Innovation Insurance (Bermuda), Ltd.	Bermuda	Insurance	SK Innovation Co., Ltd.	100.00%
SK USA, Inc.	USA	Management consulting services	SK Innovation Co., Ltd.	100.00%
Blue Dragon Energy Co., Limited.	Hong Kong	Investment	SK Innovation Co., Ltd.	100.00%
Happy Klum Co., Ltd.	Korea	Service	SK Innovation Co., Ltd.	100.00%
SK On Co., Ltd.	Korea	Lithium battery manufacturing	SK Innovation Co., Ltd.	96.54%
SK On Hungary Kft.	Hungary	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
SK On(Jiangsu) Co., Ltd.	China	Lithium battery manufacturing	SK On Co., Ltd.	70.04%
SK On(Yancheng) Co., Ltd.	China	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
SK Battery America, Inc.	USA	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
BlueOval SK, LLC (*2)	USA	Lithium battery manufacturing	SK Battery America, Inc.	50.00%
SK Battery Manufacturing Kft.	Hungary	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
SK On (Shanghai) Co., Ltd.	China	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
(formerly, SK Future Energy (Shanghai) Co., Ltd.)				
SK Mobile Energy Co., Ltd.	Korea	Lithium battery manufacturing	SK On Co., Ltd.	100.00%
Yancheng Yandu District M Energy Consulting Limited Company	China	Service / manufacturing service	SK Mobile Energy Co., Ltd.	100.00%
Mobile Energy Battery America, LLC	USA	Lithium battery manufacturing	SK Mobile Energy Co., Ltd.	100.00%
Happy Mideum Co., Ltd.	Korea	Service	SK On Co., Ltd.	100.00%
SK on Certification Center (Jiangsu) Co., Ltd.	China	Lithium cell certification	SK On Co., Ltd.	100.00%
(formerly, Jiangsu SK Battery Certification Center)				
SK Earthon Co., Ltd.	Korea	Oil development	SK Innovation Co., Ltd.	100.00%
SK Innovation America, Inc.	USA	Investment	SK Innovation Co., Ltd.	100.00%
Grove Energy Capital IV, LLC	USA	Investment	SK Innovation America, Inc.	100.00%
SK Telecom Co., Ltd. (*2)	Korea	Mobile telecommunications	SK Inc.	30.01%
SK Telink Co., Ltd.	Korea	International call and MVNO business	SK Telecom Co., Ltd.	100.00%
SK Broadband Co., Ltd.	Korea	Wire communications	SK Telecom Co., Ltd.	74.38%
Home&Service Co., Ltd.	Korea	Information and communication facilities management business	SK Broadband Co., Ltd.	100.00%
Media S Co., Ltd.	Korea	Broadcasting program production	SK Broadband Co., Ltd.	100.00%
SK Stoa Co., Ltd.	Korea	Other resale communication business	SK Telecom Co., Ltd.	100.00%
PS&Marketing Corp	Korea	Resale communication business	SK Telecom Co., Ltd.	100.00%
SK M & Service Co., Ltd.	Korea	Providing databases and online information	PS&Marketing Corp	100.00%
Service Ace Co., Ltd.	Korea	Call center and telemarketing business	SK Telecom Co., Ltd.	100.00%
Service Top Co., Ltd.	Korea	Call center and telemarketing business	SK Telecom Co., Ltd.	100.00%
SK O&S Co., Ltd.	Korea	Maintenance management	SK Telecom Co., Ltd.	100.00%
SK Communications Co., Ltd.	Korea	Internet portal service	SK Telecom Co., Ltd.	100.00%
Quantum Innovation Private Equity Joint Venture	Korea	Investment	SK Telecom Co., Ltd.	59.90%
Panasia Semiconductor Materials, LLC	Korea	Investment	Quantum Innovation Private Equity Joint Venture	66.42%
SK Telecom China Holding Co., Ltd.	China	Holding company	SK Telecom Co., Ltd.	100.00%
SK Global Healthcare Business Group, Ltd.	Hong Kong	Investment	SK Telecom Co., Ltd.	100.00%
SK Telecom Americas, Inc.	USA	Management consulting	SK Telecom Co., Ltd.	100.00%
YTK Investment, Ltd.	Cayman	Investment	SK Telecom Co., Ltd.	100.00%
Atlas Investment, Ltd.	Cayman	Investment	SK Telecom Co., Ltd.	100.00%
SK Telecom Innovation Fund, L.P.	USA	Investment	Atlas Investment, Ltd.	100.00%
SK Telecom China Fund I L.P.	Cayman	Investment	Atlas Investment, Ltd.	100.00%
SK Telecom Japan Inc.	Japan	Management consulting and information gathering	SK Telecom Co., Ltd.	100.00%
SK Planet Japan, K. K.	Japan	Digital contents sourcing and presenting	SK Telecom Japan Inc.	79.78%
Happy Hanoal Co., Ltd.	Korea	Service	SK Telecom Co., Ltd.	100.00%
SK MENA Investment B.V.	Netherlands	Investment	SK Telecom Co., Ltd.	100.00%
SK Latin America Investment S.A.	Spain	Investment	SK Telecom Co., Ltd.	100.00%
Freedom Circle Capital, Inc	USA	Investment	SK Latin America Investment S.A.	100.00%
Montague ESG Capital, LLC	USA	Investment	Freedom Circle Capital, Inc	100.00%
SK Technology Innovation Company	Cayman	Research and development	SK Telecom Co., Ltd.	96.88%
Sapeon Inc.	USA	Non-memory and others Electronic Integrated circuit manufacturing	SK Telecom Co., Ltd.	75.01%
SAPEON Korea Inc.	Korea	Non-memory and others Electronic Integrated circuit manufacturing	Sapeon Inc.	100.00%
SK Square Co., Ltd. (*2)	Korea	Holding company	SK Inc.	30.01%
Onestore Co., Ltd. (*2)	Korea	Telecommunication service	SK Square Co., Ltd.	47.49%
Rokeu Media Co., Ltd.	Korea	Publication and telemarketing	One store Co., Ltd.	100.00%
Onestore Global Pte. Ltd.	Singapore	Internet Information Mediation Service	One store Co., Ltd.	100.00%
11street Co., Ltd. (*3)	Korea	E-commerce	SK Square Co., Ltd.	98.10%
SK Shieldus Co., Ltd.	Korea	Information security service and automatic security	SK Square Co., Ltd.	63.13%
CAPSTEC Co., Ltd.	Korea	Manned security	SK Shieldus Co., Ltd.	100.00%
Infosec Information Technology (Wuxi) Co., Ltd.	China	System software development and supplying	SK Shieldus Co., Ltd.	100.00%
(formerly, SKinfosec Information Technology (Wuxi) Co., Ltd.)				
SK Shieldus America, Inc.	USA	System software development and supplying	SK Shieldus Co., Ltd.	100.00%
(formerly, CAPS America Inc.)				
SK Planet Co., Ltd.	Korea	Telecommunication service and system software development and supplying	SK Square Co., Ltd.	98.65%
SK Planet Global Holdings Pte, Ltd.	Singapore	Holding company	SK Planet Co., Ltd.	100.00%
SK Planet, Inc.	USA	Mobile Solutions presenting	SK Planet Co., Ltd.	100.00%
SCODYS Pte. Ltd.	Singapore	Virtual currency creation and presenting	SK Planet, Inc.	100.00%
SK Square Americas, Inc	USA	Investment	SK Square Co., Ltd.	100.00%
Dreamus Company Co., Ltd. (*2,4)	Korea	Video and audio equipment manufacturing	SK Square Co., Ltd.	51.44%
Iriver Enterprise Ltd.	Hong Kong	Chinese subsidiary management	Dreamus Company Co., Ltd.	100.00%
Iriver China Co., Ltd.	China	MP3.4 production and sales	Iriver Enterprise, Ltd.	100.00%
Dongguan iriver Electronics Co., Ltd.	China	Electronic book production and sales	Iriver Enterprise, Ltd.	100.00%
Life Design Company Japan Inc.	Japan	Japan goods sales	Dreamus Company Co., Ltd.	100.00%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity Ownership (%)
Studio Dolphin Co., Ltd.	Korea	Publishing	Dreamus Company Co., Ltd.	100.00%
Id Quantique SA	Swiss	Quantum information and communication business	SK Square Co., Ltd.	64.40%
Id Quantique Ltd.	Korea	Quantum information and communication business	Id Quantique SA	100.00%
ID Quantique Limited, UK	UK	Quantum information and communication	Id Quantique SA	100.00%
ID Quantique Inc, USA	USA	Quantum information and communication	Id Quantique SA	100.00%
ID Quantique Europe GmbH	Austria	Quantum information and communication	Id Quantique SA	100.00%
Alice und Bob Privatstiftung	Austria	System software development and supplying	Id Quantique SA	100.00%
FSK L&S Co., Ltd.	Korea	Cargo transport shipment and logistics consulting project	SK Square Co., Ltd.	60.00%
FSK L&S(Shanghai) Co., Ltd.	China	Transportation industry	FSK L&S Co., Ltd.	100.00%
FSK L&S(Hungary) Co., Ltd.	Hungary	Transportation industry	FSK L&S Co., Ltd.	100.00%
FSK L&S Vietnam Co., Ltd.	Vietnam	Transportation industry	FSK L&S Co., Ltd.	100.00%
FSK L&S(Jiangsu) Co., Ltd.	China	Transportation industry	FSK L&S Co., Ltd.	100.00%
FSK L&S USA, Inc.	USA	International freight forwarding industry	FSK L&S Co., Ltd.	100.00%
Incross Co., Ltd. (*2)	Korea	Media agency	SK Square Co., Ltd.	36.06%
Infra Communications Co., Ltd.	Korea	Service operation business	Incross Co., Ltd.	100.00%
Mindknock Co., Ltd.	Korea	Software development	Incross Co., Ltd.	100.00%
Solution Co., Ltd.	Korea	Software development and presenting	Incross Co., Ltd.	100.00%
Tmap Mobility Co., Ltd.	Korea	Information and communication industry	SK Square Co., Ltd.	62.45%
YLP Inc.	Korea	Cargo transport shipment business	Tmap Mobility Co., Ltd.	100.00%
Good service Co., Ltd.	Korea	Driving agency service	Tmap Mobility Co., Ltd.	100.00%
Seoul Airbus Co., Ltd.	Korea	Transportation industry	Tmap Mobility Co., Ltd.	100.00%
LOGISOFT.CO.LTD.	Korea	Software development and presenting	Tmap Mobility Co., Ltd.	100.00%
SK Networks Co., Ltd. (*2)	Korea	Distribution and trading business	SK Inc.	39.14%
SK Networks Service Co., Ltd.	Korea	Equipment repair service	SK Networks Co., Ltd.	86.50%
SK Magic Co., Ltd.	Korea	Household appliances manufacturing, sales and rent	SK Networks Co., Ltd.	100.00%
SK Magic Service Co., Ltd.	Korea	House appliances repair and others	SK Magic Co., Ltd.	100.00%
SK Magic Vietnam Company Limited	Vietnam	Household appliances sales and rent	SK Magic Co., Ltd.	100.00%
SK Magic Retails Malaysia Sdn. Bhd. (formerly, SK Networks Retails Malaysia Sdn. Bhd.)	Malaysia	Household appliances sales and rent	SK Magic Co., Ltd.	100.00%
SK Rent-a-Car Co., Ltd.	Korea	Car rental	SK Networks Co., Ltd.	72.95%
SK Rent-a-Car Service Co., Ltd.	Korea	Business support services	SK Rent-a-Car Co., Ltd.	100.00%
SK Networks (Shanghai) Co., Ltd.	China	Trading business	SK Networks Co., Ltd.	100.00%
POSK (Pinghu) Steel Processing Center Co., Ltd.	China	Steel processing and sales	SK Networks Co., Ltd.	80.00%
SK Networks Japan Co., Ltd.	Japan	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks Deutschland GmbH	Germany	Trading business	SK Networks Co., Ltd.	100.00%
SK BRASIL LTDA	Brazil	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks Trading Malaysia Sdn. Bhd.	Malaysia	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks America, Inc.	USA	Trading business	SK Networks Co., Ltd.	100.00%
Networks Tejarat Pars	Iran	Trading business	SK Networks Co., Ltd.	100.00%
MINTIT Co., Ltd.	Korea	Wholesale and commodity brokerage	SK Networks Co., Ltd.	100.00%
MINTIT VINA	Vietnam	Manufacturing and sales business	MINTIT Co., Ltd.	100.00%
Hico Capital LLC (formerly, TenX Capital)	USA	Investment	SK Networks Co., Ltd.	100.00%
SK Networks Hong Kong Ltd.	Hong Kong	Trading business	SK Networks Co., Ltd.	100.00%
SK Networks (Xiamen) Steel Processing Center Co., Ltd.	China	Steel processing and sales	SK Networks Hong Kong Ltd.	100.00%
SK Networks Resources Australia (Wyong) Pty Ltd. (*5)	Australia	Resource development	SK Networks Co., Ltd.	100.00%
SK Networks Resources Pty Ltd. (*5)	Australia	Resource development	SK Networks Co., Ltd.	100.00%
SK Networks (China) Holdings Co., Ltd. (*5)	China	Holding company	SK Networks Co., Ltd.	100.00%
Shenyang SK Bus Terminal Co., Ltd. (*5)	China	Bus terminal business	SK Networks (China) Holdings Co., Ltd.	75.00%
SK Networks (Dandong) Energy Co., Ltd. (*5)	China	Petroleum sales	SK Networks (China) Holdings Co., Ltd.	100.00%
Cartini Co., Ltd.	Korea	E-commerce retail business	SK Networks Co., Ltd.	100.00%
SKC Co., Ltd. (*2)	Korea	Petrochemicals manufacturing	SK Inc.	40.64%
Woori Fine Chem Co., Ltd.	Korea	Petrochemicals manufacturing	SKC Co., Ltd.	100.00%
SK Telesys Co., Ltd.	Korea	Communications equipment manufacturing and sales	SKC Co., Ltd.	81.40%
Techdream Co., Ltd.	Hong Kong	Semiconductor component	SK Telesys Co., Ltd.	100.00%
SK Telesys Corp.	USA	Manufacturing	SK Telesys Co., Ltd.	100.00%
SK Enpulse Co., Ltd. (formerly, SKC Solmics Co., Ltd.)	Korea	Manufacturing and sales of semiconductor parts, materials and others	SKC Co., Ltd.	100.00%
Solmics Taiwan Co., Ltd.	Taiwan	Sales of semiconductor parts, materials and others	SK enpulse Co., Ltd.	100.00%
Solmics Shanghai Co., Ltd.	China	Sales of semiconductor parts, materials and others	SK enpulse Co., Ltd.	100.00%
SKC Solmics Hong kong Co., Ltd.	Hong Kong	SPC	SK enpulse Co., Ltd.	100.00%
SKC Semiconductor Materials (Wuxi) Co., Ltd.	China	Sales of semiconductor parts, materials and others	SKC Solmics Hong kong Co., Ltd.	100.00%
SKC-ENF Electronic Materials Ltd.	Hong Kong	SPC	SK enpulse Co., Ltd.	75.10%
SKC (Nantong) Semiconductor Materials Technology Co., Ltd.	China	Manufacturing of synthetic resins	SKC-ENF Electronic Materials Ltd.	100.00%
SE (JIANGSU) Electronic Materials Co., Ltd.	China	Manufacturing of synthetic resins	SKC-ENF Electronic Materials Ltd.	100.00%
SKC PU Specialty Co., Ltd.	Hong Kong	SPC	SKC Co., Ltd.	100.00%
SKC (Nantong) PU Specialty Co., Ltd.	China	PU Jounce Bumper manufacturing and sales	SKC PU Specialty Co., Ltd.	100.00%
SK PIC Global Co., Ltd.	Korea	PG and PO manufacturing and sales	SKC Co., Ltd.	51.00%
SKCFTH Co., Ltd.	Korea	Manufacturing of battery foil and others	SKC Co., Ltd.	100.00%
SK Nexilis Co., Ltd.	Korea	Manufacturing of battery foil and others	SKCFTH Co., Ltd.	100.00%
Nexilis Management Malaysia Sdn. Bhd.	Malaysia	SPC	SK Nexilis Co., Ltd.	100.00%
SK Nexilis Malaysia Sdn. Bhd.	Malaysia	Manufacturing of battery foil	Nexilis Management Malaysia Sdn. Bhd.	100.00%
SK Nexilis Poland Sp.z o.o.	Poland	Manufacturing of battery foil	SK Nexilis Co., Ltd.	100.00%
NEXILIS MANAGEMENT EUROPE B.V.(*2, 6)	Netherlands	SPC	SK Nexilis Co., Ltd.	0.00%
SK TBMGEOSTONE Co., Ltd.	Korea	Manufacturing of biodegradable LIMEX	SKC Co., Ltd.	51.00%
Allnewone Co., Ltd.	Korea	Research and development of waste recycling	SKC Co., Ltd.	100.00%
Ecovance Co. Ltd.	Korea	Manufacturing of biodegradable plastic materials and others	SKC Co., Ltd.	73.19%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (%)
SK Pucore Co., Ltd. (formerly, Mitsui Chemicals & SKC Polyurethanes Inc.)	Korea	Manufacturing and sales of Polyol	SKC Co., Ltd.	100.00%
SK Pucore Europe sp. zo.o. (formerly, MCNS Polyurethanes Europe Sp. zo. o.)	Poland	Manufacturing and sales of Polyol	SK pucore Co., Ltd.	100.00%
SK Pucore USA Inc. (formerly, MCNS Polyurethanes USA Inc.)	USA	Manufacturing and sales of Polyol	SK pucore Co., Ltd.	100.00%
SK Pucore Mexico, S. de R.L. de C.V. (formerly, MCNS Polyurethanes Mexico, S. de R.L. de C.V.)	Mexico	Manufacturing and sales of Polyol	SK pucore Co., Ltd.	100.00%
SK Pucore India Pvt. Ltd. (formerly, MCNS Polyurethanes India Private Limited)	India	Manufacturing and sales of Polyol	SK pucore Co., Ltd.	100.00%
SK Pucore RUS LLC (formerly, MCNS Polyurethanes RUS Limited Liability Company)	Russia	Manufacturing and sales of Polyol	SK pucore Co., Ltd.	100.00%
NEX Investment Limited	UK	SPC	SKC Co., Ltd.	100.00%
NEX UK Holdings Limited	UK	SPC	NEX Investment Limited	51.00%
Absolics Inc.	USA	Manufacture of semiconductor glass substrates	SKC Co., Ltd.	80.58%
SK E&S Co., Ltd.	Korea	City gas business and power generation	SK Inc.	90.00%
Kangwon City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Yeongnam Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Ko-one Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Narae Energy Service Co., Ltd.	Korea	Integrated energy service	SK E&S Co., Ltd.	100.00%
Pusan City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Jeonbuk Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Chonnam City Gas Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Chungcheong Energy Service Co., Ltd.	Korea	City gas business	SK E&S Co., Ltd.	100.00%
Paju Energy Service Co., Ltd.	Korea	Energy business	SK E&S Co., Ltd.	51.00%
Yeoju Energy Service Co., Ltd.	Korea	Energy business	SK E&S Co., Ltd.	100.00%
Shinanjeungdo Sunlight Co., Ltd.	Korea	New regeneration project	SK E&S Co., Ltd.	100.00%
SK E&S Hong Kong Co., Ltd.	Hong Kong	City gas business	SK E&S Co., Ltd., Pusan City Gas Co., Ltd.	100.00%
SK E&S Australia Pty. Ltd.	Australia	Resource development	SK E&S Co., Ltd.	100.00%
SK E&S Americas, Inc.	USA	Holding company	SK E&S Co., Ltd.	100.00%
Energy Solution Holdings Inc.	USA	Investment	SK E&S Americas, Inc.	100.00%
LNG Americas, Inc.	USA	LNG business	SK E&S Americas, Inc.	100.00%
LAI CCS, LLC	USA	Carbon Collection and Storage-Related Investment Projects	LNG Americas, Inc.	100.00%
DewBlaine Energy, LLC	USA	Resource development	LNG Americas, Inc.	100.00%
Passkey, Inc.	USA	New regeneration project	SK E&S Americas, Inc.	100.00%
Mobility Solution I Inc.	USA	Holding Company	Passkey, Inc.	91.37%
Mobility Solution II Inc.	USA	Holding Company	Mobility Solution I Inc.	100.00%
EverCharge, Inc.	USA	Software development	Mobility Solution II Inc.	100.00%
EverCharge Services, LLC	USA	Electricity business and other electric wire installation business	EverCharge, Inc.	100.00%
Pnes Investments, LLC	USA	Investment	Passkey, Inc.	100.00%
Rnes Holdings, LLC	USA	Renewable / electric power business	Passkey, Inc.	100.00%
Grid Solution, LLC	USA	New regeneration business	Rnes Holdings, LLC	82.64%
Key Capture Energy, LLC	USA	Energy solution	Grid Solution, LLC	97.90%
KCE Global Holdings, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE PF Holdings 2021, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE LAND Holdings, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 5, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 6, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 8, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 10, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 11, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 12, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 14, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 18, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 19, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 21, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 22, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 26, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 27, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 28, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 29, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 32, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE NY 33, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 7, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 8, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 9, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 10, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 11, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 12, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 13, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 14, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 15, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 16, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 19, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 20, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 21, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 22, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 24, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 25, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 26, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 27, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE TX 28, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 4, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 5, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 6, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 7, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 8, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE CT 9, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (%)
KCE CT 10, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MD 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MI 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MI 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MI 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MI 4, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE ME 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE ME 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IL 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IL 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IL 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IN 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IN 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IN 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IN 4, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IN 5, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE OK 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE OK 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE OK 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE OK 4, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE IA 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE WI 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE MA 4, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE ID 1, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE ID 2, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE ID 3, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE Brushy Creek Holdings, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE Texas Holdings 2020, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
Roughneck Storage LLC D/B/A KCE TX 23, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE Market Operations, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
KCE PF Holdings 2022, LLC	USA	Energy solution	Key Capture Energy, LLC	100.00%
Grid Solution II, LLC	USA	Energy solution	Rnes Holdings, LLC	100.00%
Prism Energy International Pte. Ltd.	Singapore	LNG business	SK E&S Co., Ltd.	100.00%
Fajar Energy International Pte. Ltd.	Singapore	LNG business	Prism Energy International Pte. Ltd.	100.00%
Prism Energy International Hong Kong, Ltd.	Hong Kong	LNG business	Prism Energy International Pte. Ltd.	100.00%
PT Prism Nusantara International	Indonesia	LNG business	SK E&S Co., Ltd.	100.00%
Prism Energy International China Limited	China	LNG business	SK E&S Co., Ltd.	100.00%
Prism Energy International Zhoushan Limited	China	LNG business	Prism Energy International China Limited.	100.00%
SK E&S Dominicana S.R.L	Dominica	LNG business	SK E&S Co., Ltd.	100.00%
Hae-Ssal Solar Power Co., Ltd.	Korea	New regeneration project	SK E&S Co., Ltd.	100.00%
Prism DLNG Pte. Ltd.	Singapore	LNG business	Prism Energy International Pte. Ltd.	100.00%
Prism Darwin Pipeline Pty. Ltd.	Australia	LNG business	Prism DLNG Pte. Ltd.	100.00%
BU12 Australia Pty. Ltd.	Australia	LNG business	SK E&S Co., Ltd.	100.00%
BU13 Australia Pty. Ltd.	Australia	LNG business	SK E&S Co., Ltd.	100.00%
Ariul Solar Power Co., Ltd.	Korea	New regeneration project	SK E&S Co., Ltd.	100.00%
Busan Jungkwan Energy Co., Ltd.	Korea	Integrated energy service	SK E&S Co., Ltd.	100.00%
IGE Co., Ltd.	Korea	Hydrogen business	SK E&S Co., Ltd.	100.00%
Dangjin Haengbok Solar Co., Ltd.	Korea	New regeneration business	SK E&S Co., Ltd.	100.00%
Busaho haengboknanum solar Co., Ltd.	Korea	New regeneration business	SK E&S Co., Ltd.	70.00%
NEW RENEWABLE ENERGY NO.1 Joint Stock Company	Vietnam	New regeneration business	SK E&S Co., Ltd.	99.99%
SK Ecoplant Co., Ltd. (*2)	Korea	Construction	SK Inc.	44.48%
Seosuwon Development Company (*2)	Korea	Real estate development	SK Ecoplant Co., Ltd.	19.90%
SKEC Nanjing Co., Ltd.	China	Construction	SK Ecoplant Co., Ltd.	100.00%
Changzhou SKY New Energy Co., Ltd.	China	Construction	SKEC Nanjing Co., Ltd.	100.00%
SKEC (Thai), Ltd.	Thailand	Construction	SK Ecoplant Co., Ltd.	100.00%
Thai Woo Ree Engineering Co., Ltd.	Thailand	Construction	SKEC (Thai), Ltd.	99.77%
SKEC Anadolju, LLC	Turkey	Construction	SK Ecoplant Co., Ltd.	100.00%
SK E&C Betek Corporation	USA	Fuel cell and construction	SK Ecoplant Co., Ltd.	100.00%
Mesa Verde RE Ventures, LLC	USA	Real estate development	SK E&C Betek Corporation	100.00%
BT FC LLC	USA	Construction	SK E&C Betek Corporation	100.00%
Sunlake Co., Ltd.	Canada	Construction	SK Ecoplant Co., Ltd.	100.00%
SKEC Consultores Ecquador, S.A.	Ecuador	Construction	Sunlake Co., Ltd.	100.00%
SK HOLDCO PTE. LTD.	Singapore	Investment	SK Ecoplant Co., Ltd.	63.51%
Silvertown Investco Limited.	UK	Investment	SK Ecoplant Co., Ltd.	100.00%
Seongju Tech Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
DDS Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
Samwon ENT Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
Environment Management Corporation Co., Ltd.	Korea	Operation of sewage treatment plant	SK Ecoplant Co., Ltd.	100.00%
YS TEC Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Seonam Environment Energy Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Honam Environmental Energy Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Green Hwasun Inc.	Korea	Operation of sewage treatment plant	Environment Management Corporation Co., Ltd.	100.00%
Green Sunchang Co., Ltd.	Korea	Operation of sewage treatment plant	Environment Management Corporation Co., Ltd.	100.00%
Gyeongsan Clear Mulgil Co., Ltd.	Korea	Operation of sewage treatment plant	Environment Management Corporation Co., Ltd.	100.00%
Dalseong Maleunmulgil Co., Ltd.	Korea	Operation of sewage treatment plant	Environment Management Corporation Co., Ltd.	100.00%
Goksung Environment Co., Ltd.	Korea	Operation of sewage treatment plant	Environment Management Corporation Co., Ltd.	100.00%
Chungcheong Environment Energy Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Gyeonggi Environment Energy Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Gyeongbuk Environment Energy Co., Ltd.	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Gyeongin Environment Energy Company	Korea	Waste incineration	Environment Management Corporation Co., Ltd.	100.00%
Saehan Environment Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
Daewon Green Energy Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
Daewon Hi-Teck Co., Ltd.	Korea	Construction waste collection and transportation	Daewon Green Energy Co., Ltd.	100.00%
KS Investment B.V.	Netherlands	Investment	SK Ecoplant Co., Ltd.	72.51%
E-MEDI One Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
City Environment Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
Emedione Logis Co., Ltd.	Korea	Designated waste collection and transportation	City Environment Co., Ltd.	100.00%
Green Environment Technology Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
DongNam Offshore Windfarm Co. Ltd	Korea	Power generation	SK Ecoplant Co., Ltd.	100.00%
Gangdong Green Complex Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	87.00%
JA GREEN Co., Ltd.	Korea	Disposal of waste	SK Ecoplant Co., Ltd.	100.00%
AP Development Co., Ltd.	Korea	Solar power generation	SK Ecoplant Co., Ltd.	100.00%
DY Indus Co., Ltd.	Korea	Synthetic resins and other plastics material manufacturing industry	SK Ecoplant Co., Ltd.	100.00%
DY Polymer Co., Ltd.	Korea	Synthetic resins and other plastics material manufacturing industry	SK Ecoplant Co., Ltd.	100.00%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (*1)
ECOPLANT HOLDING MALAYSIA SDN. BHD.	Malaysia	Holding company	SK Ecoplant Co., Ltd.	100.00%
Eco Frontier (Singapore) Pte. Ltd	Singapore	Investment	SK Ecoplant Co., Ltd.	78.63%
Tes-Envirocorp Pte. Ltd.	Singapore	E-waste processing industry	Eco Frontier (Singapore) Pte. Ltd.	97.11%
Tes-Amm (H.K.) Limited	Hong Kong	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes-Amm (Singapore) Pte. Ltd.	Singapore	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes-Amm Europe Holdings Ltd	UK	Investment	Tes-Amm (Singapore) Pte. Ltd.	100.00%
Tes Total Environmental Solution Ab	Sweden	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes-Amm Italia Srl	Italy	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes-Amm UK Ltd	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes-Amm Espana Asset Recovery Andrecycling, S.L.	Spain	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes-Amm SAS	France	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes Recupyl	France	E-waste processing industry	Tes-Amm SAS	90.00%
Tes-Amm Central Europe Gmbh	Germany	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Vsl Support Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Technology Supplies International Ltd.	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Goldberg Enterprises Ltd	UK	E-waste processing industry	Technology Supplies International Ltd.	100.00%
Tes Consumer Solutions Ltd	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Integrations Et Services	France	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes-Amm (Europe) Ltd	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Redeem UK Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Redeem Holdings Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Custom Controllers UK Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Envirofone Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Cash For Tech Ltd	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Stock Must Go Limited	UK	E-waste processing industry	Tes-Amm Europe Holdings Ltd.	100.00%
Tes China Holdings Pte. Ltd.	Virgin Island	Investment	Tes-Amm (Singapore) Pte. Ltd.	100.00%
Tes-Amm Corporation (China) Ltd	China	E-waste processing industry	Tes China Holdings Pte. Ltd.	100.00%
Tes-Amm (Beijing) Co., Ltd	China	E-waste processing industry	Tes-Amm Corporation (China) Ltd.	80.00%
Tes-Amm (Suzhou) E-Waste Solutions Co., Ltd	China	E-waste processing industry	Tes-Amm Corporation (China) Ltd.	100.00%
Tes-Amm (Guangzhou) Co., Ltd	China	E-waste processing industry	Tes-Amm Corporation (China) Ltd.	100.00%
Shanghai Tes-Amm Waste Products Recycle Co., Ltd	China	E-waste processing industry	Tes-Amm Corporation (China) Ltd.	100.00%
Shanghai Taixiang Network Technology Co., Ltd	China	E-waste processing industry	Shanghai Tes-Amm Waste Products Recycle Co., Ltd.	100.00%
Tes-Amm Australia Pty Ltd	Australia	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes Sustainable Battery Solutions (Australia) Pty Ltd	Australia	E-waste processing industry	Tes-Amm Australia Pty Ltd.	100.00%
Tes-Amm New Zealand Limited	New Zealand	E-waste processing industry	Tes-Amm Australia Pty Ltd.	100.00%
Sustainable Product Stewards Pty Ltd	Australia	E-waste processing industry	Tes-Amm Australia Pty Ltd.	80.00%
Tes-Amm Japan K.K.	Japan	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	80.00%
Advanced Datacom (Australia) Pty Ltd	Australia	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Green Technology Management Pty Ltd	Australia	E-waste processing industry	Advanced Datacom (Australia) Pty Ltd.	100.00%
Tes-Amm (Malaysia) Sdn. Bhd.	Malaysia	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes-Amm Korea Inc.	Korea	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	55.00%
Tes-Amm (Taiwan) Co., Ltd	Taiwan	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	70.00%
Total Environmental Solutions Co., Ltd.	Thailand	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	98.00%
Tes-Amm (Cambodia) Co., Ltd	Cambodia	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Pt. Tes-Amm Indonesia	Indonesia	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	66.90%
Tes-Amm Middle East Fze	UAE	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Pc Off Corporation	Japan	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	97.56%
Tes USA, Inc.	USA	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Genplus Pte. Ltd	Singapore	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	60.17%
Tes Energy Solutions Pte. Ltd.	Singapore	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes Ess Pte. Ltd.	Singapore	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes B Pte. Ltd.	Singapore	E-waste processing industry	Tes Energy Solutions Pte. Ltd.	100.00%
Tes Sustainable Battery Solutions B.V.	Netherlands	E-waste processing industry	Tes Energy Solutions Pte. Ltd.	100.00%
Tes Sustainable Battery Solutions Gmbh	Germany	E-waste processing industry	Tes Energy Solutions Pte. Ltd.	100.00%
TES Sustainable Battery Solutions Limited Liability Company	Hungary	E-waste processing industry	Tes Energy Solutions Pte. Ltd.	100.00%
Tes Sustainability Products Pte. Ltd	Singapore	E-waste processing industry	Tes-Envirocorp Pte. Ltd.	100.00%
Tes C Pte. Ltd	Singapore	E-waste processing industry	Tes Sustainability Products Pte. Ltd.	100.00%
SK Oceanplant Co.,Ltd. (formerly, SamKang M&T Co., Ltd.) (*2)	Korea	Steel pipe manufacturing	SK Ecoplant Co., Ltd.	30.61%
Goseong Holdings Ltd.	Korea	Holding company	SK Oceanplant Co.,Ltd.	100.00%
SAM KANG S&C Co., Ltd.	Korea	Shipbuilding industry	Goseong Holdings Ltd.	95.70%
SK Specialty Co., Ltd. (formerly, SK Materials Co., Ltd.)	Korea	Special gas manufacturing and sales	SK Inc.	100.00%
SK Specialty Japan Co., Ltd. (formerly, SK Materials Japan Co., Ltd.)	Japan	Special gas sales	SK Specialty Co., Ltd.	95.00%
SK Specialty Taiwan Co., Ltd. (formerly, SK Materials Taiwan Co., Ltd.)	Taiwan	Special gas sales	SK Specialty Co., Ltd.	100.00%
SK Specialty Jiangsu Co., Ltd. (formerly, SK Materials Jiangsu Co., Ltd.)	China	Special gas manufacturing and sales	SK Specialty Co., Ltd.	100.00%
SK Specialty (Xian) Co., Ltd. (formerly, SK Materials (Xian) Co., Ltd.)	China	Trading business and warehouse operation	SK Specialty Co., Ltd.	100.00%
SK Specialty(Shanghai) Co., Ltd. (formerly, SK Materials (Shanghai) Co., Ltd.)	China	Special gas sales	SK Specialty Co., Ltd.	100.00%
Happy Companion Co., Ltd.	Korea	Cleaning and laundry service	SK Specialty Co., Ltd.	100.00%
SK Tri Chem Co., Ltd.	Korea	Manufacturing and sales of precursors and others	SK Inc.	65.00%
SK Resonac Corporation (formerly, SK Showa Denko Co., Ltd.)	Korea	Sales of raw chemical materials and chemical products related to semiconductor	SK Inc.	51.00%
SK Materials Airplus Inc.	Korea	Industrial gas sales	SK Inc.	100.00%
SK Materials Renewtech Co., Ltd.	Korea	Manufacturing industrial gas	SK Inc.	100.00%
SK Materials Performance Co., Ltd.	Korea	Semiconductor materials manufacturing and selling	SK Inc.	100.00%
SK Materials JNC Co., Ltd.	Korea	Manufacturing of organic light emitting diode material	SK Inc.	51.00%
SK JNC Japan Co., Ltd.	Japan	Manufacturing of organic light emitting diode material	SK Materials JNC Co., Ltd.	100.00%
SK Materials Group14 Co., Ltd.	Korea	Manufacturing	SK Inc.	75.00%
SK Materials Group14 (Shanghai) Co., Ltd.	China	Sales of primary batteries and storage batteries	SK Materials Group14 Co., Ltd.	100.00%
SK Siltron Co., Ltd.	Korea	Silicon wafer for electronic industry manufacturing and sales	SK Inc.	51.00%
SK Siltron America, Inc.	USA	Silicon wafer for electronic industry manufacturing and sales	SK Siltron Co., Ltd.	100.00%
SK Siltron Japan, Inc.	Japan	Silicon wafer for electronic industry manufacturing and sales	SK Siltron Co., Ltd.	100.00%
SK Siltron Shanghai Co., Ltd.	China	Silicon wafer for electronic industry	SK Siltron Co., Ltd.	100.00%
SK Siltron USA, Inc.	USA	Investment	SK Siltron Co., Ltd.	100.00%
SK Siltron CSS, LLC	USA	Silicon wafer for electronic industry manufacturing and sales	SK Siltron USA, Inc.	100.00%
SK Siltron CSS Korea Co., Ltd.	Korea	Wholesale and retail trade	SK Siltron CSS, LLC	100.00%
Happyfilling Co., Ltd.	Korea	Service	SK Siltron Co., Ltd.	100.00%
Teraon Co., Ltd.	Korea	Manufacturing and service	SK Siltron Co., Ltd.	80.40%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (*1)
SK Biopharmaceuticals Co., Ltd.	Korea	Medicine and life science	SK Inc.	64.02%
SK Life Science, Inc.	USA	Life science	SK Biopharmaceuticals Co., Ltd.	100.00%
SK Bio-Pharma Tech (Shanghai) Co., Ltd.	China	Life science	SK Biopharmaceuticals Co., Ltd.	100.00%
SK S.E.Asia Pte. Ltd.	Singapore	Investment	SK Inc.	100.00%
Essencore Limited	Hong Kong	Manufacturing and distribution of semiconductor modules	SK S.E.Asia Pte. Ltd.	100.00%
Essencore (ShenZhen) Limited	China	Consulting for computer system integration	Essencore Limited	100.00%
SK China Company, Ltd.	Hong Kong	Consulting and investment	SK Inc.	88.13%
SK Property Investment Management Co., Ltd.	Hong Kong	Real estate investment	SK China Company, Ltd.	100.00%
SK Industrial Development China Co., Ltd.	Hong Kong	Investment	SK China Company, Ltd.	100.00%
Shanghai SKY Real Estate Development Co., Ltd.	China	Real estate investment	SK Industrial Development China Co., Ltd.	100.00%
Beijing Lizhi Weixin Technology Co., Ltd.	China	Investment	SK China Company, Ltd.	100.00%
SK China Investment Management Co., Ltd.	Hong Kong	Real estate investment	SK China Company, Ltd.	100.00%
SK Networks (Liaoning) Logistics Co., Ltd.	China	Logistics	SK China Investment Management Co., Ltd.	100.00%
SK International Agro-Products Logistics Development Co., Ltd.	Hong Kong	Agriculture product logistics	SK China Investment Management Co., Ltd.	100.00%
SK International Agro-Sideline Products Park Co., Ltd.	China	Agriculture product logistics	SK International Agro-Products Logistics Development Co., Ltd.	100.00%
SK Auto Service Hong Kong Co., Ltd.	Hong Kong	Holding company	SK China Company, Ltd.	100.00%
Skyline Auto Financial Leasing Co., Ltd.	Hong Kong	Investment	SK Auto Service Hong Kong Co., Ltd.	100.00%
SK Financial Leasing Co., Ltd.	China	Financial lease	SK Auto Service Hong Kong Co., Ltd.	100.00%
SK China (Beijing) Co., Ltd.	China	Consulting	SK China Company, Ltd.	100.00%
SKY Property Management Ltd.	Virgin Islands	Investment	SK China Company, Ltd.	100.00%
SK China Real Estate Co., Ltd.	Hong Kong	Real estate investment	SKY Property Management Ltd.	100.00%
SKY Investment Co., Ltd.	China	Real estate management	SK China Company, Ltd.	100.00%
SKY (Zhuhai Hengqin) Technology Co., Ltd.	China	Investment	SK China Company, Ltd.	100.00%
SK C&C Beijing Co., Ltd.	China	Consulting for computer system integration and others	SK Inc.	100.00%
SK C&C Chengdu Co., Ltd.	China	Consulting for computer system integration and others	SK C&C Beijing Co., Ltd.	100.00%
SK C&C India Pvt. Ltd.	India	Consulting for computer system integration and others	SK Inc.	100.00%
SK C&C USA, Inc.	USA	Consulting for computer system integration and others	SK Inc.	100.00%
S&G Technology	Saudi Arabia	Consulting for computer system integration and others	SK Inc.	51.00%
Saturn Agriculture Investment Co., Ltd.	Hong Kong	Investment	SK Inc.	81.00%
SK Investment Management Co., Ltd.	Hong Kong	Investment	SK Inc.	100.00%
SK Mobility Investments Company Limited	Hong Kong	Investment	SK Investment Management Co., Ltd.	100.00%
SK Semiconductor Investments Co., Ltd.	Hong Kong	Investment management	SK Investment Management Co., Ltd.	100.00%
Gemini Partners Pte. Ltd.	Singapore	Consulting	SK Inc., SK Innovation Co., Ltd., SK Telecom Co., Ltd., and SK E&S Co., Ltd.	80.00%
Solaris Partners Pte. Ltd.	Singapore	Consulting	Gemini Partners Pte. Ltd.	100.00%
Solaris GEIF Investment	USA	Investment	Solaris Partners Pte. Ltd.	100.00%
SK GI Management	Cayman	Investment	SK Inc.	100.00%
Plutus Capital NY, Inc.	USA	Investment	SK Inc.	100.00%
Hudson Energy NY, LLC	USA	Investment	Plutus Capital NY, Inc.	50.13%
Hudson Energy NY II, LLC	USA	Investment	Plutus Capital NY, Inc.	50.01%
Hudson Energy NY III, LLC	USA	Investment	Plutus Capital NY, Inc.	50.50%
Grove Energy Capital LLC	USA	Investment	Plutus Capital NY, Inc., Pnes Investments, LLC	100.00%
Grove Energy Capital II, LLC	USA	Investment	Plutus Capital NY, Inc.	100.00%
Grove Energy Capital III, LLC	USA	Investment	Plutus Capital NY, Inc.	50.10%
Wonderland NY, Inc.	USA	Investment	Plutus Capital NY, Inc.	100.00%
Atlas NY, LLC	USA	Investment	Plutus Capital NY, Inc.	61.24%
SK South East Asia Investment Pte. Ltd.	Singapore	Investment	SK Inc., SK Innovation Co., Ltd., SK Telecom Co., Ltd. and SK E&S Co., Ltd.	80.00%
SK Investment Vina I Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	50.01%
SK Investment Vina II Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	50.01%
SK Investment Vina III Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	100.00%
MSN Investment Pte. Ltd.	Singapore	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Imexpharm Corporation	Vietnam	Pharmaceutical manufacturing	SK Investment Vina III Pte. Ltd.	64.92%
Linh Nam Ventures JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Lien Khuong Internatonal JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Dong Kinh Capital JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Lac Son Investment JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
KBA Investment Joint Stock Company	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Cong Thang Alpha JSC	Vietnam	Investment	Lac Son Investment JSC	100.00%
Eastern Vision Investment JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Truong Luu Chi Invest JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
An Nam Phu Investment JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Zion Son Kim JSC	Vietnam	Investment	SK Investment Vina III Pte. Ltd.	100.00%
Sunrise Kim Investment Joint Stock Company	Vietnam	Investment	Zion Son Kim JSC	100.00%
SK Investment Vina V Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	100.00%
SK Investment Vina VI Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	100.00%
SK Investment Vina IV Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	100.00%
SK Malaysia Investment I Pte. Ltd.	Singapore	Investment	SK South East Asia Investment Pte. Ltd.	100.00%
Lotus Fund, L.P.	Cayman	Investment	SK South East Asia Investment Pte. Ltd.	95.00%
SK Pharmteco Inc.	USA	Investment	SK Inc.	100.00%
SK Biotek Co., Ltd.	Korea	Drug medicine	SK Pharmteco Inc.	100.00%
SK BIOTEK IRELAND LIMITED	Ireland	Pharmaceutical manufacturing	SK Pharmteco Inc.	100.00%
SK BIOTEK USA, Inc.	USA	Medicine and life science	SK Pharmteco Inc.	100.00%
Crest Acquisition LLC	USA	Investment	SK Pharmteco Inc.	100.00%
Yposkesi, SAS	France	Medicine manufacturing	Crest Acquisition LLC	70.07%
Abrasax Investment Inc.	USA	Investment	SK Pharmteco Inc.	100.00%
Fine Chemicals Holdings Corp.	USA	Investment	Abrasax Investment Inc.	100.00%
AMPAC Fine Chemicals, LLC	USA	Drug medicine	Fine Chemicals Holdings Corp.	100.00%
AMPAC Fine Chemicals Texas, LLC	USA	Drug medicine	AMPAC Fine Chemicals, LLC	100.00%
AMPAC Fine Chemicals Virginia, LLC	USA	Drug medicine	AMPAC Fine Chemicals, LLC	100.00%
Golden Pearl EV Solutions Limited	Hong Kong	Investment	SK Inc.	100.00%
Socar Mobility Malaysia, Sdn. Bhd.	Malaysia	Car sharing service	SK Inc.	66.27%
Future Mobility Solutions Sdn. Bhd.	Malaysia	Online brokerage services for car rental	Socar Mobility Malaysia, Sdn. Bhd.	100.00%
PT Future Mobility Solutions	Indonesia	Online brokerage services for car rental	Socar Mobility Malaysia, Sdn. Bhd.	100.00%
Einstein Cayman Limited	Cayman	Investment	SK Inc.	100.00%
I Cube Capital Inc.	USA	Investment	SK Inc.	100.00%
I Cube Capital Hong Kong 1. LP Limited	Hong Kong	Investment	I Cube Capital Inc.	100.00%
Tellus Investment Partners, Inc.	USA	Investment	SK Inc.	100.00%
Primer Protein LLC	USA	Investment	Tellus Investment Partners, Inc.	67.55%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.2 Consolidated subsidiaries (cont'd)

Subsidiaries	Domicile	Principal business activity	The largest shareholders	Equity ownership (*1)
Terra LLC	USA	Investment	Tellus Investment Partners, Inc.	100.00%
Terra Investment Partners II, LLC	USA	Investment	Tellus Investment Partners, Inc.	100.00%
Castanea Bioscience Inc.	USA	Investment	SK Inc.	100.00%
SK Forest Co., Ltd.	Korea	Landscaping and planting business	SK Inc.	100.00%
Hweechan Co., Ltd.	Korea	Condo, resort operation	SK Inc.	100.00%
SK Pinx Co., Ltd.	Korea	Golf club operating	Hweechan Co., Ltd.	100.00%
SK REITs Co., Ltd. (*2)	Korea	Real estate developing and trading	SK Inc.	42.99%
Clean Energy REITs Co., Ltd.	Korea	Real estate developing and trading	SK REITs Co., Ltd.	100.00%
Total Value 1 REITs Co., Ltd.	Korea	Real estate developing and trading	SK REITs Co., Ltd.	100.00%
SK REITs Management Co., Ltd.	Korea	Real estate developing and trading	SK Inc.	100.00%
SK Japan Investment Inc.	Japan	Investment	SK Inc.	100.00%
SK Signet Inc. (formerly, Signet EV Inc.) (*7)	Korea	Electric vehicle charger manufacturing and selling	SK Inc.	0.00%
SK Signet America Inc. (formerly, SIGNET EV AMERICA INC.)	USA	Electric vehicle charger maintenance and technical support	SK Signet Inc.	100.00%
SK SIGNET MANUFACTURING TEXAS LLC.	USA	Motor, generator and electrical conversion equipment manufacturing industry	SK Signet America Inc.	100.00%
Auxo Capital Inc.	USA	Investment	SK Inc.	100.00%
SK Global Development Advisors LLC	USA	Investment	Auxo Capital Inc.	100.00%
Auxo Capital Managers LLC	USA	Investment	Auxo Capital Inc.	91.03%
Tellus (HONG KONG) Investment Co., Ltd.	Hong Kong	Investment	SK Inc.	100.00%
Digital Center Capital Inc.	USA	Investment	SK Inc.	100.00%
Martis Capital, LLC	USA	Investment	Digital Center Capital Inc.	100.00%
Tillandsia, Inc.	USA	Investment	SK Inc.	100.00%
Energy Solution Group, Inc.	USA	Investment	SK Inc., SK Energy Co., Ltd.	100.00%
Atom Power, Inc.	USA	Electric Vehicle Charging Station Operation	Energy Solution Group, Inc.	63.70%
Yespowertechnix	Korea	Semiconductor	SK Inc.	98.59%

- (*1) The equity ownership is based on ordinary shares and includes indirect investments held by the consolidated subsidiaries.
- (*2) SK Innovation Co., Ltd. and 14 other companies are included in the consolidated financial statements as the Group is able to exercise de facto control. The remaining voting rights of SK Innovation Co., Ltd. and 15 other companies are widely dispersed, so it is determined that the Group has voting rights to exercise de facto control.
- (*3) Although the Group's equity interests for common stock in 11Street Co., Ltd. is 98.10%, as the preferred stocks with voting rights are issued, the equity interests with voting rights are 80.26%.
- (*4) Dreamus Company Co., Ltd. has a 51.44% stake in common shares, but the preferred shares with voting rights are issued, and the share with voting rights is 41.78%.
- (*5) The assets and liabilities of SK Networks Resources Australia (Wyong) Pty Ltd. and 4 other companies are classified as assets and liabilities held for sale (See Note 31).
- (*6) Although the incorporation of Nexilis Management Europe B.V. has been completed as of December 31, 2022, there is no capital paid.
- (*7) Although the Group's equity interests for common stock in SK Signet Inc. is 0%, as the preferred stocks with voting rights are issued, the equity interests with voting rights are 52.30%
- (*8) During the year ended December 31, 2022, the Group participated in paid-in capital increase of Yes Power Technics Co., Ltd., an associate in which the Group holds investment, and gained control over the associate, accordingly. As a result, investments in Yes Power Technics Co., Ltd. reclassified as investment in a subsidiary.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.3 Changes in consolidated subsidiaries

Changes in the consolidated subsidiaries for the year ended December 31, 2022 are as follows:

December 31, 2021	Inclusion	Exclusion	December 31, 2022
454	146	28	572

For the year ended December 31, 2022, subsidiaries newly included in consolidation are as follows:

Subsidiaries	Reasons for changes
BlueOval SK, LLC	Establishment (49 companies)
SK Innovation America, Inc.	
Grove Energy Capital IV, LLC	
Freedom Circle Capital, Inc	
Montague ESG Capital, LLC	
Sapeon Inc.	
SAPEON Korea Inc.	
Onestore Global Pte. Ltd.	
SCODYS Pte. Ltd.	
id Quantique Europe GmbH	
FSK L&S USA, Inc.	
Nexilis Management Europe B.V.	
NEX Investment Limited	
NEX UK Holdings Limited	
LAI CCS, LLC	
Mobility Solution I Inc.	
Mobility Solution II Inc.	
KCE MI 4, LLC	
KCE ME 2, LLC	
KCE IL 3, LLC	
KCE IN 4, LLC	
KCE IN 5, LLC	
KCE IA 1, LLC	
KCE WI 1, LLC	
KCE MA 4, LLC	
KCE ID 1, LLC	
KCE ID 2, LLC	
KCE ID 3, LLC	
KCE Market Operations, LLC and 7 others	
BT FC LLC	
DongNam Offshore Windfarm Co. Ltd.	
GangDong Green Complex Co., Ltd.	
AP Development Co., Ltd.	
ECOPLANT HOLDING MALAYSIA SDN. BHD.	
Eco Frontier (Singapore) Pte. Ltd	
SK Materials Group14 (Shanghai) Co., Ltd.	
SK Siltron CSS Korea Co., Ltd.	
Lotus Fund, L.P.	
Terra Investment Partners II, LLC	
Total Value 1 REITs Co., Ltd.	
Tillandsia, Inc.	
Energy Solution Group, Inc.	
Won Poll Co., Ltd.	
Alice und Bob Privatstiftung	
Solution Co., Ltd.	
Seoul Airbus Co., Ltd.	
LOGISOFT Co., Ltd.	
SK pucore Co., Ltd.	
Beijing SK Pucore Inc.	
SK Pucore Europe sp. zo.o.	
SK Pucore USA Inc. (formerly, MCNS Polyurethanes USA Inc.)	
SK Pucore Mexico, S. de R.L. de C.V.	
SK Pucore India Pvt. Ltd.	
SK Pucore RUS LLC	
Absolics Inc.	
EverCharge, Inc.	
EverCharge Services, LLC	
Busaho haengbokhanum solar Co., Ltd.	
NEW RENEWABLE ENERGY NO.1 Joint Stock Company	
JA Green Co., Ltd.	
	Acquisition and others (97 companies)

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.3 Changes in consolidated subsidiaries (cont'd)

Subsidiaries	Reasons for changes
DY Indus Co., Ltd.	
DY Polymer Co., Ltd.	
Tes-Envirocorp Pte. Ltd. and 55 others	
SK Oceanplant Co., Ltd.	
Goseong Holdings Ltd.	
SAM KANG S&C Co., Ltd.	
Imexpharm Corporation and 14 others	
SK Signet Manufacturing Texas LLC.	
Atom Power, Inc.	
Yespowertechnix	

For the year ended December 31, 2022, subsidiaries excluded from consolidation are as follows:

Subsidiaries	Reasons for changes
Open Garden Co., Ltd.	Consolidated entities
Broadband Nowon Broadcasting Co., Ltd.	(8 companies)
LAI LNG, LLC	
CAILIP GAS MARKETING, LLC	
Plutus Capital NY II, Inc	
PLUTUS CAPITAL NY III, INC.	
Plutus Fashion NY, Inc.	
Signet Energy INC.	
K-Net Culture & Contents Venture Fund	Disposal
SKC (Jiangsu) High Tech Plastics Co., Ltd.	(11 company)
SKC, Inc.	
SKC Europe GmbH	
SKC Hi-Tech&Marketing Co., Ltd.	
SKC Hi-Tech&Marketing(Suzhou) Co., Ltd.	
SKC Hi-Tech&Marketing Polska SP.Z.O.O	
SKC Hi-Tech&Marketing USA LLC	
SKC Hi-tech&marketing VINA	
Beijing SK Pucore Inc.	
TES-AMM (Vietnam) Co., Ltd	
SK E&P Company	Liquidation
SKP America, LLC	(7 companies)
SK NETWORKS BRASIL INTERMEDIACAO DE NEGOCIOS LTDA	
KCE NY 25, LLC	
KCE TX 17, LLC	
New&Company Two Pte. Ltd.	
SK Bio Energy HongKong Co., Limited	
SK Ecoengineering Co., Ltd.	Change to Equity Method
SK Growth Opportunities Corporation	(2 companies)

1.4 Condensed financial information of significant consolidated subsidiaries

Details of condensed financial information of the significant subsidiaries as of and for the year ended December 31, 2022 are as follows (Korean won in millions):

Subsidiaries	Total assets	Total liabilities	Sales	Net income (loss)
SK Innovation Co., Ltd.	₩ 19,550,743	₩ 3,581,308	₩ 1,983,534	₩ 453,183
SK Energy Co., Ltd.	17,946,956	12,588,896	50,193,922	1,446,893
SK Geo Centric Co., Ltd.	6,710,464	3,681,355	11,667,977	(11,543)
SK Geo Centric International Trading (Shanghai) Co., Ltd.	178,740	120,115	1,592,377	(3,438)
SK Incheon Petrochem Co., Ltd.	5,970,686	4,402,396	8,966,225	(47,727)
SK Trading International Co., Ltd.	2,283,154	1,254,121	20,238,514	409,413
SK Energy International Pte. Ltd.	3,568,052	2,770,718	37,713,631	128,640
SK Energy Europe, Ltd.	239,223	149,652	5,372,956	100
SK Energy America, Inc.	527,239	434,370	8,385,314	3,629
SK Enmove Co., Ltd.	3,585,958	2,132,151	5,464,042	685,558
SK Lubricants Americas, Inc.	568,223	484,507	1,339,035	1,967
SK Lubricants Europe B.V.	322,338	302,387	1,181,950	3,234
Iberian Lube Base Oils Company, S.A.	708,956	330,383	1,220,411	36,498

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.4 Condensed financial information of significant consolidated subsidiaries (cont'd)

Subsidiaries	Total assets	Total liabilities	Sales	Net income (loss)
SK ie technology Co., Ltd.	2,521,924	468,508	310,749	(114,686)
SK On Co., Ltd.	11,253,370	5,881,285	5,943,132	(400,342)
SK On Hungary Kft.	4,634,485	2,826,508	1,242,271	18,757
SK On(Jiangsu) Co., Ltd.	2,693,716	1,676,456	2,097,599	61,396
SK Battery America, Inc.	5,610,814	4,113,903	962,364	(460,884)
BlueOval SK, LLC	2,177,390	435,192	-	(9,648)
SK Battery Manufacturing Kft.	2,137,287	1,679,087	443,040	(319,344)
SK Telecom Co., Ltd.	26,432,121	16,048,739	12,414,588	869,490
SK Broadband Co., Ltd.	6,227,700	3,117,165	4,162,093	212,816
PS&Marketing Corp.	390,693	165,402	1,376,400	3,856
SK Square Co., Ltd.	7,494,079	139,076	591,185	433,138
SK Shieldus Co., Ltd.	3,362,490	2,903,096	1,792,829	57,491
SK Networks Co., Ltd.	5,027,336	3,029,076	6,612,595	6,090
SK Magic Co., Ltd.	1,344,768	921,294	1,027,378	45,546
SK Rent-a-Car Co., Ltd.	3,332,708	2,814,181	1,247,544	21,214
SKC Co., Ltd.	3,258,252	1,415,444	111,742	118,429
SK PIC Global Co., Ltd.	716,696	382,350	1,237,700	92,469
SK E&S Co., Ltd.	10,272,033	4,742,112	1,273,710	752,334
Yeongnam Energy Service Co., Ltd.	579,263	349,706	1,032,798	25,827
Ko-one Energy Service Co., Ltd.	977,410	628,018	1,459,473	18,823
Narae Energy Service Co., Ltd.	1,490,568	938,314	1,099,251	51,390
Pusan City Gas Co., Ltd.	1,153,564	593,926	1,324,929	14,845
Paju Energy Service Co., Ltd.	1,981,156	1,142,415	1,607,108	235,735
SK E&S Americas, Inc.	3,689,318	4,982	-	(12,014)
Passkey, Inc.	2,508,844	68,660	-	(51,754)
Prism Energy International Pte. Ltd.	2,153,248	1,411,107	3,393,005	176,504
SK Ecoplant Co., Ltd.	9,362,346	6,995,591	6,191,350	338,863
SK Siltron Co., Ltd. (*1)	4,628,109	2,922,081	2,354,681	374,462
SK China Company, Ltd.	3,112,275	48,546	-	6,559
SK South East Asia Investment Pte. Ltd.	3,185,832	487,200	72,658	(27,050)
SK REITs Co., Ltd. (*1)	3,127,367	2,158,647	29,006	3,733

(*1) The subsidiary's financial information is consolidated financial information.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

1.5 Disclosure of significant non-controlling interests in subsidiaries

Information about significant non-controlling interests in subsidiaries as of and for the year ended December 31, 2022 is as follows (Korean won in millions):

	December 31, 2022						
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Square Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Ecoplant Co., Ltd.
Percentage of the non-controlling ownership	63.47%	69.88%	69.97%	55.59%	54.71%	10.00%	57.10%
Current assets	₩ 31,966,676	₩ 7,219,196	₩ 2,864,776	₩ 2,703,209	₩ 2,526,145	₩ 5,430,260	₩ 5,767,404
Non-Current assets	35,252,248	24,089,066	19,295,807	6,796,050	3,866,948	13,035,368	7,554,159
Current liabilities	27,557,210	8,046,541	1,819,530	3,567,813	1,870,886	5,360,347	6,113,330
Non-current liabilities	16,419,403	11,106,525	3,177,853	3,480,734	2,280,356	6,409,479	3,465,786
Net assets	23,242,311	12,155,196	17,163,200	2,450,712	2,241,851	6,695,802	3,742,447
Book value of the non-controlling interests	14,885,064	7,528,972	12,059,941	1,426,490	1,466,731	4,312,758	3,018,707
Sales	78,056,939	17,304,973	4,510,691	9,666,446	3,138,910	11,248,956	7,550,863
Net income	1,895,179	947,831	256,107	90,765	(24,637)	969,969	637,962
Total comprehensive income	2,065,921	641,605	(225,924)	85,223	252	669,912	719,925
Net income of the non-controlling interests	1,336,087	603,500	94,649	48,124	7,401	414,612	359,716
Total comprehensive income of the non-controlling interests	1,344,754	358,343	(320,220)	45,241	26,623	437,083	397,721
Net cash flows from operating activities	406,557	5,159,317	342,357	(317,353)	(147,159)	2,263,072	(75,584)
Net cash flows from investing activities	(5,123,323)	(2,807,795)	(57,802)	(706,359)	(249,038)	(1,912,805)	(1,790,238)
Net cash flows from financing activities before dividends paid to the non-controlling interests	10,724,670	(703,397)	76,867	21,446	971,580	760,127	2,421,125
Dividends paid to the non-controlling interests	(217,497)	(646,485)	(8,203)	(14,583)	(96,035)	(183,699)	(11,608)
Net increase (decrease) in cash and cash equivalents	5,790,407	1,001,640	353,219	(1,016,849)	479,348	926,695	543,695

The aforementioned condensed financial information is consolidated financial information of each subsidiary and non-controlling interests include hybrid bonds.

2. Basis of preparation and summary of significant accounting policies

The Group prepares statutory financial statements in Korean in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") enacted by the *Act on External Audit of Stock Companies*. The accompanying consolidated financial statements have been translated into English from Korean financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's report thereon, Korean version, which is used for regulatory reporting purposes, shall prevail.

The accompanying consolidated financial statements are stated in Korean won, the currency of the country in which the Company is incorporated and operates. The translation of Korean won amounts into U.S. dollar amounts is included solely for the convenience of readers of the financial statements and has been made at the rate of ₩1,267.30 to USD 1.00, the basic exchange rate in the Seoul Money Brokerage Service for cable transfers in Korean won on the last business day of the year ended December 31, 2022. Such translations into U.S. dollar should not be construed as representations that the Korean won amounts could be converted into U.S. dollar at that or any other rate.

2.1 Basis of preparation

The Group has prepared the consolidated financial statements in accordance with KIFRS.

The significant accounting policies used for the preparation of the accompanying consolidated financial statements as of and for the year ended December 31, 2022, are the same as the accounting policies adopted for the preparation of consolidated financial statements as of and for the year ended December 31, 2021, except for adoption of new and revised KIFRSs applied in the current period, which are summarized below.

The accompanying consolidated financial statements have been prepared on a historical cost basis, except for certain non-current assets and financial instruments that are measured at fair value. Historical cost is based on the fair values of the consideration given.

The accompanying consolidated financial statements were approved at the Company's Board of Directors meeting on February 14, 2023.

The principal accounting policies are set out below:

2.1.1 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, 2022.

Amendments to KIFRS 1016 Property, Plant and Equipment

The amendment prohibits entities from deducting from the cost of an item of property, plant and equipment, any proceeds of the sale of 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 must be applied retrospectively to items of property plant, and equipment that are brought to the location and condition necessary for it to be capable of operating in the manner intended by management after the beginning of the earliest period presented. The Group applied the amendments retrospectively only items of property, plant and equipment made available for use on or after the beginning of the earliest period presented when it first applies the amendments (i.e., the date of initial application). Detail of adjustments to individual items in the consolidated financial statements of the Group are as follows.

(1) Consolidated statement of financial position
(Korean won in millions):

	As of December 31, 2021		
	Before the adjustment	Adjustments	After the adjustment
Property, plant and equipment	₩ 51,406,239	₩ (12,498)	₩ 51,393,741
Assets	165,380,861	(12,498)	165,368,363
Retained earnings	14,065,642	(4,592)	14,061,050
Non-controlling interests	44,316,806	(7,906)	44,308,900
Equity	65,565,149	(12,498)	65,552,651

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

2.1.1 New and revised KIFRSs adopted in the current period (cont'd)

- (2) Consolidated statement of comprehensive income (loss)
(Korean won in millions):

	For the year ended December 31, 2021			
	Before the adjustment	Adjustment to profit (loss) from discontinued operations(*1)	Adjustments	After the adjustment
Sales	₩ 98,325,016	₩ (1,131,850)	₩ 10,487	₩ 97,203,653
Cost of sales	87,258,841	(859,073)	22,985	86,422,753
Gross profit	11,066,175	(272,777)	(12,498)	10,780,900
Selling and administrative expenses	6,130,636	(209,496)	-	5,921,140
Operating profit	4,935,539	(63,281)	(12,498)	4,859,760
Profit from continuing operations before income tax expense	6,026,833	(32,007)	(12,498)	5,982,328
Income tax expense from continuing operations	628,305	13,275	-	641,580
Profit for the year from continuing operations	5,398,528	(45,282)	(12,498)	5,340,748

(*1) The Group has retroactively reconciled the effect of discontinued operation on profit or loss since the industry material business unit of SKC Co., Ltd. was classified as discontinued operation for the year ended December 31, 2022 (See Note 30).

- (3) Consolidated statement of changes in equity

The consolidated statement of changes in equity for the year ended December 31, 2021, which is presented for comparative purposes in relation to the adjustment to the consolidated statement of financial position and consolidated statement of comprehensive income stated above, has been restated.

- (4) Consolidated statement of cash flows
(Korean won in millions):

	For the year ended December 31, 2021		
	Before the adjustment	Adjustments	After the adjustment
Cash flows from operating activities	₩ 6,125,173	₩ (12,498)	₩ 6,112,675
Cash flows from investing activities	(15,432,459)	12,498	(15,419,961)
Cash flows from financing activities	11,597,922	-	11,597,922

Amendments to KIFRS 1037 Provisions, Contingent Liabilities and Contingent Assets

The amendments specify that the costs related directly to a contract to provide goods or services shall include both incremental costs and an allocation of costs directly related to contract activities when assessing whether a contract is onerous or loss-making. The Group applies the 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 (the date of initial application) and has not restated its comparative information. The amendments do not have any significant impact on the Group's financial position or management performance.

Amendments to KIFRS 1103 Business combinations

The amendments update KIFRS 1103 so that the definition of assets and liabilities to be recognized in a business combination is referred to the 2018 Conceptual Framework and add an exception that, for transactions and other events within the scope of KIFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* or KIFRS 2121 Interpretation *Levies*, an acquirer applies KIFRS 1037 or KIFRS 2121 and clarify that contingent assets are not recognized on the acquisition date. These amendments had no material impact on the Group's financial position or management performance.

2.1.1 New and revised KIFRSs adopted in the current period (cont'd)

Amendments to KIFRS 1116 Leases

The application of the practical expedient, which provides relief to lessees from applying KIFRS 1116 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic, has been extended to lease reduction affecting the lease payments before June 30, 2022. Such rent concessions should satisfy the requirements to apply the practical expedient, and a lessee should consistently apply the practical expedients to similar contracts with similar characteristics. These amendments had no material impact on the Group's financial position or management performance.

Annual Improvements to KIFRS 2018-2020

The annual improvements include some amendments to KIFRS 1101 *First-time Adoption of KIFRS*, KIFRS 1109 *Financial Instruments*, KIFRS 1116 *Leases* and KIFRS 1041 *Agriculture*. These amendments had no material impact on the Group's financial position or management performance.

2.1.2 Standards issued but not yet effective

Amendments to KIFRS 1001: *Classification of Liabilities as Current or Non-current*

The amendments affect only the presentation of liabilities in the statement of financial position and clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period and clarify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments explain that the right exists if the borrowing arrangement is complied with at the end of the reporting period and clarify that settlement refers to the transfer of cash, equity instruments, other assets or services to the counterparty. The Company plans to apply the standard for annual reporting period beginning on or after January 1, 2024, with early application permitted.

Amendments to KIFRS 1001: *Disclosure of Accounting Policies*

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.

Amendments to KIFRS 1001: *Disclosure of financial liabilities*

The amendments required disclosure of the carrying amount of a financial liability and gains and losses in relation thereto if all or part of the instrument is classified as a financial liability under which the exercise price is adjusted according to changes in the issuer's stock price. The amendments to KIFRS 1001 are applicable for annual periods beginning on or after January 1, 2023 with earlier application permitted.

Amendments to KIFRS 1008: *Definition of Accounting Estimates*

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.

2.1.2 New and revised KIFRS issued, but not yet effective (cont'd)

Amendments to KIFRS 1012 *Income Taxes*

The amendments require companies to recognize deferred tax on particular transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary Paragraphs 15 and 24 of KIFRS 1012 were amended to include an additional condition where the initial recognition exemption is not applied. According to the amended guidance, a temporary difference that arises on initial recognition of an asset or liability is not subject to the initial recognition exemption if that transaction gave rise to equal amounts of taxable and deductible temporary differences. The amendments to KIFRS 1001 are applicable for annual periods beginning on or after January 1, 2023 with earlier application permitted

The Company is reviewing the possible effects of the above listed amendments on the separate financial statements.

2.2 Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved where the Group 1) has the power over the investee, 2) is exposed, or has rights, to variable returns from its involvement with the investee, and 3) has the ability to use its power to affect its returns. The Group reassesses 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 listed above.

When the Group has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the activities of the investee unilaterally. The Group considers all relevant facts and circumstances in assessing whether or not the Group's voting rights in an investee are sufficient to give it power, including:

- The size of the Group's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- Potential voting rights held by the Group, other vote holders or other parties;
- Rights arising from other contractual arrangements; and
- Any additional facts and circumstances that indicate that the Group has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous stockholders' meetings

Income and expenses of subsidiaries acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date the Company gains control until the date when the Company ceases to control the subsidiary. Profit or loss and each component of OCI are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company 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 intragroup transactions and related assets and liabilities, income and expenses are eliminated in full on consolidation.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to owners of the Company.

2.2 Basis of consolidation (cont'd)

When the Group loses control of a subsidiary, a gain or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognized in OCI and accumulated in equity, the amounts previously recognized in OCI and accumulated in equity are accounted for as if the Company had directly disposed of the relevant assets (i.e., reclassified to profit or loss or transferred directly to retained earnings).

2.3 Business combinations

Business combinations are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is initially measured at cost, being 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.

In a business combination achieved in stages, the Group remeasures its entire previously held interests in the acquiree at fair value, and any gain or loss from the remeasurement is recognized in profit or loss or, if appropriate, in other comprehensive income. Changes in the carrying amount of previously held interests in the acquiree that are recognized in other comprehensive income is recognized in the same manner as if those interests were disposed of directly.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

2.4 Classification of current or non-current

The Group presents assets and liabilities as current and non-current in the statement of financial position.

Assets are classified as current assets in the following cases:

- a. It is expected to be realized within the normal operating cycle, or is intended to be sold or consumed within the normal operating cycle.
- b. It is mainly held for short-term trading purposes.
- c. It is expected to be realized within 12 months after the reporting period.
- d. As cash or cash equivalents, the limit for use for exchange or debt repayment purposes is not more than 12 months after the reporting period.

All other assets are classified as non-current assets.

Liabilities are classified as current liabilities in the following cases:

- a. It is expected to be settled within the normal operating cycle.
- b. It is mainly held for short-term trading purposes.
- c. Payment is due within 12 months after the reporting period.
- d. It does not have the unconditional right to defer settlement of the debt for more than 12 months after the reporting period.

All other liabilities are classified as non-current liabilities.

Deferred tax assets (liabilities) are classified as non-current assets (liabilities).

2.5 Functional currencies and foreign currencies

The individual financial statements of each entity are presented in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each entity are expressed in Korean won, which is the functional currency of the entity and the presentation currency for the consolidated financial statements.

In preparing the consolidated financial statements of the individual entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings,
- Exchange differences on transactions entered into in order to hedge certain foreign currency risks, and
- Exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur (therefore forming part of the net investment in the foreign operation), which are recognized initially in OCI and reclassified from equity to profit or loss on disposal or partial disposal of the net investment

2.5 Functional currencies and foreign currencies (cont'd)

For the purpose of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are expressed in Korean won using exchange rates prevailing at the end of the reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising, if any, are recognized in OCI and accumulated in equity. On the disposal of a foreign operation, all of the accumulated exchange differences in respect of that operation attributable to the owners of the Group are reclassified to profit or loss.

2.6 Cash and cash equivalents

Cash and cash equivalents include cash, bank balances and short-term highly liquid investments with an original maturity of three months or less.

2.7 Financial assets

2.7.1 Classification

The Group classifies its financial assets in the following measurement categories:

- Financial assets measured at fair value through profit or loss (FVTPL)
- Financial assets measured at fair value through other comprehensive income (FVOCI)
- Financial assets measured at amortized cost

The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows.

For financial assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. The Group reclassifies debt investments when, and only when its business model for managing those assets changes.

For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income.

2.7.2 Measurement

Financial assets are initially measured at fair value, and transaction costs that are directly attributable to the acquisition of financial assets (other than financial assets at fair value through profit or loss) are added to the fair value of the financial assets, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets at fair value through profit or loss are recognized immediately in profit or loss.

The Group considers the hybrid contract which contains embedded derivatives as the entire hybrid contract for the purpose of assessing whether the contractual cashflows represent solely payments of principal and interest on the principal amount outstanding.

2.7.2 Measurement (cont'd)

(1) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. The Group classifies its debt instruments into one of the following three measurement categories:

1) Financial assets measured at amortized cost

Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt investment that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in 'finance income' using the effective interest rate method.

2) Financial assets measured at FVOCI

Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'finance income or costs' and impairment losses are presented in 'finance costs'.

3) Financial assets measured at FVTPL

Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of comprehensive income within 'finance income or costs' in the year in which it arises.

(2) Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments, which held for long-term investment or strategic purpose, in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss as 'other non-operating income' when the right to receive payments is established. But if a portion of the cost of a financial asset is recovered and profit is earned, it is recognized in other comprehensive income.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'finance income and expenses' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not reported separately from other changes in fair value.

2.7.3 Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables and lease receivables, the Group applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables.

2.7.4 Recognition and derecognition

Regular way purchases and sales of financial assets are recognized or derecognized on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

If a transfer does not result in derecognition because the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received.

2.7.5 Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Group or the counterparty.

2.8 Inventories

Inventories are measured at the lower of cost and net realizable value. Cost of inventories, except for materials in in-transit and work in progress (specific identification), are measured under the gross average method, moving average method or first-in first-out method and consists of the purchase price, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Net realizable value represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale.

When inventories are sold, the carrying amount of those inventories is recognized as an expense (cost of sales) in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

2.9 Investments 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 joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint 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.

2.9 Investments in associates and joint ventures (cont'd)

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with KIFRS 1105, *Non-current Assets Held for Sale and Discontinued Operations*. Under the equity method, an investment in an associate or a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and OCI of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate or a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment.

When the Group transacts with its associate or a joint venture, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

2.10 Interests in joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the 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 accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the KIFRSs applicable to the particular assets, liabilities, revenues and expenses.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a sale or contribution of assets), the Group is considered to be conducting the transaction with the other parties to the joint operation, and gains and losses resulting from the transactions are recognized in the Group's consolidated financial statements only to the extent of other parties' interests in the joint operation.

When a group entity transacts with a joint operation in which a group entity is a joint operator (such as a purchase of assets), the Group does not recognize its share of the gains and losses until it resells those assets to a third party.

2.11 Property, plant and equipment

Construction in progress is stated at cost, net of accumulated impairment losses, and property, plant and equipment is stated at cost, less subsequent accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment is directly attributable to its purchase or construction, which includes any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. It also includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Subsequent costs are recognized in the carrying amount of an asset or as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

Description	Useful lives (years)	Description	Useful lives (years)
Buildings	10 ~ 60	Machinery and equipment	3 ~ 40
Structures	4 ~ 50	Vehicles	1 ~ 20
Operating lease assets	3 ~ 5	Others	2 ~ 40

The Group reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

2.12 Goodwill

Goodwill resulting from an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units that is expected to benefit from the synergies of the combination.

A cash-generating unit ("CGU") to which goodwill has been allocated is tested for impairment annually, or more frequently when there is indication that the unit may be impaired. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

2.13 Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost, less accumulated amortization and accumulated impairment losses. The cost of intangible asset acquired in a business combination, separately from goodwill, is its fair value at the acquisition date and shall be carried at its cost less any accumulated amortization and any accumulated impairment losses.

Amortization of development cost, industrial property rights and other intangible assets is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value is zero. Development cost for petroleum resource is amortized by the unit of production method based on the amount of proved reserves. However, intangible assets with indefinite useful lives such as membership and brand -related assets are not amortized as there is no foreseeable limit to the period over which the asset is expected to use.

Description	Useful lives (years)	Description	Useful lives (years)
Development costs	3 ~ 10	Developed technology	5 ~ 14
Customer-related assets	3 ~ 30	Others	2 ~ 50
Right to use facilities	10, 20	Frequency usage rights	2.9 ~ 10
Industrial property rights	5 ~ 10		

The useful lives of intangible assets are assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate. Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually.

2.13.1 Development cost for petroleum resource

The Group accounts for expenditures with high probability of future economic benefits related to the acquisition costs of assets, exploration and evaluation, and development activities as intangible assets.

Expenditures for exploration and evaluation of oil and natural gas are related to geographical, geological, geochemical, geophysical research, and prospect for commercialization. Development expenditures are related to the construction of various production equipment and drilling oil wells. Impairment testing is performed when the carrying amount of the intangible asset exceeds the estimated recoverable amounts.

Oil-producing fields refer to those which acquired the permission of development for reserves with economic benefits. The cost of an item of oil-producing fields includes the costs directly attributable to its purchase, construction, other expenditures for production, and the estimated costs of provision for restoration. The Group amortizes oil-producing fields by the unit of production method based on the amount of proved reserves.

2.13.2 Research and development

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

2.13.3 Subsequent expenditures

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which they relate. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

2.14 Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the asset belongs.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired. Recoverable amount is the higher of fair value, less costs to sell and value in use. If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or the CGU) is reduced to its recoverable amount and the reduced amount is recognized in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU) is increased to the revised estimate of its recoverable amount, so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the CGU) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

2.15 Investment properties

Investment properties are properties held to earn rentals and for capital appreciation. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are reported at cost, less accumulated depreciation and accumulated impairment losses.

Subsequent costs are recognized in carrying amount of an asset or as a separate asset if it is probable that the future economic benefits associated with the assets will flow into the Group and the cost of an asset can be measured reliably. Routine maintenance and repairs are expensed as incurred.

The Group does not depreciate land. Depreciation expense is computed using the straight-line method based on the estimated useful lives of the assets as follows:

<u>Description</u>	<u>Useful lives (years)</u>	<u>Description</u>	<u>Useful lives (years)</u>
Buildings	10 ~ 60	Structures	4 ~ 50

The Group reviews the depreciation method, the estimated useful lives and residual values of investment properties at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in accounting estimate.

2.16 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization. All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

2.17 Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants related to assets are presented in the statement of financial position by deducting the grant from the carrying amount of the asset. The related grant is recognized in profit or loss over the life of a depreciable asset as a reduced depreciation expense.

Government grants related to income are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

2.18 Non-current assets held for sale and discontinued operation

The Group classifies non-current assets (or disposal group) as held for sale if their carrying amounts will be recovered principally through a sale or distribution rather than through continuing use. Such non-current assets and disposal group 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 distribute are the incremental costs directly attributable to the disposal of an asset (or disposal group), excluding the finance costs and income tax expense.

The criteria for held for distribution classification is regarded as met only when the distribution is highly probable and the asset or disposal group is available for immediate distribution in its present condition. Actions required to complete the distribution should indicate that it is unlikely that significant changes to the distribution will be made or that the decision to distribute will be withdrawn. Management must be committed to the distribution expected 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 a component of an entity that either has been disposed of, or is classified as held for sale, and:

- Represents a separate major line of business or geographical area of operations
- Is part of a single co-ordinated 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 profit or loss and other comprehensive income. Additional disclosures are provided in Note 30. All other notes to the financial statements include amounts for continuing operations, unless otherwise mentioned.

2.19 Discount (premium) on bonds

Discount (premium) on bonds is presented as a direct deduction from (addition to) the nominal value of the bonds and is amortized using the effective interest rate method over the lives of the bonds.

2.20 Leases

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

2.20.1 The Group as a lessee

The Group applied a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments.

(1) Right-of use assets

The Group recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any re-measurement 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.

Depreciation of right-of-use asset is computed using the straight-line method based on the shorter of the lease term and the estimated useful lives of the assets as follows:

Description	Useful lives (years)	Description	Useful lives (years)
Land and buildings	1 ~ 60	Tank	1 ~ 10
Ships and vessels	10 ~ 20	Vehicles	1 ~ 5
Others	1 ~ 10		

Unless the Group is reasonably certain to obtain ownership of the leased asset at the end of the lease term, the recognized right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term. Right-of-use assets are subject to impairment.

(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 a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognized as expense in the period on which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if 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 in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

The Group included lease liabilities as financial liabilities.

2.20.1 The Group as a lessee (cont'd)

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

The Group applies the short-term lease recognition exemption to its short-term leases of land, buildings, vehicles and others (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 equipment that are considered of low value (i.e., below \$5,000). 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.

2.20.2 The Group as a lessor

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group's net investment in the leases. Finance lease income is using the effective interest rate method on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

2.21 Financial liabilities and equity instruments

2.21.1 Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement and the definitions of financial liability and an equity instrument.

2.21.2 Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Group are recognized as the proceeds are received, net of direct issue costs.

Repurchase of the Group's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Group's own equity instruments.

2.21.3 Compound instruments

The component parts of compound instruments (convertible bonds) issued by the Group are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and equity instrument. Conversion option that will be settled by the exchange of a fixed amount of cash or another financial asset for a fixed number of the Group's own equity instruments is an equity instrument.

At the date of issue, the fair value of the liability component is estimated using the prevailing market interest rate for a similar non-convertible instrument. This amount is recorded as a liability on an amortized cost basis using the effective interest method until extinguished upon conversion or at the instrument's maturity date.

The conversion option classified as equity is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognized and included in equity, net of income tax effects, and is not subsequently remeasured. In addition, the conversion option classified as equity will remain in equity until the conversion option is exercised, in which case, the balance recognized in equity will be transferred to share premium. No gain or loss is recognized in profit or loss upon conversion or expiration of the conversion option.

Transaction costs that relate to the issue of the convertible notes are allocated to liability and equity components in proportion to the allocation of the gross proceeds. Transaction costs relating to equity component are recognized directly in equity. Transaction costs relating to the liability component are included in the carrying amount of the liability component and are amortized over the lives of the convertible notes using the effective interest method.

2.21.4 Financial liabilities

All financial liabilities are measured subsequently at amortized cost using the effective interest method or at FVTPL. However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

2.21.4.1 Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- It has been acquired principally for the purpose of repurchasing it in the near term; or
- On initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- It is a derivative that is not designated and effective as a hedging instrument

2.21.4.1 Financial liabilities at FVTPL (cont'd)

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group 's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and KIFRS 1109 permits the entire combined contract to be designated as at FVTPL

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognized in profit or loss to the extent that they are not part of a designated hedging relationship.

However, for financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognized in profit or loss. Changes in fair value attributable to a financial liability's credit risk that are recognized in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

Gains or losses on financial guarantee contracts issued by the Group that are designated by the Group as at FVTPL are recognized in profit or loss.

2.21.4.2 Financial liabilities measured at amortized cost

Financial liabilities that are not (a) contingent consideration of an acquirer in a business combination, (b) held-for-trading, or (c) designated as at FVTPL, are measured subsequently at amortized cost using the effective interest method.

2.21.5 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of debt instruments.

Financial guarantee contract liabilities are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

- The amount of the loss allowance determined in accordance with KIFRS 1109 (see financial assets above); and
- The amount recognized initially less, where appropriate, cumulative amortization recognized in accordance with the revenue recognition policies set out above

2.21.6 Derecognition of financial liabilities

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified. The difference between the carrying amount of a financial liability extinguished or transferred to another party and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

2.22 Retirement benefit costs

Contributions to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each reporting period. Remeasurement, comprising actuarial gains and losses, the effect of the changes to the asset ceiling (if applicable) and the return on plan assets (excluding interest), is reflected immediately in the consolidated statement of financial position with a charge or credit recognized in OCI in the period in which it occurs. Remeasurement recognized in OCI is reflected immediately in retained earnings and will not be reclassified to profit or loss. Past service cost is recognized in profit or loss in the period of a plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are composed of service cost (including current service cost and past service cost, as well as gains and losses on curtailments and settlements), net interest expense (income) and remeasurement.

The Group presents the service cost and net interest expense (income) components in profit or loss, and the remeasurement component in OCI. Curtailment gains and losses are accounted for as past service costs.

2.23 Share-based payment arrangements

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date.

The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest. At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates, if any, is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment in other component of equity as the equity-settled employee benefits reserve.

Equity-settled share-based payment transactions with parties other than employees are measured at the fair value of the goods or services received, except where that fair value cannot be estimated reliably, in which case they are measured at the fair value of the equity instruments granted, measured at the date the entity obtains the goods or the counterparty renders the service.

For cash-settled share-based payments, a liability is recognized for the goods or services acquired, measured initially at the fair value of the liability. At the end of each reporting period until the liability is settled, and at the date of settlement, the fair value of the liability is remeasured, with any changes in fair value recognized in profit or loss for the year.

2.24 Provision

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

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).

At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

2.24.1 Provision for warranties

A provision for warranties is recognized when the underlying products or services are sold. The provision is based on historical warranty data and a weighting of all possible outcomes against their associated probabilities.

2.24.2 Provision for installment of handset subsidies

The Group provides lump-sum handset subsidies to customers who agree to use the Group's service for a predetermined service period and the subsidies are charged to commission expense as the related payments are made. When customers agree to use the Group's service for a predetermined service period and purchase handsets on an installment basis, the subsidies are paid every month over the installment period and the Group estimates a provision for handset subsidies to be paid, which is recognized as commissions expense at the time telecommunication service contracts are made.

2.24.3 Provision for service/construction warranties

If the Group has an obligation to repair the product after selling the product or providing the service, the Group estimates the warranty expense based on the repair period and the past experience rate.

2.24.4 Provision for restoration

Provision for restoration of contaminated area is recognized in the related costs in accordance with published environmental policy and appropriate legal requirements of the Group.

2.24.5 Provision for onerous contracts

A provision for onerous contracts is recognized when the expected benefits to be derived by the Group from a contract are lower than the unavoidable costs of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

2.24.6 Accounting treatment related to the emission rights cap and trade scheme

The Group accounts for greenhouse gas emission rights and emission liabilities arising under the *Act on the Allocation and Transaction of Greenhouse Gas Emission Rights* as follows.

1) Greenhouse gas emission rights

Greenhouse gas emission rights consist of emission rights allocated free of charge by the government and emission rights purchased for free. The free allocation emission right is measured and recognized as zero, and the purchase emission right is recognized as the acquisition cost by adding other normally incurred costs directly related to the acquisition cost. The Group classifies the greenhouse gas emission rights held to fulfill the obligations stipulated in the relevant system as intangible assets, measures the total amount of damage deducted from the cost, and classifies the portion to be submitted to the government within one year from the end of the reporting period. Greenhouse gas emission rights held to obtain short-term trading gains are classified as floating assets and measured at fair value at the end of each reporting period, and changes in fair value are recognized in profit or loss. Greenhouse gas emission rights are removed when they are no longer available for submission or sale to the government, or when future economic benefits are no longer expected.

2) Emission liabilities

Emission liabilities are the current obligation to emit greenhouse gases and submit emission rights to the government, and are recognized when resources are likely to be leaked to fulfill the obligation and the amount required to fulfill the obligation can be reliably estimated. Emission liabilities are measured by adding the carrying amount of emission rights held for the relevant performance year to be submitted to the government and the expenditure expected to take to fulfill the obligations for emissions exceeding the amount of emission rights held. Emission liabilities are removed when submitted to the government.

2.25 Derivative financial instruments

The Group enters into foreign exchange forward contracts, interest swaps, currency swaps, and so forth to manage its exposure to foreign exchange rate risk and foreign currency risk. Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in such case the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

2.25.1 Embedded derivatives

An embedded derivative is a component of a hybrid contract that also includes a non-derivative host – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

Derivatives embedded in hybrid contracts with a financial asset host within the scope of KIFRS 1109 are not separated. The entire hybrid contract is classified and subsequently measured as either amortized cost or fair value as appropriate.

Derivatives embedded in hybrid contracts with hosts that are not financial assets within the scope of KIFRS 1109 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

2.25.2 Hedge accounting

The Group designates certain derivatives as hedging instruments in respect of foreign currency risk and interest rate risk in fair value hedges, cash flow hedges, or hedges of net investments in foreign operations. Hedges of foreign exchange risk on firm commitments are accounted for as cash flow hedges.

At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions.

Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge 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; and
- 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

2.25.3 Fair value hedges

The fair value change on qualifying hedging instruments is recognized in profit or loss except when the hedging instrument hedges an equity instrument designated at FVOCI in which case it is recognized in other comprehensive income.

The carrying amount of a hedged item not already measured at fair value is adjusted for the fair value change attributable to the hedged risk with a corresponding entry in profit or loss. For debt instruments measured at FVOCI, the carrying amount is not adjusted as it is already at fair value, but the hedging gain or loss is recognized in profit or loss instead of other comprehensive income. When the hedged item is an equity instrument designated at FVOCI, the hedging gain or loss remains in other comprehensive income to match that of the hedging instrument.

Where hedging gains or losses are recognized in profit or loss, they are recognized in the same line as the hedged item.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. The fair value adjustment to the carrying amount of the hedged item arising from the hedged risk is amortized to profit or loss from that date.

2.25.4 Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognized in other comprehensive income limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss.

The Group discontinues hedge accounting only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. The discontinuation is accounted for prospectively. Any gain or loss recognized in other comprehensive income and accumulated in cash flow hedge reserve at that time remains in equity and is reclassified to profit or loss when the forecast transaction occurs. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in cash flow hedge reserve is reclassified immediately to profit or loss.

2.26 Revenue recognition

The Group has applied KIFRS 1115 *Revenue from Contracts with Customers*. The Group operates oil refining, telecommunications, wholesale and retail businesses, chemical products, and construction. When control of a good or service is transferred to the customer, the Group recognizes revenue considering the variable consideration, such as return and discount, from the fair value of the consideration to which it expects to be entitled in exchange for the good or service.

2.26.1 Sale of goods

Revenue from the sale of goods is generally recognized at the time when control of the goods is transferred to the customer, i.e. at the time of delivery of the goods.

2.26.2 Rendering of services

The Group provides services such as construction contracts and system construction services. For construction contracts and system construction services, revenue is recognized over time at the rate of progress under the input method because the Group has no alternative use for completing the obligation for the assets created by the Group that have completed the performance so far, and because the Group has a enforceable right to payment for the completed performance.

In the case of providing other services, the Group is obliged to provide the customer with the related services during the contract period, so the transaction price allocated to the performance obligation is recognized as revenue over the period where the services are provided.

2.26.3 Commissions

When the Group acts in the capacity of an agent rather than as the principal in a transaction, the revenue recognized is the net amount of commission made by the Group.

2.26.4 Rental income and others

Rental income from investment property is recognized in profit or loss on a straight-line basis over the term of the lease. Lease incentives granted are recognized as an integral part of the total rental income, over the term of the lease. Rental income from subleased property is recognized as other income.

2.26.5 Contract assets and liabilities

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If the Group performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Group performs its performance obligations under the contract.

2.27 Income tax

Income tax expense represents the sum of the tax currently payable and deferred tax. Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in OCI or directly in equity, in which case, the current and deferred tax are also recognized in OCI or directly in equity.

2.27.1 Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the consolidated statement of profit or loss and comprehensive income because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

2.27.2 Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences to the extent it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent it is probable that there will be sufficient taxable profits against which the benefits of the temporary differences can be utilized and they are expected to reverse in the foreseeable future. The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

2.27.2 Deferred tax (cont'd)

Deferred tax assets and liabilities are offset if, and only if, the Group has a legally enforceable right to set off current tax assets against current tax liabilities, and the deferred tax assets and liabilities relate to income taxes are levied by the same taxation authority on either the same taxable entity or different taxable entities that intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

2.27.3 Current tax and deferred tax for the year

Current tax and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in OCI or directly in equity, in which case the current tax and deferred tax are also recognized in OCI or directly in equity. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

2.28 Earnings per share

Basic earnings per share are calculated by dividing the profit or loss attributable to ordinary equity holders of the Company by the weighted-average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted earnings per share are determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted-average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares.

2.29 Fair value

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, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date.

Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of KIFRS 1102 *Share-based Payment*; leasing transactions that are within the scope of KIFRS 1116 *Leases*; and measurements that have some similarities to fair value, but are not fair value, such as net realizable value in KIFRS 1002 *Inventories* or value in use in KIFRS 1036 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorized into Level 1, 2 or 3, based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

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

3. Significant accounting judgments, estimates and assumptions

When preparing the consolidated financial statements, management is required to make judgments, estimates and assumptions that affect the reported amount of assets, liabilities, revenues and expenses. Actual results may be different from those estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

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

3.1 Impairment of non-financial assets

The Group assesses at each reporting date, whether there is an indication of impairment of its non-financial assets. If any indication exists, or annually, intangible assets with indefinite useful lives including brand contract-related asset are tested for impairment. Other non-financial assets are tested for impairment when there is an indication that the carrying amount of an asset is not recoverable. In assessing value in use, management estimates future cash flows of the assets or CGU and determines an appropriate discount rate to calculate the present value of the estimated future cash flows.

3.2 Valuation of financial instruments

Subsequent to initial recognition, investment securities and others are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss or OCI. Where the fair value of financial assets and financial liabilities recorded in the consolidated statements of financial position cannot be derived from active markets, the Group uses valuation techniques that require the management's judgments on the expected future cash flows and discount rates.

3.3 Bad debt allowance for trade receivables, loans and other receivables

The Group estimates a bad debt allowance for trade receivables, loans and other receivables, based on the aging of receivables and past experience of bad debt, as well as observable changes in economic and industrial conditions that correlate with default on receivables.

3.4 Measurement and useful lives of tangible and intangible assets

If the Group acquires property, plant and equipment or intangible assets from business combination, it is required to estimate the fair value of these assets at the acquisition date. For estimating the useful lives of tangible and intangible assets, significant management judgment is required.

3.5 Defined benefit plan

The Group's defined benefit liabilities is determined based on the actuarial valuation carried out at the end of each annual reporting period. Actuarial assumptions are the Group's best estimates of the variables in determining the cost of providing post-retirement benefits, such as discount rates, rates of expected future salary increases and mortality rates. Significant estimation uncertainty is likely to persist in making such assumptions due to the long-term nature of post-retirement benefit plan.

3.6 Deferred tax assets

Recognition and measurement of deferred tax assets and liabilities requires significant management judgment. Especially, when determining if deferred tax assets will be realizable or not in the future, it involves significant management assumptions and judgment on the Group's future performance.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

3.7 COVID-19 related matters

In order to prevent the spread of COVID-19, various prevention and control measures including restrictions on movement are being implemented worldwide, and as a result, the global economy is widely affected. The Group invests in companies operating in various industries, including petroleum refining, telecommunications, wholesale and retail, chemicals, construction and others, and is exposed to market uncertainties due to the influence of COVID-19. This can negatively affect productivity, sales decline or delay, collection of existing receivables, discount rates and indicators used for various estimates, which can negatively affect the Group's financial position and financial performance. The Group prepared financial statements by reasonably estimating the impact of COVID-19 on the Group. However, there is significant uncertainty in estimating the impact of COVID-19 on the Group.

4. Operating segments

(1) Overview of operating segments

The Group makes decisions on resources to be allocated to business segments and divides the business segments based on the internal reports which the chief operating decision maker periodically reviews to evaluate the performances of the sales segments. Details of segment operations of each segment are as follows:

Operating segments	Business
SK Innovation Co., Ltd.	Petroleum refining, chemical, lubricating oil, battery and resources development
SK Telecom Co., Ltd.	Wireless and wired telecommunication
SK Square Co., Ltd.	Semiconductor and New ICT
SK Networks Co., Ltd.	Information communication, rental and trade
SKC Co., Ltd.	Chemical, Electronic Materials and mobility material
SK E&S Co., Ltd.	Gas and energy
SK Ecoplant Co., Ltd.	Civil engineering, housing, plant and others
Others	IT services, special gas manufacturing and sale, medicine and life science and others

(2) Details of financial information for each operating segment as of and for the years ended December 31, 2022 and 2021 are as follows (Korean won in billions):

	As of and for the year ended December 31, 2022									Total
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Square Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Ecoplant Co., Ltd.	Others	Consolidation adjustments (*1)	
Total sales	₩ 78,057	₩ 17,305	₩ 4,511	₩ 9,666	₩ 3,139	₩ 11,249	₩ 7,551	₩ 10,407	₩ (7,333)	₩ 134,552
Internal sales	(782)	(266)	(1,163)	(1,135)	(383)	(332)	(43)	(3,229)	7,333	-
Net sales	77,275	17,039	3,348	8,531	2,756	10,917	7,508	7,178	-	134,552
Profit (loss) from continuing operations before income tax expense	2,860	1,236	101	81	159	1,323	59	1,581	(1,491)	5,909
Profit (loss) for the year from continuing operations	1,895	948	97	68	168	970	36	1,443	(2,090)	3,535
Total assets	67,219	31,308	22,161	9,499	6,393	18,466	13,322	59,224	(33,086)	194,506
Total liabilities	43,977	19,153	4,997	7,049	4,151	11,770	9,579	22,958	(937)	122,697
Depreciation	1,616	2,897	282	823	209	494	97	712	(81)	7,049
Amortization	177	858	92	29	43	20	71	137	308	1,735

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

4. Operating segments (cont'd)

	As of and for the year ended December 31, 2021									
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Square Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Ecoplant Co., Ltd.	Others	Consolidation adjustments (*1)	Total
Total sales	₩ 46,853	₩ 19,132	₩ 1,146	₩ 11,018	₩ 2,264	₩ 7,855	₩ 6,221	₩ 8,813	₩ (6,098)	₩ 97,204
Internal sales	(503)	(365)	(602)	(1,284)	(325)	(271)	(303)	(2,445)	6,098	-
Net sales	46,350	18,767	544	9,734	1,939	7,584	5,918	6,368	-	97,204
Profit (loss) from continuing operations before income tax expense	818	3,071	366	107	393	663	202	4,530	(4,168)	5,982
Profit (loss) for the year from continuing operations	445	2,419	363	61	267	389	7	3,809	(2,419)	5,341
Total assets	49,545	30,911	22,639	9,411	6,180	15,477	8,114	54,682	(31,590)	165,369
Total liabilities	29,924	18,576	5,784	7,022	3,898	9,206	6,908	19,793	(1,295)	99,816
Depreciation	1,408	3,103	46	828	178	507	80	612	(62)	6,700
Amortization	105	1,011	17	24	31	7	50	113	330	1,688

(*1) Consolidation adjustments of the Parent Company, excluding consolidation adjustments of each subsidiary.

(3) Details of financial information by geographical location as of and for the years ended December 31, 2022 and 2021 are as follows (Korean won in billions):

	As of and for the year ended December 31, 2022							
	Korea	Asia	Europe	North America		Others	Consolidation adjustments	Total
				North America	Others			
Total sales	₩ 167,546	₩ 49,417	₩ 10,780	₩ 13,107	₩ 519	₩ (106,817)	₩ 134,552	
Operating profit (loss)	9,901	730	(163)	(348)	348	(2,463)	8,005	
Profit (loss) from continuing operations before income tax expense	9,079	669	(237)	(788)	321	(3,135)	5,909	
Profit (loss) for the year from continuing operations	6,785	532	(263)	(794)	170	(2,895)	3,535	
Total assets	210,994	24,207	11,495	30,671	2,517	(85,378)	194,506	
Total liabilities	108,453	9,869	6,666	8,545	985	(11,821)	122,697	

	As of and for the year ended December 31, 2021							
	Korea	Asia	Europe	North America		Others	Consolidation adjustments	Total
				North America	Others			
Total sales	₩ 113,659	₩ 29,503	₩ 6,063	₩ 7,323	₩ 428	₩ (59,772)	₩ 97,204	
Operating profit (loss)	6,631	140	118	(52)	191	(2,168)	4,860	
Profit (loss) from continuing operations before income tax expense	10,954	799	171	(118)	1,276	(7,100)	5,982	
Profit (loss) for the year from continuing operations	8,290	756	103	(71)	1,023	(4,760)	5,341	
Total assets	186,838	18,548	6,082	20,990	1,595	(68,684)	165,369	
Total liabilities	92,035	6,158	2,900	5,960	521	(7,758)	99,816	

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

4. Operating segments (cont'd)

(4) Details of financial information by revenue from contracts with customers for the years ended December 31, 2022 and 2021 are as follows (Korean won in billions):

For the year ended December 31, 2022										
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Square Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Ecoplant Co., Ltd.	Others	Consolidation adjustments	Total
1. Total sales	₩ 78,057	₩ 17,305	₩ 4,511	₩ 9,666	₩ 3,139	₩ 11,249	₩ 7,551	₩ 10,407	₩ (7,333)	₩ 134,552
2. Revenue from contracts with customers	78,026	17,305	4,146	7,777	3,139	11,242	7,500	9,210	(5,839)	132,506
Categories:										
Service sales	338	15,805	2,960	428	-	-	7,162	2,958	(2,650)	27,001
Finished goods sales	73,254	2	43	325	2,713	4,726	243	5,148	(1,541)	84,913
Merchandise sales	2,464	1,036	897	7,018	411	6,321	63	1,048	(1,549)	17,709
Other sales	1,970	462	246	6	15	195	32	56	(99)	2,883
	<u>78,026</u>	<u>17,305</u>	<u>4,146</u>	<u>7,777</u>	<u>3,139</u>	<u>11,242</u>	<u>7,500</u>	<u>9,210</u>	<u>(5,839)</u>	<u>132,506</u>
Timing of revenue recognition:										
Recognition at a point in time	77,688	1,500	1,186	7,349	3,139	1,422	338	6,252	(3,189)	95,685
Recognition over a period of time	338	15,805	2,960	428	-	9,820	7,162	2,958	(2,650)	36,821
	<u>78,026</u>	<u>17,305</u>	<u>4,146</u>	<u>7,777</u>	<u>3,139</u>	<u>11,242</u>	<u>7,500</u>	<u>9,210</u>	<u>(5,839)</u>	<u>132,506</u>
3. Revenue from other sources	31	-	365	1,889	-	7	51	1,197	(1,494)	2,046

For the year ended December 31, 2021										
	SK Innovation Co., Ltd.	SK Telecom Co., Ltd.	SK Square Co., Ltd.	SK Networks Co., Ltd.	SKC Co., Ltd.	SK E&S Co., Ltd.	SK Ecoplant Co., Ltd.	Others	Consolidation adjustments	Total
1. Total sales	₩ 46,853	₩ 19,132	₩ 1,146	₩ 11,018	₩ 2,264	₩ 7,855	₩ 6,221	₩ 8,813	₩ (6,098)	₩ 97,204
2. Revenue from contracts with customers	46,822	19,132	704	9,134	2,264	7,848	6,209	7,998	(4,865)	95,246
Categories:										
Service sales	277	17,746	501	365	-	-	6,176	2,838	(2,166)	25,737
Finished goods sales	44,197	28	14	462	1,999	3,194	-	4,097	(1,114)	52,877
Merchandise sales	1,264	1,267	139	8,305	231	4,559	19	1,039	(1,545)	15,278
Other sales	1,084	91	50	2	34	95	14	24	(40)	1,354
	<u>46,822</u>	<u>19,132</u>	<u>704</u>	<u>9,134</u>	<u>2,264</u>	<u>7,848</u>	<u>6,209</u>	<u>7,998</u>	<u>(4,865)</u>	<u>95,246</u>
Timing of revenue recognition:										
Recognition at a point in time	46,545	1,434	203	8,769	2,264	1,069	33	5,160	(2,699)	62,778
Recognition over a period of time	277	17,698	501	365	-	6,779	6,176	2,838	(2,166)	32,468
	<u>46,822</u>	<u>19,132</u>	<u>704</u>	<u>9,134</u>	<u>2,264</u>	<u>7,848</u>	<u>6,209</u>	<u>7,998</u>	<u>(4,865)</u>	<u>95,246</u>
3. Revenue from other sources	31	-	442	1,884	-	7	12	815	(1,233)	1,958

5. Acquisitions and disposals of subsidiaries and non-controlling interests

5.1 Acquisitions of significant subsidiaries

Significant acquisitions of subsidiaries during the year ended December 31, 2022 are listed in Note 40.

5.2 Disposal of investments in subsidiaries

1) Disposal of SK Ecoengineering Co., Ltd. performed by SK Ecoplant Co., Ltd.

During the year ended December 31, 2022, SK Ecoplant Co., Ltd., a subsidiary of the Group, sold its entire stake in SK Ecoengineering Co., Ltd. to Ecoenergy Holdings Ltd., changing its ownership in SK Ecoengineering Co., Ltd. from 100% to 49.99% and losing control over the entity. As a result, SK Ecoengineering Co., Ltd. was reclassified from a subsidiary to an associate of the Group.

5.3 Other significant equity transactions

1) Redeemable convertible preferred shares and convertible preferred shares issued by SK Ecoplant Co., Ltd.

SK Ecoplant Co., Ltd. a subsidiary of the Group, issued 940,000 shares of non-voting redeemable convertible preferred shares in accordance with a resolution of the Board of Directors held on June 14, 2022. The issuance date of the redeemable convertible preferred stock is June 29, 2022, and the issuance amount is ₩400,003 million (issue price per share: ₩425,535, par value: ₩5,000). The entity also issued 1,333,334 shares of convertible preferred shares in accordance with the resolution of the Board of Directors held on June 30, 2022, of which the issuance date of the convertible preferred shares is July 22, 2022, and the issuance amount is ₩600,000 million (issue price per share: ₩450,000, par value: ₩5,000).

2) Paid-in capital increase of SK ON Co., Ltd

SK ON Co., Ltd. a subsidiary of the Group, conducted a third-party allocation paid-in capital increase (14,987,801 shares) on December 21, 2022. As a result, the Group's stake in SK ON Co., Ltd. decreased from 100% to 96.5%, and the Group's non-controlling interest increased by ₩484,097 million.

3) Paid-in capital increase of BlueOval SK, LLC

SK Battery America, Inc. a subsidiary of the Group, acquired a 50% stake in BlueOval SK, LLC, a joint venture with Ford Motor Company. As a result, the non-controlling interest of the Group increased by ₩926,189 million.

4) Paid-in capital increase of Tmap Mobility Co., Ltd.

Tmap Mobility Co., Ltd. a subsidiary of the Group, conducted a third-party allocation paid-in capital increase (1,487,111 shares) on September 6, 2022. As a result, the Group's stake in Tmap Mobility Co., Ltd. decreased from 66.3% to 60.1%, and the Group's non-controlling stake increased by ₩194,239 million.

5) Paid-in capital increase of SK REITs Co., Ltd.

SK REITs Co., Ltd. a subsidiary of the Group, conducted a paid-in capital increase (41,533,547 shares) in the general public offering of real estate stocks after allocating shareholders on August 12, 2022. As a result, the Group's stake in SK REITs Co., Ltd. decreased from 50.0% to 42.9%, and the non-controlling interest of the Group increased by ₩171,632 million.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

6. Financial instruments

6.1 Financial assets

Details of financial assets as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022				
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Financial assets designated as hedging instruments	Total
Current assets					
Cash and cash equivalents	₩ 3,782,673	₩ -	₩ 17,611,180	₩ -	₩ 21,393,853
Short-term financial instruments	2,240,613	-	1,486,660	-	3,727,273
Trade receivables (*1)	45,369	-	13,138,018	-	13,183,387
Other receivables	162,617	-	3,397,174	-	3,559,791
Short-term loans	-	-	132,368	-	132,368
Accrued income	-	-	117,013	-	117,013
Short-term investment securities	230,576	-	10,045	-	240,621
Guarantee deposits	-	-	469,258	-	469,258
Derivative financial assets	210,773	-	-	229,353	440,126
Lease receivables	-	-	27,745	-	27,745
	<u>6,672,621</u>	<u>-</u>	<u>36,389,461</u>	<u>229,353</u>	<u>43,291,435</u>
Non-current assets					
Long-term financial instruments	24,580	-	87,904	-	112,484
Long-term trade receivables	-	-	517,701	-	517,701
Long-term other receivables	170,052	-	210,912	-	380,964
Long-term loans	-	-	408,954	-	408,954
Long-term investment securities	1,976,650	5,972,901	946	-	7,950,497
Guarantee deposits	-	-	692,386	-	692,386
Derivative financial assets	852,842	-	-	333,817	1,186,659
Lease receivables	-	-	59,316	-	59,316
	<u>3,024,124</u>	<u>5,972,901</u>	<u>1,978,119</u>	<u>333,817</u>	<u>11,308,961</u>
	<u>₩ 9,696,745</u>	<u>₩ 5,972,901</u>	<u>₩ 38,367,580</u>	<u>₩ 563,170</u>	<u>₩ 54,600,396</u>

(*1) Contract assets (unbilled receivables) amounting to ₩1,151,145 million as of December 31, 2022 are not included in the financial assets.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

6.1 Financial assets (cont'd)

	December 31, 2021				
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Financial assets designated as hedging instruments	Total
Current assets					
Cash and cash equivalents	₩ 2,800,214	₩ -	₩ 9,517,341	₩ -	₩ 12,317,555
Short-term financial instruments	5,240,060	-	884,690	-	6,124,750
Trade receivables (*1)	52,088	-	10,598,250	-	10,650,338
Other receivables	203,029	-	2,216,530	-	2,419,559
Short-term loans	-	-	94,031	-	94,031
Accrued income	-	-	114,924	-	114,924
Short-term investment securities	353,310	-	45	-	353,355
Guarantee deposits	-	-	276,658	-	276,658
Derivative financial assets	92,402	-	-	39,229	131,631
Lease receivables	-	-	19,016	-	19,016
	<u>8,741,103</u>	<u>-</u>	<u>23,721,485</u>	<u>39,229</u>	<u>32,501,817</u>
Non-current assets					
Long-term financial instruments	18,078	-	30,014	-	48,092
Long-term trade receivables	-	-	391,739	-	391,739
Long-term other receivables	256,930	-	61,954	-	318,884
Long-term loans	-	-	411,711	-	411,711
Long-term investment securities	1,972,522	7,572,640	1,023	-	9,546,185
Guarantee deposits	-	-	711,104	-	711,104
Derivative financial assets	516,067	-	-	224,550	740,617
Lease receivables	-	-	36,175	-	36,175
	<u>2,763,597</u>	<u>7,572,640</u>	<u>1,643,720</u>	<u>224,550</u>	<u>12,204,507</u>
	<u>₩ 11,504,700</u>	<u>₩ 7,572,640</u>	<u>₩ 25,365,205</u>	<u>₩ 263,779</u>	<u>₩ 44,706,324</u>

(*1) Contract assets (unbilled receivables) amounting to ₩737,104 million as of December 31, 2021 are not included in the financial assets.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

6.3 Gain and loss by category of financial instruments

Details of gain and loss by category of financial instruments for the years ended in December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022						
	Dividends income	Interest income	Interest expense	Gain (loss) on foreign currency	Gain (loss) on derivatives instruments	Others	Total
Financial assets measured at FVTPL	₩ 19,257	₩ 184,589	₩ -	₩ (2,229)	₩ 3,782,541	₩ (830,091)	₩ 3,154,067
Financial assets measured at FVOCI	32,671	126	-	(49)	-	(2,075,289)	(2,042,541)
Financial assets measured at amortized cost	-	289,441	-	553,787	-	183,483	1,026,711
Financial assets designated as hedging instruments	-	-	-	-	37,815	-	37,815
Financial liabilities measured at FVTPL	-	-	-	(14)	(3,661,837)	29,041	(3,632,810)
Other financial liabilities	-	-	(2,123,959)	(934,385)	-	-	(3,058,344)
Financial liabilities designated as hedging instruments	-	-	-	-	(192,536)	-	(192,536)
	<u>₩ 51,928</u>	<u>₩ 474,156</u>	<u>₩ (2,123,959)</u>	<u>₩ (382,890)</u>	<u>₩ (34,017)</u>	<u>₩ (2,692,856)</u>	<u>₩ (4,707,638)</u>
	For the year ended December 31, 2021						
	Dividends income	Interest income	Interest expense	Gain (loss) on foreign currency	Gain (loss) on derivatives instruments	Others	Total
Financial assets measured at FVTPL	₩ 22,972	₩ 30,659	₩ -	₩ 30	₩ 904,995	₩ 295,139	₩ 1,253,795
Financial assets measured at FVOCI	40,860	336	-	122	-	970,560	1,011,878
Financial assets measured at amortized cost	-	141,803	-	905,344	-	82,139	1,129,286
Financial assets designated as hedging instruments	-	-	-	-	291,759	-	291,759
Financial liabilities measured at FVTPL	-	-	-	(2,796)	(1,501,436)	(25,788)	(1,530,020)
Other financial liabilities	-	-	(1,418,481)	(1,168,733)	-	-	(2,587,214)
Financial liabilities designated as hedging instruments	-	-	-	-	(22,798)	-	(22,798)
	<u>₩ 63,832</u>	<u>₩ 172,798</u>	<u>₩ (1,418,481)</u>	<u>₩ (266,033)</u>	<u>₩ (327,480)</u>	<u>₩ 1,322,050</u>	<u>₩ (453,314)</u>

6.4 Fair values of financial instruments by hierarchy level

1) Fair values and book values of financial instruments as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	Book value	Fair value	Book value	Fair value
Bonds payable	₩ 35,862,966	₩ 34,930,988	₩ 34,856,002	₩ 34,967,026
Borrowings	38,609,196	38,086,905	23,249,591	23,196,353

The fair value of bonds payable and borrowings was measured as the present value of the contractually determined stream of future cash flows discounted at the market interest rate (2.40% ~ 5.99%) regarding residual market risks. As the book values of other financial assets and other financial liabilities are reasonable approximations to fair values, the fair values have not been disclosed.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

6.4 Fair values of financial instruments by hierarchy level (cont'd)

2) Details of fair values of financial instruments by hierarchy level as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets measured at FVTPL	₩ 430,499	₩ 6,380,535	₩ 1,822,096	₩ 8,633,130
Financial assets measured at FVOCI	2,853,745	-	3,119,156	5,972,901
Derivative financial assets	861	878,318	747,606	1,626,785
	<u>₩ 3,285,105</u>	<u>₩ 7,258,853</u>	<u>₩ 5,688,858</u>	<u>₩ 16,232,816</u>
Financial liabilities:				
Financial liabilities measured at FVTPL	₩ -	₩ -	₩ 432,497	₩ 432,497
Derivative financial liabilities	-	228,490	798,123	1,026,613
	<u>₩ -</u>	<u>₩ 228,490</u>	<u>₩ 1,230,620</u>	<u>₩ 1,459,110</u>
	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets measured at FVTPL	₩ 462,531	₩ 8,518,311	₩ 1,915,389	₩ 10,896,231
Financial assets measured at FVOCI	5,260,168	-	2,312,472	7,572,640
Derivative financial assets	7,219	417,876	447,153	872,248
	<u>₩ 5,729,918</u>	<u>₩ 8,936,187</u>	<u>₩ 4,675,014</u>	<u>₩ 19,341,119</u>
Financial liabilities:				
Financial liabilities measured at FVTPL	₩ -	₩ -	₩ 253,784	₩ 253,784
Derivative financial liabilities	600	96,891	663,314	760,805
	<u>₩ 600</u>	<u>₩ 96,891</u>	<u>₩ 917,098</u>	<u>₩ 1,014,589</u>

3) Valuation techniques and inputs

The description of the valuation techniques and inputs used to measure the fair value of financial instruments using fair value measurements as of December 31, 2022 and the end of the prior term, in which the Group is classified as Level 2 or Level 3 is as follows:

A. Currency forward and currency swap

The fair value of the currency forward and the currency swap was measured in principle based on the forward exchange rate disclosed in the market as of December 31, 2022 for the period consistent with the remaining period of the currency swap. If the forward exchange rate for a period consistent with the remaining period of the currency forward and the currency swap is not disclosed in the market, the forward exchange was measured by estimating the forward exchange rate for a period similar to the remaining period of the currency swap by applying interpolation to each period. The discount rate used to measure the fair value of the currency forward and the currency swap was determined using the yield curve derived from the rate quoted in the market as of December 31, 2022.

B. Commodity swap

In principle, the fair value of the commodity swap was measured on the basis of the spot transaction price disclosed in the market as of December 31, 2022 for the period consistent with the remaining period of the spot swap being measured. In addition, the discount rate used to measure the fair value of the spot swap was determined using the yield curve derived from the rate quoted in the market as of the December 31, 2022.

6.4 Fair values of financial instruments by hierarchy level (cont'd)

C. Interest rate swap

The fair value of the interest rate swap was measured in principle based on the interest rate swap rate disclosed in the market as of December 31, 2022 for the period consistent with the remaining period of the interest rate swap. If the interest rate swap for a period consistent with the remaining period of the interest rate swap is not disclosed in the market, the interest rate swap rate was measured by estimating the interest rate swap rate for a period similar to the remaining period of the interest rate swap by applying interpolation to each period.

D. Debt securities

The fair value of debt securities is measured by discounting the future cash flows of debt securities by applying the market interest rate applied to companies with similar creditworthiness as the issuer of debt securities.

E. Unlisted stocks

The fair value of unlisted stocks is measured by using a cash flow discount model and some assumptions are used that are not based on observable market prices or ratios, such as assumptions or estimates of sales growth, pre-tax operating profit rates, weighted average capital costs, etc. to estimate future cash flows. The weighted average capital expense used to discount future cash flows was determined by applying CAPM. The Group determined that the effect of the major assumptions and estimates that is mentioned above on the fair value of unlisted stocks was significant, so the fair value measurement of unlisted stock was categorized within Level 3 of the fair value hierarchy.

F. Convertible debt securities

The fair value of convertible debt securities was measured by adding the fair value of the ordinary bond component that does not include conversion rights and the fair value of the conversion right, which is an embedded derivative (purchase call option). The fair value of the non-convertible general bond component was measured by discounting the future cash flows of the bond using the market interest rate applied to entities with similar creditworthiness as the issuer of the convertible bond, and the fair value of the conversion right was measured using an option pricing model. Stock price volatility, a significant input used to measure the fair value of conversion rights, was estimated based on past stock price changes. The Group considered that the fair value of the right to convert was a significant proportion of the total fair value of the convertible debt securities and classified the fair value measurement of the entire convertible debt securities into Level 3 of the fair value hierarchy.

G. Contingent consideration

The fair value of the contingent consideration is estimated by the net profit before subtracting interest and corporate tax by scenarios, and based on these estimates, the Group measures the present value of the expected future receivables weighted on the probability of each scenario.

H. Total return swap agreement

The fair value of the total return swap agreement is based on Monte-Carlo Simulation. It generates the discrete path of the future interest rate, estimates the point of time when the buyout option is exercised, calculates the present value, and repeatedly executes it to calculate the fair value as the average value of the calculated value. On the other hand, unlisted shares subject to the purchase option were measured in accordance with the fair value assessment method of unlisted shares, and the fair value measurement of inter-share contracts was classified as Level 3 in the fair value hierarchy as the main assumptions and estimates used to assess the fair value of unlisted shares were considered to have a significant effect on their fair value.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

6.4 Fair values of financial instruments by hierarchy level (cont'd)

The valuation techniques and input variables used for major financial instruments classified as Level 3 are as follows (Korean won in millions):

	Valuation	amount	Valuation techniques	Level 3 inputs	Input variations
SK Shipping Co., Ltd.	Assets	₩ 179,500	DCF model	Permanent growth rate WACC	0.0% 8.17%
Total return swap agreement	Liabilities	₩ 235,125	Monte-Carlo simulation	Term structure of interest rate WACC	4.74% ~ 5.58% 8.17%

Among the inputs used to measure the fair value of a financial instrument, if the permanent growth rate increase (decrease), the fair value increases (decreases) and if the weighted average cost of capital increases (decrease), the fair value decreases (increases). There is no change in valuation techniques used to measure fair value of financial instruments classified as Level 2 and Level 3.

7. Trade receivables

(1) Details of trade receivables as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	Current	Non-current	Current	Non-current
Trade receivables:				
Trade receivables (*1)	₩ 13,948,905	₩ 548,695	₩ 11,182,015	₩ 407,641
Contract assets (unbilled receivables)	1,151,145	-	737,104	-
Loss allowance:				
Trade receivables	(765,518)	(30,994)	(531,677)	(15,902)
	<u>₩ 14,334,532</u>	<u>₩ 517,701</u>	<u>₩ 11,387,442</u>	<u>₩ 391,739</u>

(*1) Includes the net investment amount of the finance lease provided by the Group as a manufacturer or seller.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

7. Trade receivables (cont'd)

(2) Details of contract assets and liabilities related to the contract with the customer as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
Contract assets: (*1)				
Construction business	₩	988,901	₩	572,283
Telecommunication business		132,221		118,278
Others		241,677		200,349
	₩	<u>1,362,799</u>	₩	<u>890,910</u>
Contract liabilities: (*2)				
Construction business	₩	1,201,904	₩	973,020
Telecommunication business		233,922		202,967
Others		1,370,875		890,405
	₩	<u>2,806,701</u>	₩	<u>2,066,392</u>

(*1) Contract assets are included in trade receivables and other assets.

(*2) Contract liabilities are included in trade payables, advances received and other liabilities. The amount recognized as revenue in the current period in relation to the contract liabilities in the end of the prior period is ₩1,166,786 million, and there is no revenue recognized in the current period in relation to the performance obligation satisfied in the prior period.

(3) Details of construction profit variation by changes of accounting estimates related to construction contracts as of December 31, 2022 are as follows (Korean won in millions):

	December 31, 2022				
	Change in estimated construction revenue	Change in estimated cost	Impact on current period loss	Impact on future period profit	Change in unbilled (overbilled) receivables
SK Ecoplant Co., Ltd. and its subsidiaries	₩ 2,150,980	₩ 1,985,746	₩ 22,046	₩ 143,188	₩ 22,046
Others	18,167	34,891	(16,162)	(562)	(16,162)
	₩ <u>2,169,147</u>	₩ <u>2,020,637</u>	₩ <u>5,884</u>	₩ <u>142,626</u>	₩ <u>5,884</u>

Impact on profit of current and future period has been calculated by the estimated construction costs based on the situations which occurred from the inception of construction contracts to current reporting period and the estimated construction revenue as of current reporting period. Estimated construction costs and revenue can be changed in the future period.

(4) Details of the construction contracts where the contract revenue exceeds 5% of the preceding year's revenue under the percentage-of-completion method as of December 31, 2022 are as follows (Korean won in millions):

Subsidiary	Project	Contract date	Completion date	Percentage (%)	Unbilled receivables		Trade receivables (*1)	
					Amount	Allowance for doubtful accounts	Amount	Allowance for doubtful accounts
SK Ecoplant Co., Ltd.	RRE Project Goseong Green Power Project	2009.12 2014.07	2016.05 2022.01	100.00 99.15	₩ - 68,044	₩ - -	₩ - -	₩ - -

(*1) It refers to amounts of billed receivables.

(5) The amount includes the carrying amount of trade receivables accounted for as secured borrowings (₩98,947 million as of December 31, 2022 and ₩89,423 million as of December 31, 2021) when financial assets were transferred by trade receivables factoring and asset securitization, but are not derecognized, in entirety or in part.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

8. Inventories

Details of inventories as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022			December 31, 2021		
	Cost	Valuation		Cost	Valuation	
		allowance	Book value		allowance	Book value
Merchandise	₩ 1,472,655	₩ (41,180)	₩ 1,431,475	₩ 1,031,635	₩ (36,524)	₩ 995,111
Finished goods	4,669,223	(421,219)	4,248,004	2,997,935	(151,075)	2,846,860
Semifinished goods and work in progress	2,156,940	(337,549)	1,819,391	1,388,745	(118,721)	1,270,024
Raw materials and sub-materials	3,809,625	(232,547)	3,577,078	2,327,476	(89,613)	2,237,863
Materials in transit	3,791,181	-	3,791,181	2,765,034	-	2,765,034
Supplies	668,966	(3,343)	665,623	538,897	(4,033)	534,864
Uncompleted contracts	16,765	-	16,765	17,415	-	17,415
Others	3,920	(1,153)	2,767	13,533	-	13,533
	<u>₩ 16,589,275</u>	<u>₩ (1,036,991)</u>	<u>₩ 15,552,284</u>	<u>₩ 11,080,670</u>	<u>₩ (399,966)</u>	<u>₩ 10,680,704</u>

9. Investment securities

Details of investment securities as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022			
	Financial assets measured at FVTPL	Financial assets measured at FVOCI (*1)	Financial assets measured at amortized cost	Total
Equity instruments:				
Marketable equity instruments	₩ 430,499	₩ 2,853,745	₩ -	₩ 3,284,244
Non-marketable equity instruments	145,087	3,118,493	-	3,263,580
	<u>575,586</u>	<u>5,972,238</u>	<u>-</u>	<u>6,547,824</u>
Bond instruments:				
Beneficiary securities and others	1,337,220	663	-	1,337,883
Debt securities	294,420	-	10,991	305,411
	<u>1,631,640</u>	<u>663</u>	<u>10,991</u>	<u>1,643,294</u>
	<u>₩ 2,207,226</u>	<u>₩ 5,972,901</u>	<u>₩ 10,991</u>	<u>₩ 8,191,118</u>
Current investment securities	₩ 230,576	₩ -	₩ 10,045	₩ 240,621
Non-current investment securities	1,976,650	5,972,901	946	7,950,497
	December 31, 2021			
	Financial assets measured at FVTPL	Financial assets measured at FVOCI (*1)	Financial assets measured at amortized cost	Total
Equity instruments:				
Marketable equity instruments	₩ 462,531	₩ 5,260,168	₩ -	₩ 5,722,699
Non-marketable equity instruments	170,478	2,304,673	-	2,475,151
	<u>633,009</u>	<u>7,564,841</u>	<u>-</u>	<u>8,197,850</u>
Bond instruments:				
Beneficiary securities and others	716,254	663	-	716,917
Debt securities	976,569	7,136	1,068	984,773
	<u>1,692,823</u>	<u>7,799</u>	<u>1,068</u>	<u>1,701,690</u>
	<u>₩ 2,325,832</u>	<u>₩ 7,572,640</u>	<u>₩ 1,068</u>	<u>₩ 9,899,540</u>
Current investment securities	₩ 353,310	₩ -	₩ 45	₩ 353,355
Non-current investment securities	1,972,522	7,572,640	1,023	9,546,185

(*1) The Group has applied the irrevocable option to designate the equity instruments held for strategic investment, not for held-for-trading purpose, at the date of initial application, as items measured at FVOCI.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

10. Investments in associates and joint ventures

(1) Investments in associates and joint ventures

Details of investments in associates and joint ventures as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Company	Domicile	December 31, 2022			December 31,
		Equity ownership (*1)	Acquisition cost	Book value	2021
					Book value
Associates:					
SK Hynix Inc.	Korea	20.1%	₩ 5,420,310	₩ 13,876,478	₩ 13,746,931
Vingroup Joint Stock Company (*2,3)	Vietnam	6.1%	957,882	668,735	984,778
Eureka Midstream Holdings	USA	40.0%	465,582	558,039	523,829
VCM Services And Trading Development Joint Stock Company (*2)	Vietnam	15.8%	465,019	495,372	454,794
Masan Group Corporation (*2)	Vietnam	9.3%	457,718	382,546	419,935
SK Ecoengineering Co., Ltd.(*4)	Korea	49.9%	487,863	508,121	-
Darwin LNG Pty Ltd.	Australia	25.0%	419,675	458,916	438,090
Center For Breakthrough Medicines Holdings, LLC	USA	44.0%	409,059	387,739	237,277
Shenzhen Londian Wason Holdings Group. Co., Ltd.	China	29.5%	383,369	468,993	443,661
The CrownX Corporation (*2)	Vietnam	4.9%	348,648	390,667	361,163
FR BR Aggregator	USA	39.0%	350,718	286,327	301,159
Huizhou EVE United Energy Co., Ltd.	China	49.0%	344,465	430,301	430,164
Peru LNG Company, LLC	USA	20.0%	331,144	291,151	258,037
Daehan Oil Pipeline Corporation	Korea	41.0%	311,372	325,794	317,050
NHIP II Bison Holdings, LLC	USA	24.4%	297,511	301,753	265,634
Hana Card Co., Ltd. (*5)	Korea	-	-	-	349,866
Yemen LNG Company Ltd. (*2,6)	Bermuda	6.9%	252,813	-	-
Canakkale Highway And Bridge	Turkey	25.0%	290,269	339,811	276,853
Korea IT Fund (*7)	Korea	63.3%	242,170	324,860	339,976
ProteoVant Sciences, Inc.	USA	40.0%	222,370	205,760	212,874
Joyvio (*2)	China	14.0%	213,793	219,137	240,006
Content Wavve Corp	Korea	39.3%	197,401	139,931	141,142
Best Oil Company Limited	Myanmar	35.0%	153,024	135,364	132,430
TBM Co., Ltd. (*2)	Japan	13.5%	141,971	124,336	138,602
ENN (Zhoushan) LNG Co., Ltd. (*2)	China	10.0%	133,229	136,268	130,473
8 Rivers Capital LLC (*2,8)	USA	12.5%	120,495	124,296	-
Others				2,880,597	1,894,323
				<u>24,461,292</u>	<u>23,039,047</u>
Joint ventures (*9):					
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	China	35.0%	676,332	965,874	1,140,152
SK Pucore Co., Ltd. (*10)	Korea	-	-	-	397,417
Beijing BESK Technology Co., Ltd	China	49.0%	247,428	251,247	261,564
Lunar Energy, Inc.	USA	43.7%	181,620	129,964	73,042
ZETA CAYMAN Limited	Cayman	50.0%	179,756	140,229	108,562
Ignis Therapeutics	Cayman	46.9%	177,525	90,858	93,980
Eurasia Tunnel	Turkey	50.0%	174,215	409,162	323,192
Parkingcloud Corp.	Korea	47.0%	160,038	157,625	160,038
Boryeong LNG Terminal Co., Ltd.	Korea	50.0%	133,323	164,059	146,686
SABIC SK Nexlene Company Pte. Ltd.	Singapore	50.0%	112,670	189,585	125,952
Others				497,110	180,813
				<u>2,995,713</u>	<u>3,011,398</u>
				<u>₩ 27,457,005</u>	<u>₩ 26,050,445</u>

10. Investments in associates and joint ventures (cont'd)

- (*1) Equity ownership includes indirect investments held by the consolidated subsidiaries.
- (*2) The Group retains significant influence on the associate despite having less than 20% equity interests.
- (*3) The Group recognized an impairment loss on investments in associate due to the indication that such investments may be impaired during the year ended December 31, 2022.
- (*4) During the year ended December 31, 2022, the Group lost control by selling part of SK Ecoengineering Co., Ltd. Therefore, it has been transferred to investment in affiliates from investment in subsidiaries.
- (*5) The Group recognized loss related to investment in associates of ₩48,639 million upon receiving ₩330,032 million in cash from Hana Financial Group Inc. by disposing all of Hana Card Co., Ltd.'s shares.
- (*6) Impairment losses on investments in associates were fully recognized as there was an indication of impairment prior to the current period.
- (*7) These companies were not included as consolidated subsidiaries as the Group does not have control over more than half of the voting rights by agreements.
- (*8) It was newly acquired during the year ended December 31, 2022.
- (*9) All joint arrangements that the Group has joint control over are structured by a separate entity. The parties that have joint control with respect to the joint agreements hold the rights to the net assets of the agreements and accordingly, they are classified as joint ventures.
- (*10) Although the Group's stake in SK pucore Co., Ltd. does not exceed 50%, it was reclassified as a subsidiary from joint venture for the year ended December 31, 2022 since the Group can exercise substantial control at the board of directors, and in July 2022, the Group obtained 100% of equity shares by paid-in capital reduction.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

10. Investments in associates and joint ventures (cont'd)

(2) Changes in carrying amount of investments in associates and joint ventures

Changes in investments in associates and joint ventures accounted for using the equity method for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022							Ending balance
	Beginning balance	Acquisitions	Disposals	Equity profit or losses on investments	Other capital movements	Dividends received	Others (*1)	
Associates:								
SK Hynix Inc.	₩ 13,746,931	₩ -	₩ -	₩ 363,823	₩ 122,037	₩ (356,483)	₩ 170	₩ 13,876,478
Vingroup Joint Stock Company	984,778	-	-	(37,374)	(31,801)	-	(246,868)	668,735
Eureka Midstream Holdings	523,829	-	-	18,699	-	(20,671)	36,182	558,039
VCM Services And Trading Development Joint Stock Company	454,794	-	-	12,037	(3,566)	-	32,107	495,372
Masan Group Corporation	419,935	-	-	(11,417)	(51,072)	(5,819)	30,919	382,546
SK Ecoengineering Co., Ltd.	-	-	-	23,917	(3,658)	-	487,862	508,121
Darwin LNG Pty Ltd.	438,090	-	-	(2,541)	-	(3,882)	27,249	458,916
Center For Breakthrough Medicines Holdings, LLC	237,277	193,001	-	(56,304)	-	-	13,765	387,739
Shenzhen Londian Wason Holdings Group. Co., Ltd.	443,661	-	(285)	(5,100)	-	-	30,717	468,993
The CrownX Corporation	361,163	-	-	744	(1,617)	-	30,377	390,667
FR BR Aggregator	301,159	-	-	(36,165)	-	(1,431)	22,764	286,327
Huizhou EVE United Energy Co., Ltd.	430,164	-	-	13,802	(13,665)	-	-	430,301
Peru LNG Company, LLC	258,037	-	-	15,613	17,501	-	-	291,151
Daehan Oil Pipeline Corporation	317,050	-	-	17,002	1,490	(9,748)	-	325,794
NHIP II Bison Holdings, LLC	265,634	-	-	27,173	-	(9,037)	17,983	301,753
Hana Card Co., Ltd.	349,866	-	(368,389)	17,749	774	-	-	-
Canakkale Highway And Bridge Korea IT Fund	276,853	18,241	-	(42,741)	87,458	-	-	339,811
ProteoVant Sciences, Inc.	339,976	-	-	4,753	(7,459)	(12,410)	-	324,860
Joyvio	212,874	-	-	(29,248)	22,134	-	-	205,760
Content Wavve Corp	240,006	-	-	(14,324)	(23,833)	-	17,288	219,137
Best Oil Company Limited	141,142	32,059	-	(33,301)	31	-	-	139,931
TBM Co., Ltd.	132,430	-	-	17,158	(18,859)	-	4,635	135,364
ENN (Zhoushan) LNG Co., Ltd.	138,602	-	-	(4,028)	1	-	(10,239)	124,336
8 Rivers Capital LLC	130,473	-	-	7,467	(10,737)	-	9,065	136,268
Others	-	129,195	-	(2,481)	-	-	(2,418)	124,296
	<u>1,894,323</u>	<u>1,376,599</u>	<u>(41,972)</u>	<u>(75,800)</u>	<u>19,596</u>	<u>(65,875)</u>	<u>(226,274)</u>	<u>2,880,597</u>
	<u>23,039,047</u>	<u>1,749,095</u>	<u>(410,646)</u>	<u>189,113</u>	<u>104,755</u>	<u>(485,356)</u>	<u>275,284</u>	<u>24,461,292</u>
Joint ventures:								
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	1,140,152	-	-	(88,380)	(22,489)	(63,409)	-	965,874
SK Puore Co., Ltd.	397,417	-	-	-	-	-	(397,417)	-
Beijing BESK Technology Co., Ltd.	261,564	-	-	(3,184)	(7,133)	-	-	251,247
Lunar Energy, Inc.	73,042	90,325	-	(44,252)	-	-	10,849	129,964
ZETA CAYMAN Limited	108,562	982	-	(979)	24,644	-	7,020	140,229
Ignis Therapeutics	93,980	-	-	(14,927)	11,548	-	257	90,858
Eurasia Tunnel	323,192	-	-	38,272	25,627	-	22,071	409,162
Parkingcloud Corp	160,038	-	(201)	(2,449)	237	-	-	157,625
Boryeong LNG Terminal Co., Ltd.	146,686	-	-	17,233	140	-	-	164,059
SABIC SK Nextlene Company Pte. Ltd.	125,952	-	-	68,848	(5,215)	-	-	189,585
Others	<u>180,813</u>	<u>341,281</u>	<u>(9,420)</u>	<u>(75,054)</u>	<u>3,183</u>	<u>(3,380)</u>	<u>59,687</u>	<u>497,110</u>
	<u>3,011,398</u>	<u>432,588</u>	<u>(9,621)</u>	<u>(104,872)</u>	<u>30,542</u>	<u>(66,789)</u>	<u>(297,533)</u>	<u>2,995,713</u>
	<u>₩ 26,050,445</u>	<u>₩ 2,181,683</u>	<u>₩ (420,267)</u>	<u>₩ 84,241</u>	<u>₩ 135,297</u>	<u>₩ (552,145)</u>	<u>₩ (22,249)</u>	<u>₩ 27,457,005</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

10. Investments in associates and joint ventures (cont'd)

	For the year ended December 31, 2021							
	Beginning balance	Acquisitions	Disposals	Equity profit or losses on investments	Other capital movements	Dividends received	Others (*1)	Ending balance
Associates:								
SK Hynix Inc.	₩ 11,750,425	₩ -	₩ -	₩ 1,921,010	₩ 226,952	₩ (170,937)	₩ 19,481	₩ 13,746,931
Vingroup Joint Stock Company	851,300	-	-	(29,190)	85,610	-	77,058	984,778
Eureka Midstream Holdings	465,917	-	-	18,461	-	(2,861)	42,312	523,829
VCM Services And Trading Development Joint Stock Company	-	465,019	-	(3,754)	127	-	(6,598)	454,794
Masan Group Corporation	367,832	-	-	(28,952)	55,691	(6,565)	31,929	419,935
Darwin LNG Pty Ltd.	-	419,675	-	4,780	-	(10,776)	24,411	438,090
Shenzhen Lonian	383,049	-	-	23,650	8,975	(17,407)	45,394	443,661
Wason Holdings Group Co., Ltd.	-	348,648	-	-	-	-	12,515	361,163
The CrownX Corporation	-	-	-	-	-	-	-	-
FR BR Aggregator	283,933	-	-	(5,704)	-	(2,230)	25,160	301,159
Huizhou EVE United Energy Co., Ltd.	353,815	-	-	38,282	38,067	-	-	430,164
Peru LNG Company, LLC	243,456	-	-	(6,988)	21,569	-	-	258,037
Daehan Oil Pipeline Corporation	311,015	-	-	9,672	750	(4,387)	-	317,050
NHIP II Bison Holdings, LLC	244,325	-	-	(565)	-	-	21,874	265,634
Hana Card Co., Ltd.	314,930	-	-	35,057	(121)	-	-	349,866
Canakkale Highway And Bridge	208,272	56,312	-	(7,327)	19,596	-	-	276,853
Korea IT Fund	323,294	-	-	31,734	(4,336)	(10,716)	-	339,976
Center For Breakthrough Medicines Holdings, LLC	-	229,055	-	-	-	-	8,222	237,277
ProteoVant Sciences, Inc.	-	222,370	-	(14,506)	5,010	-	-	212,874
Joyvio	197,974	-	-	4,991	18,457	-	18,584	240,006
Content Wavve Corp	75,803	100,000	-	(34,592)	(69)	-	-	141,142
Parkingcloud Corp	-	160,038	-	-	-	-	-	160,038
Best Oil Company Limited	159,557	-	-	2,633	(36,194)	-	6,434	132,430
TBM Co., Ltd.	-	141,945	-	(1,863)	-	-	(1,480)	138,602
ENN (Zhoushan) LNG Co., Ltd.	133,164	600	-	9,388	10,134	-	(22,813)	130,473
Others	1,243,830	552,530	(72,028)	(99,148)	12,095	(45,485)	142,491	1,734,285
	<u>₩ 17,911,891</u>	<u>₩ 2,696,192</u>	<u>₩ (72,028)</u>	<u>₩ 1,867,069</u>	<u>₩ 462,313</u>	<u>₩ (271,364)</u>	<u>₩ 444,974</u>	<u>₩ 23,039,047</u>
Joint ventures:								
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	942,775	-	-	86,880	110,497	-	-	1,140,152
SK Pucore Co., Ltd.	419,404	-	-	(9,672)	(10,039)	-	(2,276)	397,417
Beijing BESK Technology Co., Ltd.	235,604	-	-	(1,148)	27,108	-	-	261,564
ZETA CAYMAN Limited	163,720	870	-	(865)	(67,416)	-	12,253	108,562
Ignis Therapeutics	-	177,525	-	(83,813)	268	-	-	93,980
Eurasia Tunnel	254,324	-	-	30,007	13,747	-	25,114	323,192
Boryeong LNG Terminal Co., Ltd.	146,568	-	-	12,880	38	(12,800)	-	146,686
SABIC SK Naxlene Company Pte. Ltd.	93,915	-	-	41,005	(8,968)	-	-	125,952
Hana Land Chip PEF 33	262,881	-	-	-	-	-	(262,881)	-
Others	587,881	41,618	(32,410)	(17,983)	13,294	(10,022)	(168,485)	413,893
	<u>₩ 3,107,072</u>	<u>₩ 220,013</u>	<u>₩ (32,410)</u>	<u>₩ 57,291</u>	<u>₩ 78,529</u>	<u>₩ (22,822)</u>	<u>₩ (396,275)</u>	<u>₩ 3,011,398</u>
	<u>₩ 21,018,963</u>	<u>₩ 2,916,205</u>	<u>₩ (104,438)</u>	<u>₩ 1,924,360</u>	<u>₩ 540,842</u>	<u>₩ (294,186)</u>	<u>₩ 48,699</u>	<u>₩ 26,050,445</u>

(*1) Others include the effects of changes in scope of consolidation, net foreign currency differences and others.

(3) Details of unrecognized changes in equity method caused by discontinuing the application of equity method as of December 31, 2022 are as follows (Korean won in millions):

	Beginning balance	Changes	Ending balance
Korea Consortium Kazakh B.V.	₩ 175,694	₩ -	₩ 175,694
Yemen LNG Company Ltd. and others	75,168	17,651	92,819

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

10. Investments in associates and joint ventures (cont'd)

(4) Details of reconciliation from net assets of investments in associates and joint ventures to book value of investments in associates and joint ventures as of December 31, 2022 are as follows (Korean won in millions):

	December 31, 2022					Book value
	Net assets	Equity ownership	Net assets attributable to the ownership interests	Cost-book value differentials	Intercompany transactions and others	
Associates:						
SK Hynix Inc. (*1)	₩ 63,277,078	20.1%	₩ 13,444,064	₩ 641,849	₩ (209,435)	₩ 13,876,478
Vingroup Joint Stock Company	6,489,239	6.1%	404,929	263,806	-	668,735
Eureka Midstream Holdings	752,416	40.0%	300,967	257,072	-	558,039
VCM Services And Trading Development Joint Stock Company	199,194	15.8%	31,372	464,000	-	495,372
Masan Group Corporation	465,598	9.3%	43,115	339,431	-	382,546
SK Ecoengineering Co., Ltd.	269,083	49.9%	134,542	413,393	(39,814)	508,121
Darwin LNG Pty Ltd.	143,544	25.0%	35,886	423,030	-	458,916
Center For Breakthrough Medicines Holdings, LLC	259,681	44.0%	114,276	273,463	-	387,739
Shenzhen Lonian Wason Holdings Group. Co., Ltd.	977,982	29.5%	288,831	180,162	-	468,993
The CrownX Corporation	947,209	4.9%	46,224	344,443	-	390,667
FR BR Aggregator	734,705	39.0%	286,315	12	-	286,327
Huizhou EVE United Energy Co., Ltd.	956,225	49.0%	468,550	-	(38,249)	430,301
Peru LNG Company, LLC	1,458,093	20.0%	291,619	-	(468)	291,151
Daehan Oil Pipeline Corporation	758,444	41.0%	310,974	22,878	(8,058)	325,794
NHIP II Bison Holdings, LLC	1,237,201	24.4%	301,753	-	-	301,753
Canakkale Highway And Bridge	1,366,773	25.0%	341,694	-	(1,883)	339,811
Korea IT Fund	512,936	63.3%	324,860	-	-	324,860
ProteoVant Sciences, Inc.	130,201	40.0%	52,080	153,680	-	205,760
Joyvio	1,210,064	14.0%	169,409	49,728	-	219,137
Content Wavve Corp	52,013	39.3%	20,426	118,438	1,067	139,931
Best Oil Company Limited	239,469	35.0%	83,814	51,655	(105)	135,364
TBM Co., Ltd.	103,084	13.5%	13,906	110,430	-	124,336
ENN (Zhoushan) LNG Co., Ltd.	606,408	10.0%	60,641	75,627	-	136,268
8 Rivers Capital LLC	109,889	12.5%	13,736	110,560	-	124,296
Joint ventures:						
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	2,544,380	35.0%	890,533	75,341	-	965,874
Beijing BESK Technology Co., Ltd.	533,054	49.0%	261,197	1,289	(11,239)	251,247
Lunar Energy, Inc.	289,758	43.7%	126,624	3,340	-	129,964
ZETA CAYMAN Limited	280,458	50.0%	140,229	-	-	140,229
Ignis Therapeutics	303,533	46.9%	134,120	26,732	(69,994)	90,858
Eurasia Tunnel	798,345	50.0%	399,172	17,209	(7,219)	409,162
Parkingcloud Corp	117,314	47.0%	55,183	102,442	-	157,625
Boryeong LNG Terminal Co., Ltd.	304,092	50.0%	152,046	28,736	(16,723)	164,059
Sabic SK Nexlene Company Pte. Ltd.	451,105	50.0%	225,553	-	(35,968)	189,585

(*1) The equity ownership presented is the ownership in respect to the number of shares issued by the investee, and the effective equity ratio of 21.25% was applied to the equity method valuation.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

10. Investments in associates and joint ventures (cont'd)

(5) Condensed financial information's of significant investments in associates and joint ventures as of December 31, 2022 are as follows (Korean won in millions).

	As of and for the year ended December 31, 2022						
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Sales	Net income (loss)	Total comprehensive income (loss)
Associates:							
SK Hynix Inc.	₩ 28,733,332	₩ 75,138,180	₩ 19,843,696	₩ 20,737,274	₩ 44,621,568	₩ 2,241,669	₩ 2,822,168
Vingroup Joint Stock Company	14,618,350	16,248,802	15,924,823	7,659,905	5,593,943	109,198	109,198
Eureka Midstream Holdings	51,274	1,096,191	20,280	374,769	154,969	66,980	66,980
VCM Services And Trading Development Joint Stock Company	785,788	251,464	481,588	289,654	1,618,231	109,145	109,145
Masan Group Corporation	2,560,127	5,029,982	3,507,731	2,114,985	4,198,026	261,967	261,967
SK Eengineering Co., Ltd.	1,192,631	83,995	989,387	18,156	2,892,268	127,238	127,238
Darwin LNG Pty Ltd.	285,324	63,694	205,474	-	2,021,118	48,386	48,386
Center For Breakthrough611,426 Medicines Holdings, LLC	169,851	186,874	62,127	34,917	13,056	(129,493)	(129,493)
Shenzhen Londian Wason Holdings Group Co., Ltd.	1,563,343	1,237,403	1,612,610	219,018	1,420,958	131,043	131,043
The CrownX Corporation	1,884,716	1,009,467	1,053,390	539,329	3,097,779	214,372	214,372
FR BR Aggregator	6,883	1,318,106	5,743	584,541	-	(44,828)	(88,147)
Huizhou EVE United Energy Co., Ltd.	944,371	599,242	523,374	64,014	1,712,660	80,321	80,321
Peru LNG Company, LLC	476,876	2,382,639	415,674	985,748	4,098,999	92,297	92,297
Daehan Oil Pipeline Corporation	151,735	904,373	41,197	256,467	186,499	40,317	43,960
Canakkale Highway And Bridge	684,919	3,905,363	208,245	3,015,264	139,721	(141,423)	189,471
Korea IT Fund	98,132	414,804	-	-	19,916	7,505	(4,274)
ProteoVant Sciences, Inc.	160,800	13,558	23,017	21,140	1,823	(19,865)	(19,865)
Joyvio	1,931,127	2,446,666	1,517,277	1,302,636	3,852,012	(106,121)	(99,065)
Content Wavve Corp	169,533	223,778	127,585	214,486	273,528	(226,165)	(226,165)
Best Oil Company Limited	519,493	177,530	444,921	12,633	1,503,786	56,751	56,751
TBM Co., Ltd.	105,028	56,211	11,984	46,171	54,403	(25,997)	(25,997)
ENN (Zhoushan) LNG Co., Ltd.	77,697	996,070	81,255	386,104	202,576	76,684	76,684
8 Rivers Capital LLC	108,078	16,167	1,981	12,375	5,828	(19,846)	(19,846)
Joint ventures:							
Sinopec-SK (Wuhan) Petrochemical Co., Ltd.	1,048,968	4,451,906	1,540,089	1,416,405	11,083,635	(252,483)	(252,483)
Beijing BESK Technology Co., Ltd.	487,154	443,638	378,291	19,447	827,742	8,687	8,687
Lunar Energy, Inc.	198,449	149,805	19,264	39,232	3,327	(102,237)	(102,237)
ZETA CAYMAN Limited	1,708	279,230	480	-	-	(1,959)	47,330
Ignis Therapeutics	106,965	198,852	1,743	541	-	(56,711)	(56,922)
Eurasia Tunnel	264,318	1,589,750	174,843	880,880	10,974	65,914	117,589
Parkingcloud Corp	128,999	72,295	44,696	39,284	74,957	(2,091)	(2,091)
Boryeong LNG Terminal Co., Ltd.	161,482	1,528,879	144,413	1,241,856	347,528	33,913	34,194
SABIC SK Nexlene Company Pte. Ltd.	378,172	489,856	119,137	297,786	648,468	134,917	103,955

(6) Details of joint operation as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	Ownership equity		Principal place of business	Date of financial statements in use	Nature of Joint Agreement Activities and others
	December 31 2022	December 31 2021			
Ulsan Aromatics Co., Ltd.	50%	50%	Republic of Korea	December 31	(*1,2)
Bonds payable and	65%	65%	Indonesia	December 31	(*1,3)

(*1) The Group classified activities subject to the joint arrangement with the entities above as a joint operation, considering facts and circumstances that the contractual agreement is designed to provide outputs to relevant parties of the agreement, despite the terms of the agreement that grant the parties neither any rights to the assets nor any obligations to the liabilities in relation to the agreement.

(*2) The entity was established as a joint venture with ENEOS Corporation on March 30, 2012 and is engaged in manufacturing of aromatic compounds.

(*3) The entity was established as a joint venture with PT Pertamina Patra Niaga on November 19, 2006 and is engaged in manufacturing and selling lubricating oil.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

11. Property, plant and equipment

(1) Details of property, plant and equipment as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Acquisition cost	₩ 85,931,206	₩ 73,860,837
Accumulated depreciation and accumulated impairment loss	(26,009,334)	(22,467,096)
	<u>₩ 59,921,872</u>	<u>₩ 51,393,741</u>

(2) Changes in property, plant and equipment for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022						Ending balance
	Beginning balance	Business combination	Acquisitions	Disposals	Depreciation	Others (*1)	
Land	₩ 9,294,248	₩ 288,833	₩ 23,740	₩ (88,773)	₩ -	₩ (201,104)	₩ 9,316,944
Buildings	6,003,660	58,773	26,541	(59,115)	(268,357)	848,153	6,609,655
Structures	1,986,791	58,310	22,125	(84,125)	(143,925)	67,499	1,906,675
Machinery and equipment	20,845,521	51,304	731,183	(342,637)	(4,167,360)	3,755,151	20,873,162
Vehicles	180,594	7,569	10,359	(5,138)	(32,098)	16,302	177,588
Operating lease asset	1,942,319	-	1,120,857	(21,241)	(463,811)	(190,531)	2,387,593
Others	4,447,472	175,836	1,706,473	(20,123)	(832,711)	(196,105)	5,280,842
Construction-in-progress	6,693,136	58,987	12,237,936	(196,397)	-	(5,424,249)	13,369,413
	<u>₩ 51,393,741</u>	<u>₩ 699,612</u>	<u>₩ 15,879,214</u>	<u>₩ (817,549)</u>	<u>₩ (5,908,262)</u>	<u>₩ (1,324,884)</u>	<u>₩ 59,921,872</u>

	For the year ended December 31, 2021						Ending balance
	Beginning balance	Business combination	Acquisitions	Disposals	Depreciation	Others (*1)	
Land	₩ 8,514,509	₩ 857,667	₩ 79,474	₩ (243,129)	₩ -	₩ 85,727	₩ 9,294,248
Buildings	4,567,149	241,018	20,264	(21,772)	(213,984)	1,410,985	6,003,660
Structures	1,660,194	48,975	22,391	(30,241)	(131,765)	417,237	1,986,791
Machinery and equipment	20,261,529	134,761	644,866	(161,153)	(3,949,965)	3,915,483	20,845,521
Vehicles	199,411	1,684	7,583	(1,299)	(34,219)	7,434	180,594
Operating lease asset	1,786,789	-	861,956	(29,304)	(442,502)	(234,620)	1,942,319
Others	3,382,742	32,207	1,417,158	(11,782)	(820,957)	448,104	4,447,472
Construction-in-progress	5,523,271	388,084	6,524,051	(7,226)	-	(5,735,044)	6,693,136
	<u>₩ 45,895,594</u>	<u>₩ 1,704,396</u>	<u>₩ 9,577,743</u>	<u>₩ (505,906)</u>	<u>₩ (5,593,392)</u>	<u>₩ 315,306</u>	<u>₩ 51,393,741</u>

(*1) Other changes include exclusion from the scope of consolidation, impairment losses, transfer of construction-in-progress to depreciable assets and investment properties, net translation differences and others.

(3) Capitalized borrowing costs

Capitalized borrowing costs and capitalization rates for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Property, plant and equipment and intangible assets	₩ 117,951	₩ 77,241
Capitalization rate	1.3% ~ 6.7%	1.3% ~ 4.6%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

12. Right-of-use assets and lease liabilities

(1) Details of right-of-use assets as of December 31, 2022 and December 31, 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Acquisition cost	₩ 8,112,183	₩ 7,234,373
Accumulated depreciation and accumulated impairment losses	<u>(2,674,769)</u>	<u>(2,200,057)</u>
	<u>₩ 5,437,414</u>	<u>₩ 5,034,316</u>

(2) Changes in right-of-use assets for the year ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022						Ending balance
	Beginning balance	Business combination	Increase	Decrease	Depreciation	Others (*1)	
Land and buildings	₩ 2,200,309	₩ 17,236	₩ 1,044,340	₩ (183,099)	₩ (591,142)	₩ 31,762	₩ 2,519,406
Tank	172,618	-	35,425	(64)	(64,883)	13,307	156,403
Ships and vessels	1,234,191	-	256,799	-	(116,990)	61,547	1,435,547
Vehicles	1,167,310	37,432	273,840	(271,900)	(260,776)	997	946,903
Others	259,888	11,257	173,995	(34,558)	(89,075)	57,648	379,155
	<u>₩ 5,034,316</u>	<u>₩ 65,925</u>	<u>₩ 1,784,399</u>	<u>₩ (489,621)</u>	<u>₩ (1,122,866)</u>	<u>₩ 165,261</u>	<u>₩ 5,437,414</u>

	For the year ended December 31, 2021						Ending balance
	Beginning balance	Business combination	Increase	Decrease	Depreciation	Others (*1)	
Land and buildings	₩ 3,230,719	₩ 28,165	₩ 964,605	₩ (390,837)	₩ (522,480)	₩ (1,109,863)	₩ 2,200,309
Tank	217,252	-	11,355	(1,143)	(61,864)	7,018	172,618
Ships and vessels	1,013,186	-	286,424	-	(97,223)	31,804	1,234,191
Vehicles	1,264,696	1,312	379,707	(239,548)	(276,808)	37,951	1,167,310
Others	452,627	188	95,605	(22,503)	(131,014)	(135,015)	259,888
	<u>₩ 6,178,480</u>	<u>₩ 29,665</u>	<u>₩ 1,737,696</u>	<u>₩ (654,031)</u>	<u>₩ (1,089,389)</u>	<u>₩ (1,168,105)</u>	<u>₩ 5,034,316</u>

(*1) The amounts include net foreign exchange differences and others.

(3) Changes in lease liabilities for the year ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022							Ending balance
	Beginning balance	Business combination	Increase	Interest expenses	Decrease	Transfer	Others (*1)	
Lease liabilities	₩ 5,054,890	₩ 69,176	₩ 1,699,435	₩ 146,290	₩ (1,245,908)	₩ (96,717)	₩ (120,719)	₩ 5,506,447

	For the year ended December 31, 2021							Ending balance
	Beginning balance	Business combination	Increase	Interest expenses	Decrease	Transfer	Others (*1)	
Lease liabilities	₩ 5,665,951	₩ 29,476	₩ 1,633,969	₩ 110,475	₩ (1,181,100)	₩ (64,521)	₩ (1,139,360)	₩ 5,054,890

(*1) The amounts include net foreign exchange differences and others.

The Group recognized lease payments of ₩317,851 million (₩164,901 million as of December 31, 2021) in relation to short-term lease, ₩20,525 million (₩10,584 million as of December 31, 2021) in relation to leases of low-value assets, and ₩282,466 million (₩157,456 million as of December 31, 2021) in relation to variable lease payments in cost of sales and selling and administrative expenses during the year ended December 31, 2022. The total cash outflow of leases during the year ended December 31, 2022 is ₩1,866,750 million (₩1,514,041 million as of December 31, 2021).

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

13. Investment properties

(1) Details of investment properties as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Acquisition cost	₩ 2,046,637	₩ 1,125,221
Accumulated depreciation and accumulated impairment loss	<u>(180,531)</u>	<u>(158,093)</u>
	<u>₩ 1,866,106</u>	<u>₩ 967,128</u>

(2) Changes in investment properties for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>For the year ended December 31, 2022</u>					
	<u>Beginning balance</u>	<u>Acquisition</u>	<u>Disposal</u>	<u>Depreciation</u>	<u>Others (*1)</u>	<u>Ending balance</u>
Land	₩ 544,584	₩ 892,851	₩ (4,846)	₩ -	₩ (311,464)	₩ 1,121,125
Buildings	417,545	329,385	(1,304)	(17,562)	11,858	739,922
Structures	4,999	5	-	(148)	203	5,059
	<u>₩ 967,128</u>	<u>₩ 1,222,241</u>	<u>₩ (6,150)</u>	<u>₩ (17,710)</u>	<u>₩ (299,403)</u>	<u>₩ 1,866,106</u>
	<u>For the year ended December 31, 2021</u>					
	<u>Beginning balance</u>	<u>Acquisition</u>	<u>Disposal</u>	<u>Depreciation</u>	<u>Others (*1)</u>	<u>Ending balance</u>
Land	₩ 501,528	₩ -	₩ (131,201)	₩ -	₩ 174,257	₩ 544,584
Buildings	63,800	44,268	(111,308)	(17,058)	437,843	417,545
Structures	3,828	452	-	(72)	791	4,999
	<u>₩ 569,156</u>	<u>₩ 44,720</u>	<u>₩ (242,509)</u>	<u>₩ (17,130)</u>	<u>₩ 612,891</u>	<u>₩ 967,128</u>

(*1) This includes net translation differences, transferred amounts to property, plant and equipment and others.

(3) Details of profit or loss recognized for the year ended December 31, 2022 and 2021 with regards to investment properties are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Rental revenue	₩ 95,762	₩ 67,248
Depreciation	<u>(17,710)</u>	<u>(17,130)</u>
	<u>₩ 78,052</u>	<u>₩ 50,118</u>

The Group does not distinguish operating expenses related to rental revenue.

(4) As of December 31, 2022, the fair value of investment properties is ₩2,186,332 million.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

14. Goodwill

(1) Changes in goodwill for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Beginning balance	₩ 5,618,511	₩ 4,454,730
Business combination (See note 40)	1,724,875	1,028,547
Others (*1)	132,172	135,234
Ending balance	<u>₩ 7,475,558</u>	<u>₩ 5,618,511</u>

(*1) Others include net translation differences, retroactive adjustment amount of identifiable net assets in accordance with past business combination.

(2) Impairment testing of goodwill

1) Goodwill of each operating segment for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
SK Inc. and others	₩ 1,484,802	₩ 1,279,365
Group of SK Innovation Co., Ltd.	308,030	297,664
Group of SK Telecom Co., Ltd.	407,655	405,639
Group of SK Square Co., Ltd.	1,419,319	1,359,816
Group of SK E&S Co., Ltd.	262,908	49,569
Group of SK Networks Co., Ltd.	442,860	443,522
Group of SKC Co., Ltd.	871,782	775,088
Group of SK Ecoplant Co., Ltd.	<u>2,278,202</u>	<u>1,007,848</u>
	<u>₩ 7,475,558</u>	<u>₩ 5,618,511</u>

2) Significant assumptions to estimate the recoverable amounts reflected the management's expectation of future trend considered with external and internal (historical) information.

Significant assumptions used in impairment testing of goodwill for the year ended December 31, 2022 are as follows:

	Recoverable amount	Growth rate (*1)	Discount rate (*2)
SK Inc. and others	Value in use	1.0%	10.3% ~ 14.9%
Group of SK Innovation Co., Ltd.	Value in use	0.0% ~ 2.0%	11.0% ~ 12.5%
Group of SK Telecom Co., Ltd.	Value in use	1.0%	6.7%
Group of SK Square Co., Ltd.	Value in use	1.0%	9.1%
Group of SK E&S Co., Ltd.	Value in use	0.0%	8.5% ~ 20.0%
Group of SK Networks Co., Ltd.	Value in use	1.0%	9.3% ~ 14.4%
Group of SKC Co., Ltd.	Value in use	1.0%	11.4% ~ 12.9%
Group of SK Ecoplant Co., Ltd.	Value in use	1.0% ~ 1.7%	8.3% ~ 9.4%

(*1) Future cash flows for additional periods after the estimated period are estimated using a fixed growth rate.

(*2) The discount rate used to determine the recoverable amount of each operating segment is based on the weighted-average cost of capital.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

15. Intangible assets

(1) Details of intangible assets for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022						
	Beginning balance	Business combination	Acquisitions	Disposals	Amortization	Others (*2)	Ending balance
Development costs	₩ 292,091	₩ -	₩ 52,106	₩ (915)	₩ (77,924)	₩ (13,044)	₩ 252,314
Facility usage rights	51,727	2,274	2,176	(2)	(6,836)	(15,988)	33,351
Industrial property rights	122,489	127,708	18,688	(2,157)	(12,858)	(59,058)	194,812
Frequency usage rights	2,559,690	-	-	-	(477,256)	-	2,082,434
Customer-related assets	2,915,524	346,584	1,540	(239)	(293,536)	16,037	2,985,910
Membership (*1)	308,690	3,682	54,139	(15,000)	-	1,645	353,156
Development costs for petroleum resource	1,134,207	-	201,943	-	(74,847)	39,358	1,300,661
Brand-related assets (*1)	2,634,144	27,243	-	-	-	20,296	2,681,683
Developed technology	870,417	131,033	-	-	(174,695)	49,809	876,564
Others (*3)	1,792,911	152,514	254,752	(11,230)	(616,855)	376,042	1,948,134
	<u>₩ 12,681,890</u>	<u>₩ 791,038</u>	<u>₩ 585,344</u>	<u>₩ (29,543)</u>	<u>₩ (1,734,807)</u>	<u>₩ 415,097</u>	<u>₩ 12,709,019</u>

	For the year ended December 31, 2021						
	Beginning balance	Business combination	Acquisitions	Disposals	Amortization	Others (*2)	Ending balance
Development costs	₩ 219,166	₩ 1,383	₩ 61,448	₩ (1,742)	₩ (65,102)	₩ 76,938	₩ 292,091
Facility usage rights	55,671	-	1,817	(21)	(8,135)	2,395	51,727
Industrial property rights	87,019	37,730	20,719	(2,629)	(11,084)	(9,266)	122,489
Frequency usage rights	1,932,765	-	1,146,000	-	(519,075)	-	2,559,690
Customer-related assets	2,999,319	63,688	69,825	(506)	(266,281)	49,479	2,915,524
Membership (*1)	284,835	-	32,968	(16,302)	-	7,189	308,690
Development costs for petroleum resource	1,149,011	-	59,407	-	(35,517)	(38,694)	1,134,207
Brand-related assets (*1)	2,631,393	10	-	-	-	2,741	2,634,144
Developed technology	989,587	-	18,010	-	(156,179)	18,999	870,417
Others (*3)	1,692,511	280,694	207,440	(7,435)	(626,430)	246,131	1,792,911
	<u>₩ 12,041,277</u>	<u>₩ 383,505</u>	<u>₩ 1,617,634</u>	<u>₩ (28,635)</u>	<u>₩ (1,687,803)</u>	<u>₩ 355,912</u>	<u>₩ 12,681,890</u>

(*1) Membership and brand-related assets are classified as intangible assets with infinite useful lives and are not amortized.

(*2) This includes impairment loss, net translation differences, transfer to intangible assets from construction-in-progress and others.

(*3) This comprises intangible assets recognized through business combination, software, usable and profitable donation assets and others.

(2) Impairment testing of brand-related assets

The Company has estimated the recoverable amount of brand-related assets with indefinite useful lives for the impairment test. Significant assumptions to estimate the recoverable amounts reflected the management's expectation of future trend considered with external and internal (historical) information.

Significant assumptions used in impairment testing of brand-related assets as of December 31, 2022 are as follows:

	<u>Growth rate (*1)</u>	<u>Discount rate (*2)</u>
Value in use	1.0%	10.3% ~ 14.9%

(*1) Future cash flows for additional periods after the estimated period are estimated using a fixed growth rate.

(*2) The discount rate was estimated by adding risk premium to weighted average cost of capital.

As a result of goodwill impairment test of brand-related assets, the carrying amount does not exceed the recoverable amount, so there is no impairment loss recognized during the year ended December 31, 2022.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

16. Borrowings and bonds payable

(1) Details of borrowings and bonds payable as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	Current	Non-current	Current	Non-current
Short-term borrowings (*1)	₩ 17,457,297	₩ -	₩ 7,657,381	₩ -
Bonds and long-term borrowings:				
Bonds payable	8,119,008	27,743,958	5,613,715	29,242,287
Long-term borrowings (*1)	<u>3,254,112</u>	<u>17,897,787</u>	<u>2,214,356</u>	<u>13,377,854</u>
	<u>11,373,120</u>	<u>45,641,745</u>	<u>7,828,071</u>	<u>42,620,141</u>
	<u>₩ 28,830,417</u>	<u>₩ 45,641,745</u>	<u>₩ 15,485,452</u>	<u>₩ 42,620,141</u>

(*1) It includes borrowings collateralized for trade receivables of ₩98,947 million and ₩89,423 million as of December 31, 2022 and 2021, respectively, which were transferred but not derecognized.

(2) Details of bonds payable as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
SK Inc.	₩ 6,915,000	₩ 6,735,000
SK Innovation Co., Ltd.	1,293,650	1,252,750
SK Energy Co., Ltd.	3,310,000	3,360,000
SK Geo Centric Co., Ltd.	1,810,000	1,750,000
SK Incheon Petrochem Co., Ltd.	2,037,000	2,110,000
SK Enmove Co., Ltd.	920,000	720,000
SK Battery America, Inc.	1,267,300	1,185,500
SK On Co., Ltd.	700,000	700,000
SK Earthon Co., Ltd.	150,000	150,000
SK Telecom Co., Ltd.	7,005,760	6,822,600
SK Broadband Co., Ltd.	1,380,190	1,625,650
SK Shieldus Co., Ltd.	297,823	297,823
SK Networks Co., Ltd.	1,110,000	1,040,000
SK Magic Co., Ltd.	453,000	360,000
SK Rent-a-Car Co., Ltd.	725,000	720,000
SKC Co., Ltd.	192,400	398,807
SK Telesys Co., Ltd.	10,000	30,000
SKC Hightech & Marketing Co., Ltd.	-	10,000
SK E&S Co., Ltd.	1,580,000	1,380,000
Paju Energy Service Co., Ltd.	680,000	730,000
Narae Energy Service Co., Ltd.	370,000	360,000
Yeoju Energy Service Co., Ltd.	200,000	200,000
Ige Co., Ltd.	130,000	-
SK Ecoplant Co., Ltd.	1,550,000	1,558,000
SK Oceanplant Co., Ltd.	55,000	-
SK Specialty Co., Ltd.	460,000	460,000
SK Materials Airplus Incorporated.	100,000	100,000
SK Siltron Co., Ltd.	741,000	779,000
Teraon Co., Ltd.	10	10
SK Signet Inc.	500	2,800
SK REITs Co., Ltd.	429,000	-
	<u>35,872,633</u>	<u>34,837,940</u>
Addition: premium(Discount) on bonds payable	(9,667)	18,062
Less: current portion	<u>(8,119,008)</u>	<u>(5,613,715)</u>
	<u>₩ 27,743,958</u>	<u>₩ 29,242,287</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

16. Borrowings and bonds payable (cont'd)

(3) Details of long-term borrowings as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Financial institution	Description	Interest rate (%)	December 31, 2022	December 31, 2021
Korea Development Bank and others	General	0.00 ~ 6.83	₩ 8,256,466	₩ 7,062,438
Korea Development Bank and others	Fund for facility	1.50 ~ 7.50	5,811,463	4,300,193
Standard Chartered Bank and others	Foreign borrowings	0.00 ~ 8.00	5,714,344	2,463,366
Korea Energy Agency (*1)	Fund for mine exploration	0.00 ~ 8.80	75,416	61,804
Econg 1st Co., Ltd. and others	Callable preferred share	2.64 ~ 3.09	-	100,420
Korea Development Bank and others	Fund for operation	3.48 ~ 5.70	19,520	252,276
KEB Hana Bank	Fund for reasonable energy consumption	1.75	-	3,477
Korea Development Bank and others	Takeover	LIBOR(3M) + 1.60	177,422	165,970
Mizuho Bank and others	Takeover	EURIBOR(3M) + 0.70	217,543	216,117
MD Prime 1st Co., Ltd. and others	Others	3MCD+1.8, 4.95	<u>1,007,818</u>	<u>1,007,818</u>
			21,279,992	15,633,879
Addition (less): premium (discount)			(128,093)	(41,669)
Less: current portion			<u>(3,254,112)</u>	<u>(2,214,356)</u>
			<u>₩ 17,897,787</u>	<u>₩ 13,377,854</u>

(*1) As of December 31, 2022 and December 31, 2021, the Group holds a loan amounting to ₩ 67,655 million and ₩53,420 million from Korea Energy Agency for the purpose of oil exploration and development in which there is no repayment obligation in case for failure in exploration.

Long-term borrowings presented above are to be repaid either in installments or all at once at maturity. Financial instruments and other assets of the Group are pledged as detailed in Note 35.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

17. Long-term other payables

Details of long-term other payables as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022			
	Nominal value	Discount on long-term other payables		Long-term other payables
		Current portion		
Frequency usage right	₩ 1,690,470	₩ (52,129)	₩ (398,874)	₩ 1,239,467
Others	273,740	-	-	273,740
	<u>₩ 1,964,210</u>	<u>₩ (52,129)</u>	<u>₩ (398,874)</u>	<u>₩ 1,513,207</u>
	December 31, 2021			
	Nominal value	Discount on long-term other payables		Long-term other payables
		Current portion		
Frequency usage right	₩ 2,090,715	₩ (80,882)	₩ (398,823)	₩ 1,611,010
Others	243,333	-	-	243,333
	<u>₩ 2,334,048</u>	<u>₩ (80,882)</u>	<u>₩ (398,823)</u>	<u>₩ 1,854,343</u>

18. Provisions

Changes in the provisions for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022					
	Beginning balance	Increase	Decrease	Ending balance	Current	Non-current
Provision for sale warranties	₩ 131,417	₩ 111,744	₩ (27,970)	₩ 215,191	₩ 44,093	₩ 171,098
Provision for service / construction warranties	99,366	20,614	(24,132)	95,848	95,848	-
Provision for restoration	581,157	153,298	(29,284)	705,171	138,526	566,645
Provision for onerous contracts	256,190	108,729	(82,680)	282,239	235,530	46,709
Other provisions (*1)	168,371	360,630	(320,426)	208,575	126,201	82,374
	<u>₩ 1,236,501</u>	<u>₩ 755,015</u>	<u>₩ (484,492)</u>	<u>₩ 1,507,024</u>	<u>₩ 640,198</u>	<u>₩ 866,826</u>

(*1) Other provisions include ₩8,467 million of greenhouse gas emission allowance, and the Group recognizes expenses estimated to be spent for fulfilling its obligation on emissions exceeding greenhouse gas emission rights granted to the Group for the applicable year (See Note 39).

	For the year ended December 31, 2021					
	Beginning balance	Increase	Decrease	Ending balance	Current	Non-current
Provision for sale warranties	₩ 91,319	₩ 48,088	₩ (7,990)	₩ 131,417	₩ 4,910	₩ 126,507
Provision for service / construction warranties	101,415	21,791	(23,840)	99,366	99,366	-
Provision for restoration	166,855	426,452	(12,150)	581,157	60,840	520,317
Provision for onerous contracts	353,075	23,290	(120,175)	256,190	223,103	33,087
Other provisions (*1)	224,737	188,514	(244,880)	168,371	141,830	26,541
	<u>₩ 937,401</u>	<u>₩ 708,135</u>	<u>₩ (409,035)</u>	<u>₩ 1,236,501</u>	<u>₩ 530,049</u>	<u>₩ 706,452</u>

(*1) Other provisions include ₩18,402 million of greenhouse gas emission allowance, and the Group recognizes expenses estimated to be spent for fulfilling its obligation on emissions exceeding greenhouse gas emission rights granted to the Group for the applicable year (See Note 39).

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

19. Defined benefit liabilities

(1) Details of defined benefit liabilities as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Present value of defined benefit obligation	₩ 3,418,566	₩ 3,609,349
Fair value of plan assets	(3,908,480)	(3,381,561)
Defined benefit liability	170,368	283,938
Defined benefit asset (*1)	(660,282)	(56,150)

(*1) Since the Group has neither an enforceable legal right to use any excess reserves of a plan in the Group for a settlement of defined benefit obligations of another plan nor an intention to settle such obligations likewise, the asset above may not be set off.

(2) Changes in the defined benefit liabilities for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>For the year ended December 31, 2022</u>		
	<u>Present value of defined benefit obligation</u>	<u>Fair value of plan assets</u>	<u>Total</u>
Beginning balance	₩ 3,609,349	₩ (3,381,561)	₩ 227,788
Business combination	29,730	(27,223)	2,507
Provision for pension benefits:			
Current service cost	446,510	-	446,510
Past service cost	31	-	31
Net interest expense (income)	114,756	(109,849)	4,907
Remeasurement:			
Return on plan assets (excluding amounts included in net interest expenses)	-	59,001	59,001
Actuarial changes arising from changes in financial assumptions and others	(396,996)	-	(396,996)
Contributions by employer directly to plan assets	-	(840,984)	(840,984)
Benefit paid	(355,317)	323,722	(31,595)
Others	(29,497)	68,414	38,917
Ending balance	<u>₩ 3,418,566</u>	<u>₩ (3,908,480)</u>	<u>₩ 489,914</u>

19. Defined benefit liabilities (cont'd)

	<u>For the year ended December 31, 2021</u>		
	Present value of defined benefit obligation	Fair value of plan assets	Total
Beginning balance	₩ 3,491,805	₩ (3,054,840)	₩ 436,965
Business combination	3,182	-	3,182
Provision for pension benefits:			
Current service cost	450,854	-	450,854
Past service cost	164	-	164
Net interest expense (income)	83,124	(74,100)	9,024
Remeasurement:			
Return on plan assets (excluding amounts included in net interest expense)	-	19,943	19,943
Actuarial changes arising from changes in financial assumptions and others	(29,458)	-	(29,458)
Contributions by employer directly to plan assets	-	(588,275)	(588,275)
Benefit paid	(339,058)	313,145	(25,913)
Others	(51,264)	2,566	(48,698)
Ending balance	<u>₩ 3,609,349</u>	<u>₩ (3,381,561)</u>	<u>₩ 227,788</u>

(3) As of December 31, 2022 and 2021, 51.24% and 62.96% of the plan assets, respectively, consist of cash and cash equivalents and debt instruments.

(4) The principal assumptions used in actuarial calculation as of December 31, 2022 and 2021 are as follows:

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Discount rate for defined benefit obligation	2.30% ~ 6.17%	2.30% ~ 3.69%
Expected rate of salary increase	1.00% ~ 8.37%	1.00% ~ 8.00%

(5) The sensitivity analysis for significant actuarial assumptions as of December 31, 2022 is as follows (Korean won in millions):

	<u>Sensitivity level</u>	<u>Impact on the defined benefit liabilities</u>	
		<u>Increase</u>	<u>Decrease</u>
Discount rate for defined benefit obligation	0.5% point	₩ (128,807)	₩ 140,745
Expected rate of salary increase	0.5% point	137,482	(127,404)

The sensitivity analysis above has been done under the assumption that all other variables remain unchanged. However, actual results may change through the interaction among other variables.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

20. Other assets and liabilities

(1) Details of other assets as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Current assets:		
Short-term loans	₩ 132,368	₩ 94,031
Accrued income	117,013	114,924
Advanced payments	1,295,693	1,280,959
Prepaid expenses	2,788,339	2,695,879
Guarantee deposits	469,258	276,658
Derivative financial assets	440,126	131,631
Lease receivables	27,745	19,016
Other contract assets	150,887	112,226
Others	168,273	154,321
	<u>₩ 5,589,702</u>	<u>₩ 4,879,645</u>
Non-current assets:		
Long-term prepaid expenses	₩ 1,228,124	₩ 1,187,057
Long-term loans	408,954	411,711
Guarantee deposits	692,386	711,104
Derivative financial assets	1,186,659	740,617
Long-term lease receivables	59,316	36,175
Other long-term contract assets	62,654	41,580
Others	218,440	174,832
	<u>₩ 3,856,533</u>	<u>₩ 3,303,076</u>

(2) Details of other liabilities as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Current liabilities:		
Accrued expenses	₩ 4,821,371	₩ 4,845,940
Dividends payable	935	887
Advances received	2,107,997	1,464,756
Unearned revenue	139,865	99,749
Withholdings	1,859,463	2,061,187
Leasehold deposits received	167,538	198,776
Income tax payable	1,239,007	1,244,891
Derivative financial liabilities	208,194	321,570
Lease liabilities	1,286,208	1,250,891
Finance guarantee liabilities	1,508	642
Financial liabilities at fair value through profit or loss	57,218	160,528
Other contract liabilities	269,543	293,715
Others	126,513	48,266
	<u>₩ 12,285,360</u>	<u>₩ 11,991,798</u>
Non-current liabilities:		
Long-term accrued expenses	₩ 60,537	₩ 34,035
Long-term unearned revenue	839,648	640,133
Leasehold deposits received	432,615	298,478
Derivative financial liabilities	818,419	439,235
Long-term lease liabilities	4,220,239	3,803,999
Financial guarantee liabilities	23,400	16,910
Financial liabilities at fair value through profit or loss	91,355	59,123
Other long-term contract liabilities	75,875	51,220
Others (*1)	454,038	225,409
	<u>₩ 7,016,126</u>	<u>₩ 5,568,542</u>

(*1) Includes long-term employee benefit liabilities amounting to ₩137,793 million and ₩125,102 million as of December 31, 2022 and 2021, respectively.

20. Other assets and liabilities (cont'd)

(3) Details of incremental costs of obtaining a contract as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Current incremental costs of obtaining a contract	₩ 1,888,182	₩ 1,886,680
Non-current incremental costs of obtaining a contract	996,180	977,236
	<u>₩ 2,884,362</u>	<u>₩ 2,863,916</u>

The Group pays fees to its dealers based on the performance of customer recruitment and contract renewal relating to mobile telephone services, etc., and among these fees, costs that would not have been incurred if there were no contracts with the customer is recognized as prepaid expenses. The asset is amortized on a straight-line basis over the estimated contract period with the related customer. On the other hand, the amount of incremental cost of obtaining a contract recognized as an asset which was expensed as commission expense and others in the consolidated statement of comprehensive income for the current period is ₩2,485,593 million.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

21. Derivative financial assets and liabilities

(1) Details of derivative financial assets and liabilities as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	Current	Non-current	Current	Non-current
Firm contracts	₩ (17,832)	₩ (85,378)	₩ 20,966	₩ (92,236)
Swap contracts	326,765	(187,723)	(218,791)	(53,910)
Forward contracts	(66,554)	39,790	9,007	11,170
Futures contracts	4,827	-	8,794	-
Options contracts	(15,274)	601,551	(9,915)	436,358
	₩ 231,932	₩ 368,240	₩ (189,939)	₩ 301,382
Derivative financial assets	₩ 440,126	₩ 1,186,659	₩ 131,631	₩ 740,617
Derivative financial liabilities	(208,194)	(818,419)	(321,570)	(439,235)

(2) The Group has entered into derivatives (such as foreign exchange forwards, foreign exchange swap and interest swap) contracts in order to avoid exchange rate risk of foreign currency assets and liabilities and the interest rate risk associated with debts. In addition, The Group recognizes derivatives for various rights such as call options and put options granted under the agreement between shareholders. As of December 31, 2022, significant derivative financial instruments that the Group holds as a hedge or held-for-trading are as follows:

Segments	Purpose of transaction	Classification	Financial institutes
SK Inc. and others	Hedge of foreign currency exchange risk of foreign currency denominated contract and others	Foreign exchange forwards and total revenue swap agreement	KEB Hana Bank and others
SK Innovation Co., Ltd.	Cash flow hedge of forecasted sales of products and the risk of changes in market interest rates	Merchandise derivative and interest swaps and others	BOA, Credit Agricole and others
SK Telecom Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated bond, hedge of currency exchange, interest rate risk of floating rate foreign currency denominated bond and the risk of changes in market interest rates and others	Foreign exchange swaps and interest swaps and others	Korea Eximbank, Citi Bank and others
SK Square Co., Ltd.	Purpose of sale	conditional payment consideration, option and others	Odin9LLC, individual and others
SK Networks Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated debt and bond and others	Foreign exchange forwards and interest swaps and others	KEB Hana Bank, Kookmin Bank and others
SKC Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated debt and bond and others	Foreign exchange forwards and interest rate swaps	KEB Hana Bank, Woori Bank, Shinhan Bank and others
SK E&S Co., Ltd.	Hedge of foreign currency exchange risk of foreign currency denominated borrowings and hedge of interest rate of floating rate borrowings. Price change hedge of natural gas purchase contract	Foreign exchange forwards and interest rate swaps Merchandise swaps	Korea Development Bank Woori Bank, NH Bank, Kookmin Bank and others JARON&COMPANY(SINGAPORE) PTE and others
SK Ecoplant Co., Ltd.	Hedge of exchange rate fluctuations of foreign currency assets and liabilities, hedge of interest rate fluctuations such as loans and others	Foreign exchange forwards, Foreign exchange swaps	KEB Hana Bank, Woori Bank, Busan Bank, HSBC and others
SK Siltron Co., Ltd.	Exchange rate and interest rate fluctuation risk aversion of foreign currency borrowings with variable interest rates	Foreign exchange swap, interest rate swaps	Korea Development Bank, Korea Eximbank, NH Bank

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

22. Equity

(1) Details of issued capital as of December 31, 2022 and 2021 are as follows (Korean won in millions, except for number of shares):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Number of shares authorized for issue	400,000,000	400,000,000
Per share (Korean won)	₩ 200	₩ 200
Number of shares issued:		
Ordinary share	74,149,329	74,149,329
Preferred share	566,135	566,135
Issued capital:		
Ordinary share	₩ 16,030	₩ 16,030
Preferred share	113	113
	<u>₩ 16,143</u>	<u>₩ 16,143</u>

The Company retired 6,000,000 shares of its treasury share (par value: ₩1,200 million) by reducing retained earnings, which resulted in a difference between total par value of ordinary shares and issued capital.

(2) Details of other paid-in capital as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Additional paid-in capital (*1)	₩ 6,609,167	₩ 6,609,167
Treasury shares (*2)	(2,009,083)	(1,812,774)
Others	1,801,828	1,648,903
	<u>₩ 6,401,912</u>	<u>₩ 6,445,296</u>

(*1) During the year ended December 31, 2015, the Company repurchased treasury shares of ₩3,369,395 million from merger with the former SK Inc., which was recognized as a contra-equity account on additional paid-in capital.

(*2) For the period ended December 31, 2022, treasury shares consist of those acquired to increase the enterprise value and to stabilize share price (7,951,583 ordinary shares) and those acquired from repurchase of shares from dissenting shareholders on business combination and shares arising from odd lot shares (11,023,237 ordinary shares and 1,787 preferred shares) during the year 2015.

(3) Details of retained earnings as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Legal reserve (*1)	₩ 8,072	₩ 7,693
Voluntary reserve	62,897	62,897
Unappropriated retained earnings	14,847,644	13,990,460
	<u>₩ 14,918,613</u>	<u>₩ 14,061,050</u>

(*1) In accordance with the Korean Commercial Code, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of issued capital. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to issued capital through approval at the general meeting of the shareholders.

22. Equity (cont'd)

(4) Dividends

1) Details of dividends proposed for approval at the annual ordinary shareholders' meeting for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended			
	December 31, 2022		December 31, 2021	
	Ordinary share	Preferred share	Ordinary share	Preferred share
Number of shares (*1)	55,174,508	564,348	56,090,767	564,348
Par value per share (Korean won)	₩ 200	₩ 200	₩ 200	₩ 200
Dividend rate	1,750%	1,775%	3,250%	3,275%
Dividends	₩ 193,112	₩ 2,003	₩ 364,590	₩ 3,696

(*1) The total number of shares was calculated from the number of issued shares excluding treasury shares.

2) Details of Interim dividends proposed for approval at board of directors for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended			
	December 31, 2022		December 31, 2021	
	Ordinary share	Preferred share	Ordinary share	Preferred share
Number of shares (*1)	56,125,518	564,348	52,307,337	564,348
Par value per share (Korean won)	₩ 200	₩ 200	₩ 200	₩ 200
Dividend rate	750%	750%	750%	750%
Dividends	₩ 84,188	₩ 847	₩ 78,461	₩ 847

(*1) The total number of shares was calculated from the number of issued shares excluding treasury shares.

(5) Details of other components of equity as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Net gain on valuation of financial assets measured at FVOCI	₩ (948,954)	₩ 284,085
Equity adjustments of investments in associates and joint ventures	101,980	(27,047)
Net gain on valuation of derivative instruments	61,374	13,388
Net gain on translation of foreign operation	1,044,478	450,836
	₩ 258,878	₩ 721,262

22. Equity (cont'd)

(6) Upon resolution by the shareholders and the Board of Directors, the Group established a stock option program that entitles key management personnel an option to purchase ordinary shares. The terms and conditions related to the grants of the stock options granted under the share option program are as follows:

1) SK Inc.

	1-1(*1)	1-2(*2)	1-3(*2)	2-1(*2)	2-2(*2)
Grant date	2017-03-24			2020-03-25	
Type of shares to be issued	Ordinary shares				
Grant method	Reissue of treasury shares, but if the stock option's exercise price is lower than the stock's real price (evaluated based on exercise date), the Company may settle the difference in cash or with treasury share equivalent to the difference amount.				
Number of shares (shares)	41,429	41,430	41,431	142,692	71,346
Exercise price (Korean won)	₩ 226,290	₩ 244,400	₩ 263,950	₩ 153,450	₩ 153,450
Contractual life of options	2019.03.25 ~2022.03.24	2020.03.25 ~2023.03.24	2021.03.25 ~2024.03.24	2023.03.26 ~2027.03.25	2023.03.26 ~2027.03.25
Vesting conditions	2 year service from the grant date	3 year service from the grant date	4 year service from the grant date	2 year service from the grant date	3 year service from the grant date
	1(*2,3)	2(*2,3)	1(*2,3)	2(*2,3)	2(*2,3)
Grant date	2018-03-29		2020-03-31		
Type of shares to be issued	Ordinary shares				
Grant method	Reissue of treasury shares, but if the stock option's exercise price is lower than the stock's real price (evaluated based on exercise date), the Company may settle the difference in cash or with treasury share equivalent to the difference amount.				
Number of shares (shares)	18,607	18,607	39,098	19,551	
Exercise price (Korean won)	₩ 100,884	₩ 108,959	₩ 89,204	₩ 89,204	
Contractual life of options	2020.03.29 ~2023.03.28	2021.03.29 ~2024.03.28	2023.03.31 ~2027.03.30	2023.03.31 ~2027.03.30	
Vesting conditions	2 year service from the grant date	3 year service from the grant date	2 year service from the grant date	3 year service from the grant date	

(*1) All options granted in wave 1-1 were fully exercised during the year ended December 31, 2022.

(*2) The Group decided to pay cash for the difference between the exercise value of the stock option exercised in the current period and the actual value of the stock. Accordingly, it was determined that the Group is obligated to pay cash for the unexercised stock option and the accounting for stock options changed from equity-settled to cash-settled.

(*3) The stock options have been transferred from SK Materials Co., Ltd.(formerly)

The Group reversed ₩6,999 million of share-option-compensation cost upon the grant of share options above for the year ended December 31, 2022 (accumulated compensation costs for share options: ₩(-)7,371 million), and recognized the contra account to cash-settled share option liability as stock-compensation cost as the fair value of cash-settled liabilities is remeasured at the end of each reporting period. As of December 31, 2022, the amount of liabilities recognized in relation to cash-settled share options is ₩18,749 million.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

22. Equity (cont'd)

The Group used the binomial option pricing model, and the inputs used in the measurement of the fair values at the grant date of the share-based payment plans are as follows (Korean won):

	1-2		1-3		2-1		2-2	
Risk-free interest rate		3.67%		3.70%		3.76%		3.76%
Option life		6 years		7 years		7 years		7 years
Expected price (Closing price on the preceding day in Korean won)	₩	189,000	₩	189,000	₩	189,000	₩	189,000
Expected volatility		28.60%		28.60%		28.60%		28.60%
Rate of returns		4.23%		4.23%		4.23%		4.23%
Exercise price (Korean won)	₩	244,440	₩	263,950	₩	153,450	₩	153,450
Fair value per share (Korean won)	₩	326	₩	4,815	₩	51,219	₩	51,219

	1		2		1		2	
Risk-free interest rate		3.67%		3.70%		3.76%		3.76%
Option life		5 years		6 years		7 years		7 years
Expected price (Closing price on the preceding day in Korean won)	₩	189,000	₩	189,000	₩	189,000	₩	189,000
Expected volatility		28.60%		28.60%		28.60%		28.60%
Rate of returns		4.23%		4.23%		4.23%		4.23%
Exercise price (Korean won)	₩	100,884	₩	108,959	₩	89,204	₩	89,204
Fair value per share (Korean won)	₩	88,116	₩	80,041	₩	98,431	₩	98,431

Changes in stock option granted by the Company for the years ended December 31, 2022 and 2021 are as follows (Korean won):

	December 31, 2022		December 31, 2021	
	Quantities	Weighted average exercise price	Quantities	Weighted average exercise price
Beginning balance	434,191	₩ 166,785	338,328	₩ 145,743
Granted	-	-	95,863	95,306
Exercised	(41,429)	(226,290)	-	-
Ending balance	<u>392,762</u>	<u>₩ 160,508</u>	<u>434,191</u>	<u>₩ 166,785</u>

In addition, the Group has entered into a Stock Grant that pays treasury stocks to employees for free apart from the above stock options. In the case of such Stock Grant, there is no requirement for vesting condition, and may not be transferred during the term of the stock. As of December 31, 2022, the recognized stock compensation costs related to the Stock Grant is ₩ 340 million.

2) Subsidiaries of the Company established a stock option program that entitles key management personnel an option to purchase ordinary shares. Share-based compensation expenses recognized under the share option program are as follows (Korean won in millions):

	Current(reversal)	Accumulated	Remaining	Total
Group of SK Innovation Co., Ltd.	₩ 3,329	₩ 7,533	₩ 2,239	₩ 9,772
Group of SK Telecom Co., Ltd.	78,600	155,579	40	155,619
Group of SK Square Co., Ltd.	29,606	45,787	42,016	87,803
Group of SK Networks Co., Ltd.	1,234	2,906	309	3,215
Group of SKC Co., Ltd.	(8,304)	4,817	1,638	6,455
Group of SK E&S Co., Ltd.	-	496	14	510
Group of SK Ecoplant Co., Ltd.	2,610	2,610	5,001	7,611
Others	1,278	3,897	6,739	10,636
	<u>₩ 108,353</u>	<u>₩ 223,625</u>	<u>₩ 57,996</u>	<u>₩ 281,621</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

23. Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Salaries	₩ 1,920,887	₩ 1,643,671
Provision for pension benefits	147,432	122,999
Employee welfare benefits	413,561	304,091
Travel	106,529	47,399
Bad debt expenses	62,088	59,652
Communications	9,537	8,546
Utilities	49,528	30,991
Taxes and dues	132,787	168,293
Supplies	62,570	38,464
Rents	181,814	144,509
Depreciation	528,033	444,018
Amortization	361,957	302,985
Repairs	25,536	26,654
Insurance	69,326	55,401
Advertising	767,161	681,429
Research and development	645,824	545,990
Education and examination	77,596	70,038
Outsourcing technology services	820,256	757,289
Transport	431,662	331,151
Others	280,225	137,570
	<u>₩ 7,094,309</u>	<u>₩ 5,921,140</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

24. Finance income and costs

Details of finance income and costs for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>For the years ended</u>	
	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Finance income:		
Interest income	₩ 474,156	₩ 172,798
Gain on foreign currency transactions	3,400,383	1,057,159
Gain on foreign currency translation	984,229	274,615
Gain on transactions of derivatives	3,357,557	1,246,890
Gain on valuation of derivatives	673,889	327,411
Others	281,535	479,506
	<u>₩ 9,171,749</u>	<u>₩ 3,558,379</u>

	<u>For the years ended</u>	
	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Finance costs:		
Interest expenses	₩ 2,123,959	₩ 1,418,481
Loss on foreign currency transactions	4,097,841	1,209,713
Loss on foreign currency translation	669,661	388,094
Loss on transactions of derivatives	3,728,143	1,476,357
Loss on valuation of derivatives	337,320	425,424
Others	1,127,294	76,830
	<u>₩ 12,084,218</u>	<u>₩ 4,994,899</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

25. Other non-operating income and expenses

(1) Details of other non-operating income for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Other non-operation income:		
Dividend income	₩ 51,928	₩ 63,832
Rental income	1,754	1,220
Gain on disposal of trade receivables	1,043	32,633
Gain on disposal of investments in subsidiaries and associates	504,791	483,812
Gain on disposal of property, plant and equipment	581,887	269,087
Gain on disposal of intangible assets	80,528	145,227
Others	914,624	1,550,101
	<u>₩ 2,136,555</u>	<u>₩ 2,545,912</u>

(2) Details of other non-operating expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Other non-operation expenses:		
Loss on disposal of trade receivables	₩ 100,820	₩ 19,307
Loss on impairment of investments in associates and joint ventures	375,147	35,166
Loss on disposal of property, plant and equipment	70,862	89,755
Loss on impairment of property, plant and equipment	91,319	64,221
Loss on disposal of intangible assets	5,941	5,225
Loss on impairment of intangible assets	176,957	123,914
Donations	109,384	109,912
Others	473,910	1,462,396
	<u>₩ 1,404,340</u>	<u>₩ 1,909,896</u>

26. Expense classified based on nature of expense

Details of classification based on nature of expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Employee benefits	₩ 9,254,128	₩ 8,370,079
Depreciation and amortization	8,765,935	8,356,745
Network connection	730,106	854,292
Transport	1,219,990	824,689
Advertising	773,505	855,812
Lease payments and rents	583,275	459,638
Others	22,134,639	17,624,603
Use of raw materials and purchase of finished goods and merchandise	85,455,939	58,089,063
Changes in finished goods and semi-finished goods	(2,370,586)	(3,091,028)
	<u>₩ 126,546,931</u>	<u>₩ 92,343,893</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

27. Income taxes

(1) Components of income tax expense for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Current income tax	₩ 2,248,178	₩ 1,311,152
Adjustments in respect of current income tax of prior year	118,715	(24,747)
Origination and reversal of temporary difference	34,370	(356,176)
Income tax recognized directly to equity	121,595	(216,392)
Others	44,104	17,889
Income tax expense	₩ 2,566,962	₩ 731,726
Income tax expense from continuing operations	₩ 2,373,950	₩ 641,580
Income tax expense (benefits) from discontinued operations	193,012	90,146

(2) Details of income tax recognized directly to equity for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Remeasurement loss on defined benefit plan	₩ (78,576)	₩ (2,819)
Net gain (loss) on valuation of financial instruments measured at FVOCI	249,071	(173,626)
Equity adjustments of investments in associates and joint ventures	(12,439)	(14,591)
Net loss on valuation of derivative instruments	(7,146)	(26,501)
Others	(29,315)	1,145
	₩ 121,595	₩ (216,392)

(3) Reconciliations of profit before income tax expense at the Korea statutory tax rate to income tax expense at the effective tax rate of the Group for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Profit before income tax expense	₩ 6,533,138	₩ 6,437,652
Profit before income tax expense from continuing operations	5,908,697	5,982,328
Profit before income tax expense from discontinued operations	624,441	455,324
Applied tax rates (*1)	27.50%	27.50%
Income tax at statutory tax rate	1,796,613	1,770,354
Non-taxable income	(235,640)	(19,872)
Non-deductible expenses	214,140	45,433
Tax credit	9,565	(64,430)
Unrecognized deferred taxes	(31,551)	467,289
Others (*2)	813,835	(1,467,048)
Income tax expense	₩ 2,566,962	₩ 731,726
Income tax expense from continuing operations	₩ 2,373,950	₩ 641,580
Income tax expense from discontinued operations	193,012	90,146
Effective tax rate	39.29%	11.37%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

27. Income taxes (cont'd)

(*1) The Company is subject to corporate income tax of Republic of Korea where the Parent Company is located. For the year ended December 31, 2022, the difference between the Korean tax burdens and the foreign tax burdens on foreign subsidiaries is included in others.

(*2) The effect of tax rate change is included.

(4) Significant changes in deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

For the year ended December 31, 2022						
	Beginning balance	Business combination	Recognized directly in profit or loss	Recognized directly in equity	Others	Ending balance
Temporary differences	₩(4,033,420)	₩ (126,992)	₩ 26,584	₩ 121,595	₩ (60,773)	₩ (4,073,006)
Tax loss carryforward	804,472	(17,131)	(177,347)	-	1,698	611,692
Tax credits carryforward	186,511	-	(5,202)	-	11,257	192,566
	<u>₩(3,042,437)</u>	<u>₩ (144,123)</u>	<u>₩ (155,965)</u>	<u>₩ 121,595</u>	<u>₩ (47,818)</u>	<u>₩ (3,268,748)</u>
Deferred tax assets (*1)	₩ 765,000					₩ 1,166,846
Deferred tax liabilities (*1)	(3,807,437)					(4,435,594)

For the year ended December 31, 2021						
	Beginning balance	Business combination	Recognized directly in profit or loss	Recognized directly in equity	Others	Ending balance
Temporary differences	₩(4,551,845)	₩ (43,522)	₩ 734,592	₩ (216,392)	₩ 43,747	₩ (4,033,420)
Tax loss carryforward	1,059,098	-	(254,944)	-	318	804,472
Tax credits carryforward	85,866	-	92,920	-	7,725	186,511
	<u>₩(3,406,881)</u>	<u>₩ (43,522)</u>	<u>₩ 572,568</u>	<u>₩ (216,392)</u>	<u>₩ 51,790</u>	<u>₩ (3,042,437)</u>
Deferred tax assets (*1)	₩ 1,165,308					₩ 765,000
Deferred tax liabilities (*1)	(4,572,189)					(3,807,437)

(*1) The Group offsets tax assets and liabilities if, and only if, it has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities related to income taxes are levied by the same tax authority.

(5) The expected expiration schedule of tax loss carryforward and tax credits carryforward for which deferred tax assets are not recognized as of December 31, 2022 is as follows (Korean won in millions):

	Tax loss carryforward	Tax credits carryforward
1 year or less	₩ 60,333	₩ -
1 year ~ 2 years	170,607	-
2 years ~ 3 years	40,418	4,285
More than 3 years	2,830,234	1,544
	<u>₩ 3,101,592</u>	<u>₩ 5,829</u>

28. Earnings per share

(1) Basic and diluted earnings

1) Basic earnings per share for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Profit for the year attributable to owners of the parent	₩ 1,098,683	₩ 1,965,612
Less: preferred share dividends	(4,543)	(4,543)
Profit for the year attributable to ordinary share owners of the parent	₩ 1,094,140	₩ 1,961,069
Weighted-average number of ordinary share outstanding (*1)	55,974,240	52,545,906
Basic earnings per share (in Korean won)	₩ 19,547	₩ 37,321

(*1) The weighted-average number of ordinary share outstanding is calculated by multiplying the number of shares issued by the portion of the reporting period those shares covered. The treasury shares held until the disposal date, after the date of acquisition, are excluded from the number of ordinary shares outstanding.

The basis of calculating weighted-average number of ordinary shares for the years ended December 31, 2022 and 2021 is as follows:

	For the years ended	
	December 31, 2022	December 31, 2021
Weighted-average number of issued shares outstanding	74,149,329	70,599,058
Weighted-average number of treasury shares	(18,175,089)	(18,053,152)
Weighted-average number of ordinary shares outstanding	55,974,240	52,545,906

2) Diluted earnings per share for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Diluted profits	₩ 1,094,140	₩ 1,961,069
Weighted-average number of treasury shares diluted ordinary share outstanding	56,092,595	52,653,520
Diluted earnings per share	₩ 19,506	₩ 37,245

The basis of calculating weighted-average number of diluted ordinary shares for the years ended December 31, 2022 and 2021 is as follows:

	For the years ended	
	December 31, 2022	December 31, 2021
Weighted-average number of ordinary shares outstanding	55,974,240	52,545,906
Effect of exercising stock options	118,355	107,614
Weighted-average number of treasury shares diluted ordinary share outstanding	56,092,595	52,653,520

28. Earnings per share (cont'd)

(2) Basic and diluted earnings per share from continuing operations

1) Basic earnings per share from continuing operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except basic earnings per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Profit for the year attributable to owners of the parent	₩ 1,094,140	₩ 1,961,069
Less: gain from discontinued operations	180,810	158,918
Profit for the year from continuing operations attributable to owners of the parent	₩ 913,330	₩ 1,802,151
Weighted-average number of ordinary shares outstanding	55,974,240	52,545,906
Basic earnings per share from continuing operations (in Korean won)	₩ 16,317	₩ 34,297

2) Diluted earnings per share from continuing operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except basic earnings per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Profit for the year from continuing operations attributable to owners of the parent	₩ 913,330	₩ 1,802,151
Weighted-average number of diluted ordinary share outstanding	56,092,595	52,653,520
Diluted earnings per share from continuing operations (in Korean won)	₩ 16,283	₩ 34,227

(3) Basic and diluted earnings per share from discontinued operations

1) Basic earnings per share from discontinued operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except basic losses per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Gain from discontinued operations attributable to owners of the parent	₩ 180,810	₩ 158,918
Weighted-average number of ordinary shares outstanding	55,974,240	52,545,906
Basic earnings per share from discontinued operations (in Korean won)	₩ 3,230	₩ 3,024

2) Diluted earnings per share from discontinued operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions, except basic losses per share and weighted-average number of ordinary shares outstanding):

	For the years ended	
	December 31, 2022	December 31, 2021
Gain from discontinued operations attributable to owners of the parent	₩ 180,810	₩ 158,918
Weighted-average number of ordinary shares outstanding	56,092,595	52,653,520
Diluted earnings per share from discontinued operations (in Korean won)	₩ 3,223	₩ 3,018

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

29. Transactions with related parties

Balances on transactions arising from intercompany transactions within the Group were eliminated in preparing the consolidated financial statements as of and for the years ended December 31, 2022 and 2021.

(1) Details of significant transactions with the related parties for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	Company name	For the years ended December 31, 2022		
		Sales and others	Expenses and others	
Other related parties	Daehan Oil Pipeline Corporation	₩ 11,374	₩ 66,430	
	SABIC SK Nexlene Company Pte. Ltd.	676	304,817	
	Korea Nexlene Company	234,743	74	
	Best Oil Company Limited	889,876	1,332	
	Sinopec-SK(Wuhan) Petrochemical Co., Ltd.	64,655	739,852	
	Baic Electronics SK(Jiangsu) Technology Co., Ltd.	63,074	632,919	
	ChangZhou BTR New Material Technology Co., Ltd.	141,085	460,618	
	Xinglu (HongKong) Ltd.	177,054	-	
	Huizhou EVE United Energy Co., Ltd.	121,182	1,130,108	
	Peru LNG Company, LLC	547,507	-	
	Asia Bitumen Trading Pte. Ltd.	11,186	48,475	
	Ignis Therapeutics	11,413	-	
	F&U Credit Information Co., Ltd.	3,507	51,418	
	SK Hynix Inc.	4,894,369	530,900	
	SK Hynix Semiconductor (China) Ltd.	437,154	1,340	
	SK Hynix Semiconductor (Chongqing) Ltd.	36,741	-	
	SK Hynix Semiconductor HK Ltd.	3	631,252	
	SK Hynix System IC Co., Ltd.	12,354	-	
	Happynarae Co., Ltd.	28,954	478,299	
	SKC Evonik Peroxide Korea Co., Ltd.	1,124	57,563	
	Boryeong LNG Terminal Co., Ltd.	99,384	193,496	
	Darwin LNG Pty Ltd.	497,523	-	
	Eurasia Tunnel	3,227	-	
	Xe-Pian Xe-Namnoy Power Company	12,799	-	
	SK Ecoengineering Co., Ltd.	24,421	2,294,657	
	Daewon Green Energy Co., Ltd.	22,088	-	
	Bloom SK Fuel Cell, LLC	192	44,428	
	Yongin Iiban Industry Danji Co., Ltd.	35,343	-	
	Others	1,047,115	276,320	
	Others (*1)	SK D&D Co., Ltd.	5,173	1,088
		Ulsan Aromatics Co., Ltd.	131,052	111,041
		SK Chemicals Co., Ltd.	66,265	16,684
SK Gas Co., Ltd.		320,790	427,491	
Ubins Co., Ltd.		813	100,986	
Others		183,581	657,772	
		<u>₩ 10,137,797</u>	<u>₩ 9,259,360</u>	

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

29. Transactions with related parties (cont'd)

	Company name	For the years ended December 31, 2021		
		Sales and others	Expenses and others	
Other related parties	Daehan Oil Pipeline Corporation	₩ 5,991	₩ 63,312	
	SABIC SK Nexlene Company Pte. Ltd.	4,439	232,204	
	Korea Nexlene Company	187,460	761	
	Best Oil Company Limited	699,150	956	
	Sinopec-SK(Wuhan) Petrochemical Co., Ltd.	1,326	677,730	
	Baic Electronics SK(Jiangsu) Technology Co., Ltd.	70,451	508,954	
	Xinglu (HongKong) Ltd.	99,471	4,191	
	Huizhou EVE United Energy Co., Ltd.	127,836	686,690	
	Peru LNG Company, LLC	216,343	-	
	Asia Bitumen Trading Pte. Ltd.	6,751	21,662	
	Ignis Therapeutics	163,878	-	
	F&U Credit Information Co., Ltd.	3,990	51,528	
	SK Hynix Inc.	3,486,379	20,966	
	SK Hynix Semiconductor (China) Ltd.	357,375	1,645	
	SK Hynix Semiconductor (Chongqing) Ltd.	33,636	-	
	SK Hynix Semiconductor HK Ltd.	80	824,182	
	SK Hynix System IC Co., Ltd.	37,301	33	
	Happynarae Co., Ltd.	30,671	417,226	
	SKC Evonik Peroxide Korea Co., Ltd.	3,910	46,909	
	Boryeong LNG Terminal Co., Ltd.	59,212	101,876	
	Darwin LNG Pty Ltd.	456,086	-	
	Daewon Green Energy Co., Ltd.	115,218	-	
	Bloom SK Fuel Cell, LLC	-	17,272	
	Yongin Ilban Industry Danji Co., Ltd.	4,177	-	
	Eurasia Tunnel	2,894	-	
	Xe-Pian Xe-Namnoy Power Company	8,090	-	
	Others	909,860	226,189	
	Others (*1)	SK D&D Co., Ltd.	92,953	5,283
		Ulsan Aromatics Co., Ltd.	70,563	74,869
		SK Chemicals Co., Ltd.	83,918	25,520
		SK Gas Co., Ltd.	114,471	200,852
		Ubins Co., Ltd.	1,431	94,240
		Others	214,159	79,007
		₩ 7,669,470	₩ 4,384,057	

(*1) Although, not designated as related parties as defined in KIFRS 1024, the entity belongs to the same conglomerate affiliates under *Monopoly Regulation and Fair Trade Act*.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

29. Transactions with related parties (cont'd)

(2) Details of significant outstanding balances of receivables and payables with the related parties as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	Company name	December 31, 2022		December 31, 2021	
		Receivables		Receivables	
		(*1)	Payables	(*1)	Payables
Other related parties	Daehan Oil Pipeline Corporation	₩ 110	₩ 10,029	₩ 75	₩ 9,443
	SABIC SK Nexlene Company Pte. Ltd.	348	46,818	5,127	58,538
	Korea Nexlene Company	26,361	268	19,941	146
	Best Oil Company Limited	204,549	49,856	145,233	33,455
	Sinopec-SK(Wuhan) Petrochemical Co., Ltd.	-	8,042	363	10,883
	Baic Electronics SK(Jiangsu) Technology Co., Ltd.	18,858	146,986	5,514	174,332
	ChangZhou BTR New Material Technology Co., Ltd.	86,563	229,826	-	-
	Yemen LNG Company Ltd.	71,883	-	61,219	-
	Xinglu (HongKong) Ltd.	38,162	-	19,097	-
	Huizhou EVE United Energy Co., Ltd.	36,111	408,582	36,143	179,264
	Korea Consortium Kazakh B.V. (*2)	119,215	-	111,520	-
	F&U Credit Information Co., Ltd.	81	5,682	65	5,265
	Wave City Development Co., Ltd.	2,355	-	5,753	-
	SK Hynix Inc.	1,781,976	84,075	694,254	66,600
	SK Hynix Semiconductor (China) Ltd.	44,823	280	57,369	853
	SK Hynix Semiconductor (Chongqing) Ltd.	3,659	30	5,084	138
	SK Hynix Semiconductor HK Ltd.	2	30,587	-	60,528
	SK Hynix System IC Co., Ltd.	181	13	5,474	99
	Happynarae Co., Ltd.	12,420	61,828	9,344	73,563
	SKC Evonik Peroxide Korea Co., Ltd.	2	4,450	-	6,353
	Boryeong LNG Terminal Co., Ltd.	4,139	15	5,345	7,577
	Darwin LNG Pty Ltd.	42,802	-	120,235	-
	Eurasia Tunnel	28,786	-	25,823	-
	Xe-Pian Xe-Namnoy Power Company	95,889	-	113,282	26,004
	Yongin Ilban Industry Danji Co., Ltd.	1,100	188,573	-	-
	Bloom SK Fuel Cell, LLC	-	5,317	-	-
	SK Ecoengineering Co., Ltd.	32,658	305,026	-	-
	SK E&C JURONG Investment Singapore Pte. Ltd.	74,375	-	59,914	-
	Godeok Clean Energy Co., Ltd.	-	62,136	-	62,136
	Chuncheon Green Energy Inc.	2	-	-	-
	Others	126,344	144,795	240,973	182,353
Others (*3)	Ulsan Aromatics Co., Ltd.	-	13,435	3,841	9,958
	SK Chemicals Co., Ltd.	5,066	872	22,563	1,465
	SK Gas Co., Ltd.	7,986	244,960	23,965	227,816
	Ubins Co., Ltd.	26	21,190	199	14,977
	Others	16,266	20,640	1,332	23,655
		<u>₩ 2,883,098</u>	<u>₩ 2,094,311</u>	<u>₩ 1,799,047</u>	<u>₩ 1,235,401</u>

(*1) The Company recognized bad debt expense and reversal of bad debt each amounting to ₩451 million and ₩(-)73,767 million for the years ended December 31, 2022 (for the years ended December 31, 2021: bad debt expense of ₩7,202 million, write-off and others of ₩15,880 million). The Company recognized the allowance for doubtful accounts amounting to ₩261,317 million and ₩334,633 million as of December 31, 2022 and December 31, 2021, respectively.

(*2) As of December 31, 2022 and 2021, the Group recognized loss allowances in full amount of corresponding receivables.

(*3) Although, not designated as related parties as defined in KIFRS 1024, the entity belongs to the same conglomerate affiliates under *Monopoly Regulation and the Fair Trade Act*.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

29. Transactions with related parties (cont'd)

(3) Details of significant financial transactions with related-parties for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions and foreign currencies in thousands):

Company	Currency	December 31, 2022		December 31, 2021	
		Loans	Collection	Loans	Collection
Yemen LNG Company Ltd.	KRW	6,581	-	6,452	-
Peru LNG Company, LLC	KRW	-	7,113	6,996	-
Zhejiang SK Baoying Group Co., Ltd.	KRW	5,443	-	-	-
Eurasia Tunnel	KRW	-	-	-	11,243
Yongin Ilban Industry Danji Co., Ltd.	KRW	-	-	5,072	5,072
Xe-Pian Xe-Namnoy Power Company	KRW	11,990	-	30,385	-
PT REGAS ENERGITAMA INFRASTRUKTUR	KRW	-	-	5,604	-
SK Growth Opportunities Corporation	USD	5,240	-	-	-

(4) There were additional capital contribution transactions for investments in associates and joint ventures for the years ended December 31, 2022 and 2021 (See Note 10).

(5) Compensation for key management personnel of the Company.

Key management personnel consists of registered executives who are responsible for the planning, operation and control of the Company's business activities. Details of compensation for them for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Salaries	₩ 16,797	₩ 20,643
Provision for pension benefits	5,893	8,397
Share-based payment expenses	(4,295)	780
	<u>₩ 18,395</u>	<u>₩ 29,820</u>

30. Discontinued operations

(1) Details of discontinued operations

SK Innovation Co., Ltd., a subsidiary of the Group, decided to suspend operations in North American petroleum development (E&P) businesses and sold related assets and liabilities during the prior period, and profit or loss arising from the relevant business units are classified as profit or loss for the period from discontinued operations. The purpose of the sale of oil development (E&P) businesses in North America and Peru is in line with the long-term policy of subsidiaries to focus their capabilities on core businesses.

SK Networks Co., Ltd., a subsidiary of the Group, decided to discontinue operations with the sale of its resource business to clean up non-core businesses, strengthen its financial soundness and secure investment funds, during the prior period.

SKC Co., Ltd., a subsidiary of the Group, sold EVA and Back Sheet solar power business and PVDF business for construction during the prior period. In addition, SK Telesys Co., Ltd. and SKC Infra Services Co., Ltd. were sold in accordance with the board's decision on June 24, 2021 for the purpose of concentrating on their core businesses through reorganization of the business structure. Furthermore, in accordance with the decision of the Board of Directors made on June 8, 2022, the entity split its industry material business division as of November 1, 2022, sold the division split as of December 2, 2022, and sold Beijing SKpucore Inc. as of October 21, 2022.

SK Ecoplant Co., Ltd., a subsidiary of the Group, sold its entire stake in SK TNS Co., Ltd., a subsidiary of the Group, to Alchemist Capital Partners Korea Co., Ltd. on April 30, 2021 for the purpose of converting a portfolio focused on eco-friendly and new energy by the resolution of the board of directors on January 7, 2021. In accordance with the board's resolution on October 28, 2022, after the spin-off and merger of the K-Solutions Business Group, P-Solutions Business Group, Gas&Power Business Group, Battery Business Group, and Industrial Business Group, to SK Ecoengineering Co., Ltd., 50.0003% of stake therein was sold on February 15, 2022 and excluded from the consolidation scope.

(2) Gain and loss from the discontinued operation for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022			
	Resource business and others in SK Networks Co., Ltd.	Industrial materials business in SKC Co., Ltd.	K-solutions business group and others in SK ecoplant Co., Ltd.	Total
Revenue	₩ 89,030	₩ 1,076,935	₩ 1,062,168	₩ 2,228,133
Expenses	56,817	1,278,503	268,372	1,603,692
Profit (loss) before income tax expense	32,213	(201,568)	793,796	624,441
Income tax expense	9,881	(8,675)	191,806	193,012
Profit (loss) for the period from discontinued operations	₩ 22,332	₩ (192,893)	₩ 601,990	₩ 431,429
Attributable to:				
Owners of the parent	9,918	(87,353)	258,245	180,810
Non-controlling interests	12,414	(105,540)	343,745	250,619

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

30. Discontinued operations (cont'd)

	For the year ended December 31, 2021					
	Petroleum Development business in SK innovation Co., Ltd.	Resource business and others in SK Networks Co., Ltd.	Industrial materials business in SKC Co., Ltd.	K-solutions business group and others in SK ecoplant Co., Ltd.	SK TNS Co., Ltd. and others	Total
	Co., Ltd.	Co., Ltd.	SKC Co., Ltd.	Co., Ltd.	and others	
Revenue	₩ 75,020	₩ 126,881	₩ 1,364,066	₩ 1,783,840	₩ 282,593	₩ 3,632,400
Expenses	14,114	67,991	1,298,062	1,670,768	126,141	3,177,076
Profit before income tax expense	60,906	58,890	66,004	113,072	156,452	455,324
Income tax expense	17,158	16,788	(8,982)	27,363	37,819	90,146
Profit for the period from discontinued operations	₩ 43,748	₩ 42,102	₩ 74,986	₩ 85,709	₩ 118,633	₩ 365,178
Attributable to:						
Owners of the parent	16,076	18,707	32,167	38,575	53,393	158,918
Non-controlling interests	27,672	23,395	42,819	47,134	65,240	206,260

(3) Details of cash flows relating to discontinued operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022				
	Resource business and others in SK Networks Co., Ltd.	Industrial materials business in SKC Co., Ltd.	K-solutions business group and others in SK ecoplant Co., Ltd.	Total	
	Co., Ltd.	SKC Co., Ltd.	Co., Ltd.		
Cash flows from operating activities	₩ 60,782	₩ (157,098)	₩ (82,652)	₩	(178,968)
Cash flows from investing activities	(70)	796,759	444,905		1,241,594
Cash flows from financing activities	(20,874)	281,449	(78)		260,497

	For the year ended December 31, 2021					
	Petroleum Development business in SK innovation Co., Ltd.	Resource business and others in SK Networks Co., Ltd.	Industrial materials business in SKC Co., Ltd.	K-solutions business group and others in SK ecoplant Co., Ltd.	SK TNS Co., Ltd. and others	Total
	Co., Ltd.	Co., Ltd.	SKC Co., Ltd.	Co., Ltd.	and others	
Cash flows from operating activities	₩ (6,909)	₩ (9,697)	₩ 110,758	₩ 542,185	₩ (74,204)	₩ 562,133
Cash flows from investing activities	47,879	94,495	(25,731)	(27,639)	283,146	372,150
Cash flows from financing activities	(80,109)	5,277	(43,494)	(865)	(14,643)	(133,834)

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

31. Assets and liabilities held for sale

Details of assets and liabilities held for sale as of December 31, 2022 are as follows (Korean won in millions):

		December 31, 2022	
		Assets	Liabilities
Investment securities	ESR Cayman Limited (*1)	₩ 260,970	₩ -
	SKC (Jiangsu) High tech Plastics	18,778	-
	Digital Content Korea Investment Association, and others	5,315	-
Business segment	China business segment (*2)	74,772	12,693
	Resources business segment (*2)	55,028	26,067
Associates	Daekyo Confident Content Korea Investment Association, and others	1,062	-
	NanoEnTek Inc.	46,779	-
	Grab Geo Holdings Pte. Ltd (*3)	30,564	-
Property, plant and equipment	Land and Buildings in Suyeong-gu, Busan (*4)	102,255	29,000
		<u>₩ 595,523</u>	<u>₩ 67,760</u>

(*1) The Group decided to sell ESR Cayman Limited before the year ended December 31, 2021, and classified related assets and liabilities as held-for-sale and measured them at the lower of their carrying amounts and fair value less costs to sell. Some of the shares were sold before the year ended December 31, 2021, and the remaining shares are also being reviewed for sale.

(*2) SK Networks Co., Ltd., a subsidiary, decided to sell the China and resource business sector. The Group classified related assets and liabilities as held-for-sale and measured them at the lower of their carrying amounts and fair value less costs to sell.

(*3) Tmap mobility Co., Ltd., a subsidiary, classified the entire stake in Grab Geo Holdings Pte. Ltd., an investment in associate, as an asset held-for-sale upon its decision to sell the stake as a whole and measured the asset at the lower of net fair value (i.e., fair value less costs to sell) and book value. Accordingly, the entire stake in Grab Geo Holdings Pte. Ltd. was classified as an asset held-for-sale. The Group is scheduled to dispose such investments in the entity in June 2023.

(*4) SK E&S Co., Ltd., a subsidiary, decided to sell 3 parcels of land in Namcheon-dong and house no. 545 in Namcheon-dong, Suyeong-gu on December 20, 2022, and assets and liabilities related thereto are classified as held-for-sale. The transaction is expected to be completed by the end of May 2023.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

32. Lessor

(1) Details of gross investment amount and net investment amount in finance leases as of December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>		<u>December 31, 2021</u>	
	<u>Gross investment</u>	<u>Net investment</u>	<u>Gross investment</u>	<u>Net investment</u>
1 year or less	₩ 270,015	₩ 253,493	₩ 188,312	₩ 184,949
1 year ~ 2 years	236,197	222,719	166,112	159,314
2 year ~ 3 years	188,314	179,727	149,165	140,115
3 year ~ 4 years	129,214	123,263	103,241	94,808
4 year ~ 5 years	72,690	69,212	50,789	46,568
More than 5 years	46,859	39,617	43,475	35,848
	₩ 943,289	₩ 888,031	₩ 701,094	₩ 661,602

(2) Details of unrealized interest income of finance leases for the year ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	<u>December 31, 2022</u>	<u>December 31, 2021</u>
Gross investment	₩ 943,289	₩ 701,094
Net investment	888,031	661,602
Unrealized interest income	55,258	39,492

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

33. Cash flow information

(1) Details of non-cash adjustments for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Provision for pension benefits	₩ 451,448	₩ 460,042
Depreciation	7,048,838	6,699,911
Amortization	1,734,807	1,687,803
Bad debt expenses	62,088	93,158
(Reversal of)Valuation loss on inventories	637,025	218,000
Interest expenses	2,145,881	1,444,113
Loss on foreign currency translation	683,217	390,626
Loss on valuation of derivatives	338,092	426,301
Loss on disposal of trade receivables	100,820	19,478
Loss on impairment of investments in associates and joint ventures	375,147	35,166
Loss on disposal of property, plant and equipment	72,042	94,551
Loss on impairment of property, plant and equipment	94,240	64,836
Loss on disposal of intangible assets	5,941	8,418
Loss on impairment of intangible assets	176,957	133,965
Income tax expense	2,566,962	731,726
Share of profit of subsidiaries and associates	(84,667)	(1,924,360)
Interest income	(475,779)	(195,473)
Gain on foreign currency translation	(988,638)	(275,719)
Gain on valuation of derivatives	(681,118)	(329,733)
Dividend income	(51,928)	(63,832)
Gain on disposal of trade receivables	(1,043)	(32,633)
Gain on disposal of investments in associates and joint ventures	(504,791)	(550,239)
Gain on disposal of property, plant and equipment	(581,887)	(269,703)
Gain on disposal of intangible assets	(80,528)	(147,092)
Gain on disposal of assets held for sale	(785,828)	-
Others	1,468,225	(1,247,124)
	<u>₩ 13,725,523</u>	<u>₩ 7,472,186</u>

(2) Details of working capital adjustments for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Inventories	₩ (5,508,605)	₩ (4,719,207)
Trade receivables	(2,951,317)	(2,120,245)
Other receivables	(928,900)	(380,299)
Trade payables	6,282,388	4,369,497
Other payables	(2,465,180)	81,556
Advances received	342,662	(17,094)
Defined benefit obligation	(384,814)	(390,322)
Plan assets	(448,848)	(272,564)
Others	(359,628)	(652,833)
	<u>₩ (6,422,242)</u>	<u>₩ (4,101,511)</u>

(3) Significant non-cash transactions for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Increase in other payables due to acquisition of property, plant and equipment and others	₩ 898,940	₩ 883,091

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

33. Cash flow information (cont'd)

(4) Details of changes in liabilities arising from financing activities for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the year ended December 31, 2022				
	Beginning balance	Cash flows from financing activities	Non-cash transaction		Ending balance
			Changes in exchange rate and others	Others	
Short-term borrowings	₩ 7,657,381	₩ 10,426,397	₩ (214,633)	₩ (411,848)	₩ 17,457,297
Bonds payable and long-term borrowings	50,448,212	5,200,815	945,980	419,858	57,014,865
Long-term trade payables	1,854,343	(407,780)	-	66,644	1,513,207
Lease liabilities	5,054,890	(1,099,618)	7,812	1,543,363	5,506,447
Dividends payable	887	(1,708,407)	-	1,708,455	935
	<u>₩ 65,015,713</u>	<u>₩ 12,411,407</u>	<u>₩ 739,159</u>	<u>₩ 3,326,472</u>	<u>₩ 81,492,751</u>
	For the year ended December 31, 2021				
	Beginning balance	Cash flows from financing activities	Non-cash transaction		Ending balance
			Changes in exchange rate and others	Others	
Short-term borrowings	₩ 6,201,430	₩ 1,279,570	₩ 28,680	₩ 147,701	₩ 7,657,381
Bonds payable and long-term borrowings	43,060,288	5,979,071	328,920	1,079,933	50,448,212
Long-term trade payables	1,168,784	(426,462)	-	1,112,021	1,854,343
Lease liabilities	5,665,951	(1,070,625)	4,352	455,212	5,054,890
Dividends payable	840	(1,394,332)	-	1,394,379	887
	<u>₩ 56,097,293</u>	<u>₩ 4,367,222</u>	<u>₩ 361,952</u>	<u>₩ 4,189,246</u>	<u>₩ 65,015,713</u>

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies

(1) Guarantees provided for the Group as of December 31, 2022 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantee	Guarantor	Currency	Amount	Description of guarantee
SK Inc.	Korea Software Financial Corporation	KRW	529,372	Performance guarantees for contract and others
	Seoul Guarantee Insurance	KRW	23,553	Performance guarantees for contract and others
Netruck Co., Ltd.	Seoul Guarantee Insurance	KRW	5	Performance insurances for warranties and others
SK Telink Co., Ltd.	Seoul Guarantee Insurance	KRW	1,232	Performance guarantees for contract
	F&U Credit Information Co., Ltd.	KRW	30	Performance guarantees for contract
SK Planet Co., Ltd.	Seoul Guarantee Insurance	KRW	20,924	Performance guarantees for contract and others
	KEB Hana Bank	KRW	3,000	Performance insurances for warranties and others
SK Broadband Co., Ltd.	Seoul Guarantee Insurance	KRW	30,406	Guarantee of warranties contract
	Korea Content Financial Cooperative	KRW	37,761	Guarantee of warranties contract
SK Square Co., Ltd.	KEB Hana Bank	USD	499	Guarantee of foreign currencies
Tmap Mobility Co., Ltd.	Seoul Guarantee Insurance	KRW	1,135	Performance guarantees and others
SK Shieldus Co., Ltd.	Korea Software Financial Cooperative	KRW	214,556	Guarantee of bid payment and others
SK M & Service Co., Ltd.	Seoul Guarantee Insurance	KRW	2,913	Performance guarantees for contract and others
	Shinhan Bank	KRW	700	Guarantee of Korean won
PS&Marketing Corp.	Seoul Guarantee Insurance	KRW	1,635	Performance guarantees
Dreamus company Co., Ltd.	Seoul Guarantee Insurance	KRW	1,463	Performance guarantees for contract
One store Co., Ltd.	Seoul Guarantee Insurance	KRW	3,668	Guarantee for E-commerce and others
	KEB Hana Bank	KRW	100	Guarantees for prepayment method and payment of Korean won
Home&Service Co., Ltd.	Seoul Guarantee Insurance	KRW	5,690	Specific debt guarantee
SK Store Co., Ltd.	Kookmin Bank	KRW	1,540	Performance guarantees and others
11street Co., Ltd.	KEB Hana Bank	KRW	27,000	Performance guarantees and others
	Seoul Guarantee Insurance	KRW	23,153	Guarantee of deposit on lease and others
FSK L&S Co., Ltd.	Seoul Guarantee Insurance	KRW	21,670	Performance guarantees for contract and others
SK O&S Co., Ltd.	Seoul Guarantee Insurance	KRW	50,000	Performance guarantees for contract
SK Networks Co., Ltd.	KEB Hana Bank	KRW	2,000	Guarantee of payment for goods
	Seoul Guarantee Insurance	KRW	10,658	Performance guarantees for contract
	Korea Trade Insurance Corporation	KRW	3,798	Guarantee of debt
SK Networks Service Co., Ltd.	Seoul Guarantee Insurance	KRW	15,847	Performance guarantees for sales contract
	KEB Hana Bank	KRW	1,200	Performance guarantees for contract
SK Magic Co., Ltd.	Seoul Guarantee Insurance	KRW	20,353	Performance insurances for warranties and others
	Machinery Financial Cooperative	KRW	91	Performance insurances for warranties and others
SK Magic Service Co., Ltd.	Seoul Guarantee Insurance	KRW	551	Performance guarantees
SK Rent-a-Car Co., Ltd.	Seoul Guarantee Insurance	KRW	12,385	Performance guarantees for contract
SK Nexilis Co., Ltd.	Seoul Guarantee Insurance	KRW	55	Guarantee of payment
SK E&S Co., Ltd.	Seoul Guarantee Insurance	KRW	112,785	Performance guarantees for contract and others
	Kookmin Bank	USD	80,000	Guarantee of debt
	Shinhan Bank	USD	80,000	Guarantee of debt
	BNP Paribas	USD	71,000	PPA Bid Guarantee
Yeongnam Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	1,329	Guarantee of warranties and approval
Chonnam Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	936	Guarantee of warranties and payment
Busan City Gas Co., Ltd.	Seoul Guarantee Insurance	KRW	818	Guarantee of seizure contract and others
Kangwon City Gas Co., Ltd.	Seoul Guarantee Insurance	KRW	1,202	Guarantee of performance and approval
Jeonbuk Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	434	Performance guarantees and warranties
Chungcheong Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	3,755	Performance insurances for warranties and others
Ko-one Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	2,755	Performance guarantees for contract
Paju Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	428	Performance guarantees for approval and others
Narae Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	5,115	Guarantee of license to use state property and others
Yeosu Energy Service Co., Ltd.	Seoul Guarantee Insurance	KRW	10,406	Performance guarantees for deposit on approval and others
Dangjin Haengbok Solar Co., Ltd.	Seoul Guarantee Insurance	KRW	3,205	Guarantee of payment of facility restoration and relocation work expenses
Shinanjeungdo Sunlight Co., Ltd.	Seoul Guarantee Insurance	KRW	25	Permission for development activities and approval for implementation of urban planning facility projects
Prism Energy International. Zhoushan Limited	KEB Hana Bank Beijing Branch	CNY	34,460	Guarantee of Terminal fee

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

Guarantee	Guarantor	Currency	Amount	Description of guarantee	
SK Ecoplant Co., Ltd.	HSBC and others	USD	438,019	Performance guarantees for overseas construction and others	
		KWD	76,620	Performance guarantees for overseas construction and others	
		QAR	30,938	Performance guarantees for overseas construction and others	
		TRY	26,264	Performance guarantees for overseas construction and others	
		THB	153,040	Performance guarantees for overseas construction and others	
		KZT	7,568,929	Performance guarantees for overseas construction and others	
		VND	595,464,834	Performance guarantees for overseas construction and others	
		HKD	24,921	Performance guarantees for overseas construction and others	
		AED	119,780	Performance guarantees for overseas construction and others	
		NOK	370,295	Performance guarantees for overseas construction and others	
		SGD	752	Performance guarantees for overseas construction and others	
		KEB Hana Bank	USD	161,695	Performance guarantees for overseas construction and others
			SAR	182,198	Performance guarantees for overseas construction and others
			EUR	84,938	Performance guarantees for overseas construction and others
			KRW	82,705	Performance guarantees for overseas construction and others
			GBP	18,900	Performance guarantees for overseas construction and others
	Busan Bank		KRW	5,500	Performance guarantees for overseas construction and others
			Shinhan Bank	KRW	122,396
	USD			10,911	Performance guarantees for overseas construction and others
	EUR	1,658	Performance guarantees for overseas construction and others		
	Korea Development Bank	KRW	3,000	Performance guarantees for overseas construction and others	
	Korea Eximbank	USD	107,317	Performance guarantees for overseas construction and others	
		EUR	12	Performance guarantees for overseas construction and others	
	Korea Housing Guarantee Co., Ltd.	KRW	3,566,825	Housing guarantees and others	
		Seoul Guarantee Insurance	KRW	546,795	Performance guarantees for domestic construction and others
	Engineering Financial Cooperative	Construction Guarantee	KRW	1,135,691	Domestic construction contract
		Cooperative	KRW	5,252,096	Performance guarantees for domestic construction and others
	Machinery Financial Cooperative and others	KRW	401,825	Performance guarantees for construction and others	
	Korea Trade Insurance Corporation	KRW	169,473	Insurance of overseas investment and others	
	Environment Management Corporation Co., Ltd.	Construction Guarantee Cooperative	KRW	86,338	Performance guarantees for business, construction, warranties and others
		Seoul Guarantee Insurance	KRW	116,018	Performance guarantees for contract, payment, construction, advance payment and others
		Engineering Financial Cooperative	KRW	157,449	Guarantees for contract, advance payment, warranties and others
SK Specialty Co., Ltd.	Korea Life Pyegimul Fraternal Union	KRW	66	Guarantees for contract and warranties	
SK Materials Performance Co., Ltd.	Seoul Guarantee Insurance	KRW	171	Performance guarantees and others	
	Korea Trade Insurance Corporation.	USD	6,000	Insurance of short-term export	
SK Biopharmaceuticals Co., Ltd.	Hupis Co., Ltd.	KRW	1,904	Guarantee of deposit on lease	
SK Signet Inc.	Seoul Guarantee Insurance	KRW	5,936	Performance guarantees for contract, payment, warranties and deposits	
SK Pinx Co., Ltd.	Seoul Guarantee Insurance	KRW	282	Performance guarantees for sales contract	
Hweechan Co., Ltd.	Seoul Guarantee Insurance	KRW	116	Performance guarantees for contract for underground water and convenience stores	
SK Tri Chem Co., Ltd.	Seoul Guarantee Insurance	KRW	1,185	Performance guarantees and others	

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

(2) Guarantees provided to others as of December 31, 2022 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantee	Guarantor	Currency	Amount	Description of guarantee
SK Geo Centric Co., Ltd.	SABIC SK Nexlene Company Pte. Ltd.	USD	195,000	Guarantee of debt
Iberian Lube Base Oils S.A.	Puertos del Estado	EUR	929	Guarantees for construction
	Railway Administration and others	EUR	265	Guarantee for installing facilities and others
SK Innovation Co., Ltd.	Terra Power, LLC	USD	151,000	Performance guarantees for investment
SK Telink Co., Ltd.	IOT Wave Co., Ltd. and others	KRW	50	Performance guarantees for insurance and others
SK Communications Co., Ltd.	Purchaser or right holder of electronic payment method	KRW	1,100	Protection of user funds from electronic financiers
Dreamus Company Co., Ltd.	Youngkwang Precision Industry Co., Ltd.	KRW	216	Performance guarantees for contract
SKC Co., Ltd.	PI Advanced Materials Co., Ltd.	USD	7,836	Guarantee for litigation
	SKC, Inc.	USD	169,000	Local Finance Payment Guarantee
	SKC (Jiangsu) High Tech	USD	49,950	Local Finance Payment Guarantee
	Plastics Co., Ltd	CNY	390,000	Local Finance Payment Guarantee
SK E&S Co., Ltd.	Boryeong LNG Terminal Co., Ltd.	KRW	320,000	Guarantee of debt
	Jeonnam Offshore Wind Power Co., Ltd.	EUR	25,143	Assurance of selected share price
Environment Management Corporation Co., Ltd.	Dongbugwon Puleunmul Co., Ltd. and others	KRW	29,860	Guarantee of debt
	Geochang Malgunmool Sarang Co., Ltd. and others	KRW	44,943	Guarantee for loan agreement
	Gyeongsan Pure Water Co., Ltd. and others	KRW	3,090	Performance guarantees for business
SK Ecoplant Co., Ltd.	SBC General Trading & Contracting Co. WLL and others	KWD	3,500	Performance guarantees for contract and others
	Pohang Clean Water Co., Ltd. and others	KRW	874,807	Cash deficiency support agreement
	Gweonseon District 6 redevelopment maintenance business association and others	KRW	195,558	Guarantees for reconstruction project financing
	Customers of Pangyo SK view	KRW	952,104	Guarantee of payment of intermediate payment and moving expenses loan
	Lu 1 City SK leaders view and others	KRW	4,058,630	Guarantee of completion
	Fuel cell power generation project	KRW	164,423	Performance assurance related to long-term maintenance contracts
		USD	206,330	Performance assurance related to long-term maintenance contracts
	Contractor issuing guarantee for sale	KRW	2,242,500	Joint surety

In addition, SK Ecoplant Co., Ltd., a subsidiary of the Group, provides other construction companies with performance guarantees for domestic construction, and the amount of the guarantees is ₩731,638 million as of December 31, 2022.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

(3) Pending litigations

The Group's significant pending litigations as of December 31, 2022, in which the Group is a plaintiff are as follows (Korean won in millions and foreign currencies in thousands):

Plaintiff	Defendant	Description	Claim	Status
SK Shieldus Co., Ltd.	Individual and others	Claim for damages for breach of contract and others	KRW 710	First trial in progress
SK Planet Co., Ltd.	Fair Trade Commission	Claim for revocation of corrective order and others	KRW 335	First trial in progress
11Street Co., Ltd.	Individual and others	Claim for payment and others	KRW 8,000	Third trial in progress and others
SK Broadband Co., Ltd.	Fair Trade Commission and others	Claim for payment and others	KRW 5,371	Third trial in progress and others
SK Telecom Co., Ltd.	Individual and others	Claim for payment and others	KRW 4,005	Third trial in progress and others
PS&Marketing Corp.	Individual and others	Claim for payment and others	KRW 3,903	Second trial in progress and others
Dreamus Company Co., Ltd.	Ebo Tech	Claim for payment of goods	KRW 475	First trial in progress
SK Networks Co., Ltd.	Individual and others	Claim for lease deposit and others	KRW 4,900	Second trial in progress and others
SK Magic Co., Ltd.	YK DONGRAMI Co., Ltd. and others	Request for payment of rental fee and others	KRW 426	First trial in progress and others
SK Specialty Co., Ltd.	Byuckwoo Co., Ltd.	Lawsuit for a return of money	KRW 1,110	First trial in progress
SK Rent-a-Car Co., Ltd.	Individual and others	Claim for payment and others	KRW 1,000	Third trial in progress and others
SK E&S Co., Ltd.	Gwangyang City mayor	Claim for cancellation of imposition of refusal of request for correction	KRW 1,176	First trial in progress
Narae Energy Service Co., Ltd.	Hanam City Hall	Claim for cancellation of the imposition of the contribution to the water supply cause	KRW 3,171	First trial in progress
Paju Energy Service Co., Ltd.	Paju City mayor	Claim for cancellation of imposition of refusal of request for correction	KRW 1,703	First trial in progress
LNG Americas, Inc. (formerly, Cailip Gas Marketing, LLC)	Chevron U.S.A. Inc	Claim for compensation for loss of natural gas supply	USD 84,531	First trial in progress
SK Incheon Petrochem Co., Ltd.	Dongatanker Co., Ltd. and others	Claim for payment	KRW 10,075	First trial in progress
SK Ecoplant Co., Ltd.	Korea Rail Network Authority	Claim for payment of construction and others	KRW 4,279	Second trial in progress and others
	Korea Specialty Contractor Financial Cooperative	Claim for deposit of construction performance and others	KRW 3,456	First trial in progress
	Plant & Mechanical Contractors Financial Cooperative and others	Claim for deposit of construction performance	KRW 5,403	Third trial in progress
	Korea National Oil Corporation	Claim for payment of Construction	KRW 13,294	Second trial in progress and others
	Korea Land & Housing Corporation	Claim for payment of construction	KRW 1,090	Second trial in progress
	NSRP	Claim for payment of construction	KRW 235,718	Arbitration in progress
	PNPC	Claim for payment of construction	KRW 193,263	Arbitration in progress
	Seogeumsa Redevelopment Association and others	Claim for payment and others	KRW 118,189	First trial in progress and others
	Legal manager of Seobon Construction Co., Ltd.	A final and conclusive bond investigation trial of KNPCCFP	KRW 1,940	First trial in progress
	Goseong Green Power Co., Ltd.	Claim for payment of construction	KRW 198,500	First trial in progress
Environment Management Corporation Co., Ltd.	Siheung City and others	Claim related to settlement of operating and management expenses and others	KRW 26,720	First trial in progress and others
SK Oceanplant Co., Ltd.	Green ST Co., Ltd. and others	Claim for transfer corporeal movables and others	KRW 607	First trial in progress
Green Environment Technology Co., Ltd.	Da Moa Machinery and others	Claim related to balance of machine sales	KRW 40	Second trial in progress
E-MEDI ONE CO., LTD.	Individual	Claim for a loan	KRW 1,341	First trial in progress

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

The Group's significant pending litigations as of December 31, 2022, in which the Group is a defendant are as follows (Korean won in millions):

Defendant	Plaintiff	Description	Claim	Status
SK Shieldus Co., Ltd.	Individual and others	Claim for damages and others	KRW 1,866	Second trial in progress and others
11Street Co., Ltd	Individual and others	Litigation for Claims for Settlement and others	KRW 1,685	Second trial in progress and others
SK Broadband Co., Ltd.	Individual and others	Claim for damages and others	KRW 11,190	Second trial in progress and others
SK Telecom Co., Ltd.	Individual and others	Claim for damages and others	KRW 24,366	Third trial in progress and others
SK Communications Co., Ltd.	Individual and others	Claim for confirmation of the invalidity of dismissal and others	KRW 4	First trial in progress
SK M&SERVICE CO.,LTD.	Individual and others	Claim for confirmation of the invalidity of dismissal and others	KRW 50	Second trial in progress
SK Networks Co., Ltd.	Individual and others	Claim for damages and others	KRW 3,484	Second trial in progress and others
SK Magic Co., Ltd.	Individual and others	Claim for confirmation of the scope of trademark rights and others	KRW 226	Second trial in progress and others
SK Rent-a-Car Co., Ltd.	Individual and others	Claim for compensation and others	KRW 1,257	Second trial in progress and others
SK Nexilis Co., Ltd.	Individual and others	Claim for damages	KRW 3,498	Second trial in progress
Ko-one Energy Service Co., Ltd.	Korea Land & Housing corporation	Claim for cancellation of allotted charges	KRW 1,286	Second trial in progress
Busan City Gas Co., Ltd.	HDC-labs Co., Ltd.	Claim for payment of construction	KRW 534	First trial in progress
Narae energy service Co., Ltd.	Korea Electric Power Corporation	Claim for Contract amount reduction confirmation	KRW 2,694	First trial in progress
SK Ecoplant Co., Ltd.	K-Water Resources Corporation	Claim for design compensation cost return and others	KRW 3,004	Third trial in progress
	Incheon Metropolitan City	Claim for design compensation cost return and others	KRW 7,804	Third trial in progress and others
	Hanwha Engineering & Construction Corp.	Claim for cost share	KRW 5,087	First trial in progress
	Suwon Sky View resident's representative and others	Claim for damages and others	KRW 26,801	Second trial in progress and others
	NSRP	Claim for payment of construction	KRW 111,269	First trial in progress
	PNPC	Claim for payment of construction	KRW 411,873	First trial in progress
	IMCO and others	Claim for payment of construction and others	KRW 150,278	First trial in progress and others
	Republic of Korea	Claim for damages and others	KRW 5,326	First trial in progress and others
	Woori Bank	Claim for payment of construction	KRW 12,096	Second trial in progress
Environment Management Corporation Co., Ltd.	Siheung City and others	Claim for cost share and others	KRW 2,300	First trial in progress and others
SK Oceanplant Co.,Ltd.	AT Co., Ltd. and others	Claim for payment of construction	KRW 4,831	Second trial in progress and others
Green Environment	Daesang Co., Ltd. and others	Claim for payment of construction	KRW 253	Second trial in progress and others

On May 15, 2021, SK Innovation Co., Ltd., a subsidiary of the Group, LG Chem Co., Ltd. and LG Energy Solution Co., Ltd., which split-off from LG Chem Co., Ltd. agreed to withdraw all domestic and foreign disputes, be exempt from all related obligations, prohibit similar or identical disputes for 10 years, and permanent licenses for trade secrets and patents. Accordingly, ₩1 trillion in cash throughout 2021 and 2022 and royalties up to ₩1 trillion corresponding to a certain percentage of sales from 2023 will be paid to LG Energy Solution Ltd. ₩1 trillion out of the total paybles to LG Energy Solution Co., Ltd., has been paid in cash as of December 31, 2022, and the amount of royalties will be expensed at the point when any events resulting payment incur.

34. Commitments and contingencies (cont'd)

On May 4, 2020, the Attorney General Office of California, USA, filed a civil lawsuit in the California District Court located in San Francisco against Vitol Inc., SK Trading International Co., Ltd. and SK Energy Americas Inc., the subsidiaries of the Group, for manipulating the market price of gasoline products and anti-competitive and unfair practices during the refinery explosion in 2015. The case is currently in progress, and the duration and final outcome are not estimable at the moment. Since May 6, 2020, end-users of gasoline have filed a number of collective lawsuits in California federal court. The duration and final outcome thereof are also not estimable at the moment.

E&P business in 8th block of Peru, a subsidiary of SK Innovation Co., has been suspended due to the liquidation of operator (Pluspetrol Norte S.A.) and the business is in progress of closing.

The Perupetro S.A., a Peruvian state-owned oil company and mining rights management agency, received an injunction from the local judiciary to suspend the liquidation procedure of the operator for the year ended December 31, 2021 and the Peruvian Environmental Assessment and Supervision Authority (OEFA) fined the operator related to the restoration of the workplace and environmental pollution charge for the year ended December 31, 2021. Accordingly, SK Innovation Co., Ltd. paid expenses of ₩1,527 million and ₩1,611 million for the year ended December 31, 2021 and the year ended December 31, 2022, respectively, upon request of the operator which were accounted as non-operating expenses.

The Perupetro S.A. has filed international proceedings with the International Chamber of Commerce against the parties to the mining contract, including SK Innovation Co., Ltd., in accordance with the dispute settlement clause in the mine contract to the effect that the mining right contract is not terminated only by the initiation of liquidation of the operator. The status of the arbitration is currently pending, and the final outcomes of the arbitration cannot be predicted at the moment.

SKC Co., Ltd., a subsidiary of the Group, guarantees 50% of claim amounts related to the patent litigation filed by Kaneka Corporation against PI Advanced Materials Co., Ltd. As of December 31, 2022, the appeal of the lawsuit in the U.S. was rejected and the jury's verdict determined damages, but the final ruling was not made because some of the compensation for damages were not confirmed. Meanwhile, Kaneka Corporation filed a lawsuit against PI Advanced Materials Co., Ltd. in Korea based on a portion of final judgment on the U.S. jury's verdict. Accordingly, the Group paid PI Advanced Materials Co., Ltd. USD 7,836 thousand which is 50% of USD 15,671 thousand in damages. Based on the final results of litigation, the Group may have to pay more according to the ratio as specified by the payment arrangement. As of December 31, 2022, the final result of trial 1 and the timing of payment of compensation for damage are not estimable.

34. Commitments and contingencies (cont'd)

(4) Commitments

- 1) In accordance with the Commercial Code of the Republic of Korea, the Company, SK Innovation Co., Ltd., SK Energy Co., Ltd., SK Geo Centric Co., Ltd.(formerly, SK Global Chemical Co., Ltd.), SK Enmove Co., Ltd.(formerly, SK Lubricants Co.), Ltd., SK Incheon Petrochem Co., Ltd., SK Trading International Co., Ltd., SK ie technology Co., Ltd., SK On Co., Ltd, and SK Earthon Co., Ltd. are collectively responsible for any obligations of the Company arising before the spin-off. The Company and SK Biopharmaceuticals Co., Ltd. are collectively responsible for any obligations of the Company that occurred before the spin-off on April 1, 2011 and the Company and SK Specialty Co., Ltd. are collectively responsible for any obligations of SK Materials Co., Ltd. (formerly) that occurred before the spin-off on December 1, 2021.
- 2) The Company has signed a lease contract for the head office building from SK REITs Co., Ltd. The lease contract period under this lease contract is until July 5, 2026, and we have the option of extending the lease contract by five years before the end of the contract. On the other hand, we have been granted preferential purchase rights for landlords to purchase at fair prices when selling the building.
- 3) The Company holds IT outsourcing and IT system maintenance agreements to provide hardware and information systems maintenance and development service entered into between the Company and SK Group companies and others.
- 4) The Company entered into a contract with Gyeonggi province on May 31, 2011 to purchase land located in Pangyo Land Development District. The total agreement amount is ₩82,964 million (the Company's portion: ₩45,536 million (54.9%)), which will be used for the construction of urban infrastructure facilities ("designated purpose" of the land). The contract includes requirements to be complied with and restrictions in transfer of ownership of the land. Should there be non-compliance, the contract may be terminated or cancelled.
- 5) The Company has total return swap contracts in regards to SK Shipping Co., Ltd.'s issuance of ordinary shares and sale of existing shares, and details are as follows:

	<u>Subscription of new shares</u>	<u>Sale of existing shares</u>
Investor	Special Situation 1 st Fund	Corporate Turnaround 1 st Fund
Number of shares	6,548,672	4,808,259
Contract date	April 11, 2017	May 11, 2017
Expiry date	April 10, 2022	May 10, 2022
Settlement	The Company and the investor make a cash settlement of the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.	
Premium	The Company pays to the investor the amount equivalent to 3.14% of the total shares held by the investor annually. When the investor receives dividends on the shares held, the amount is paid to the Company.	
Call option	The Company has the right to purchase the shares held by the investor at the issued price of the ordinary shares with certain level of additional charges.	

34. Commitments and contingencies (cont'd)

As of March 30, 2022, the Company signed an agreement to changes in total profit swap including extension of expiry date, etc. with the investor of the common stock above. The changes are effective from the termination date of investment (expiry date of the existing agreement). The main details of the changes to the agreement are as follows:

Description	Subscription of new shares	Sale of existing shares
Investor	Special Situation 1 st Fund	Corporate Turnaround 1 st Fund
Number of shares	6,548,672	4,808,259
Contract date	March 30, 2022	March 30, 2022
Expiry date	April 12, 2027	May 10, 2027
Settlement	The Company and the investor make a cash settlement of the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.	
Premium	The Company pays to the investor the amount equivalent to 3.899% of the total shares held by the investor quarterly. When the investor receives dividends on the shares held, the amount is paid to the Company.	
Call option	On every first year between the end of the investment and the expiration date, the Company has the right to purchase the shares held by the investor at the contract price of the ordinary shares with certain level of additional charges.	

34. Commitments and contingencies (cont'd)

6) The Group entered into total return swap contracts with ordinary shareholders of SK Siltron Co., Ltd., one of the subsidiaries. Details are as follows:

Investor	Total return swap
Investor	Warmachine Sixth Co., Ltd. and others
Number of shares	13,140,440
Contract date	August 25, 2017
Expiry date	August 24, 2022
Settlement	The Company and the investors are to settle the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.
Premium	The Company is to pay 0.5% of the initial contract amount at the closing date of the transaction and pay to the investor the amount equivalent to 3.20% of the total shares held by the investors annually. When the investor receives dividends on the shares held, the amount is paid to the Company.
Call option	On a three-month basis from the closing date of sale (“the quarterly payment day”), the Company has the right to purchase the shares held by the investor at the initial contract price of the ordinary shares with a certain level of additional charges.

As of August 16, 2022, the Company signed an agreement to changes in total profit swap including extension of expiry date, etc. with the investor of the common stock above. The changes are effective from August 30, 2022 (effective date of contract). The main details of the changes to the agreement are as follows:

Description	Total return swap contracts
Investor	Warmachine Sixth Co., Ltd. and others
Number of shares	13,140,440
Contract date	August 16, 2022
Expiry date	August 30, 2027
Settlement	The Company and the investors settle the amount that deducts the issue price from the net selling price in cash. If the amount is positive, the investor shall pay to the Company, and if the amount is negative, the Company shall pay to the investor. In case where the sale is not complete, the selling price of the shares is considered to be 0.
Premium	The Company shall pay 0.5% of the initial contract amount within 5 operating day from the effective date of contract and shall pay to the investors the amount equivalent to 4.948% of the total shares held by investors on a three-month basis. When the investor receives dividends on the shares held, the amount shall be paid to the Company.
Call option	On a three-month basis from the effective date of contract (“the quarterly payment day”), the Company has the right to purchase the shares held by the investors at the initial contract price of the ordinary shares with certain level of additional charges.

As of December 31, 2022, the value of the agreements amounting to ₩169,131 million is recognized in long-term borrowings (See Note 16).

34. Commitments and contingencies (cont'd)

7) The Group entered into total return swap contracts with ordinary shareholders of SK E&S Co., Ltd., one of the subsidiaries. Details are as follows:

	Total return swap
Investor	MD Prime 1st Co., Ltd.
Number of shares	4,640,199
Contract date	November 14, 2017
Expiry date	November 16, 2022
Settlement	The Company and the investors are to settle the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.
Premium	The Company is to pay to the investor the amount equivalent to 3.07% of the total shares held by the investors annually. When the investor receives dividends on the shares held, the amount is paid to the Company.
Call option	The Company may make a purchase request in the amount of common shares held by the investor plus a certain amount on every premium payment date and every quarterly payment date between the date of the board's resolution to select the IPO organizer and the date of submission of a preliminary listing review.

As of November 4, 2022, the Company signed an agreement to changes in total profit swap including extension of expiry date, etc. with the investor of the common stock above. The changes are effective from November 16, 2022(effective date of contract). The main details of the changes to the agreement are as follows:

Description	Total return swap
Investor	MD Prime 1st Co., Ltd.
Number of shares	4,640,199
Contract date	November 4, 2022
Expiry date	November 16, 2027
Settlement	The Company and the investors are to settle the amount that deducts the issue price from the net selling price. If the amount is positive, the investor pays to the Company, and if the amount is negative, the Company pays to the investor. In case where the sale is not complete, the selling price of the shares is considered to be nil.
Premium	At the date when three months passed after the last premium payment date or the effective date ("premium payment date") during the period from the effective date to the expiration date of this Agreement, the Company shall pay the remaining contract amount of the remaining shares multiplied by the TRS Premium (rate of return on final asking price of 91-day Transferable Certificate of Deposit (CD) plus 1.80% of annual rate). On the other hand, if an investor receives dividends or other receivables from holding the target stock, the relevant amount must be paid to the Company.
Call option	On each premium payment date (every three months from the effective date of this contract), the Company may claim all remaining underlying assets (ordinary shares that SK E&S issued and an investor purchased from the Company) to the remaining contract amount of the underlying assets plus the call option exercise fee, securities exchange tax, and special tax for rural development.

As of December 31, 2022, the value of the agreements amounting to ₩677,775 million is recognized in current portion of long-term borrowings (See Note 16).

34. Commitments and contingencies (cont'd)

- 8) The Company entered into a cash deficiency support agreement with Hudson Energy NY, LLC, a subsidiary of Plutus Capital NY, Inc., to lend funds for the shortfall of payment for loans and credit limit of USD 226,000 thousand.
- 9) The Company entered into a cash deficiency support agreement with Abrasax Investment Inc., a subsidiary of SK Pharmteco Inc. to lend funds for the shortfall of payment for loans and credit of up to USD 315,000 thousand.
- 10) The Company has a shareholder-to-share agreement with Showa Denko K.K. in relation to the investment of subsidiary SK Resonac Corporation, and Showa Denko K.K. has the right to sell 630,000 shares (15%) of SK Resonac Corporation at ₩ 5,000 per share in the event of a specific case of this agreement.
- 11) The Company have signed a contract between shareholders that allows certain shareholders to sell their shares to us for ₩50,000 per share if certain conditions are met for shares held by certain shareholders of its subsidiary SK Signet Co., Ltd.
- 12) As of December 31, 2022, Prism Energy International Pte., Ltd., a subsidiary, provides LOU (Letter of Understanding) to ship owners HHIENS1 Shipholding S.A., HHIENS2 Shipholding S.A., HHIENS3 Shipholding S.A. and HHIENS4 Shipholding S.A. in connection with LNG carriers. Accordingly, if SK Shipping Co., Ltd. fails to fulfill the contract (BBCHP) signed with the shipping Company, SK E&S Co., Ltd. will assume all obligations related to the execution of the contract.
- 13) LNG Americas, Inc.(formerly, LAI LNG, LLC), one of the subsidiaries, is scheduled to be provided with liquefaction service for 20 years from FLNG Liquefaction 3, LLC, which plans to operate natural gas liquefaction plants in Texas starting from 2019. As of December 31, 2022, SK E&S Co., Ltd., one of the subsidiaries, is responsible for performance guarantee in case of LNG Americas, Inc.(formerly, LAI LNG, LLC)'s inability to make payments for service or for claims against breach of obligation. In regard to this, the Company provides performance guarantee for SK E&S Co., Ltd.'s guarantee.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

14) As of December 31, 2022, details of contracts of the subsidiaries of SK E&S Co., Ltd. are as follows:

Contracting parties	Description of contract	Counterparty	Term of contract
Kangwon City Gas Co., Ltd. and 7 subsidiaries	Contract for the supply of long-term natural gas (*1)	Korea Gas Corporation Co., Ltd.	-
SK E&S Co., Ltd.	Contract of supply for natural gas	Tangguh PSC Contractor Parties	2006.1 ~ 2026.7
	Contract for the repair and maintenance of gas turbine (estimated)	GE International Inc.	2004.6 ~ 2026.12
	Contract for the storage and vaporization service of natural gas	POSCO ENERGY Co., Ltd.	2005.6 ~ 2025.12
	Rental contract of the plant and tower site	POSCO Co., Ltd.	2020.7 ~ 2040.12
	Contract for the REC trading	Godeok Green Energy Co., Ltd. and others	2003.8 ~ 2028.12
	Direct power transaction contract	SK Specialty Co., Ltd. and others	20 years from the time of supply
	Power supply contract	Dangjin Haengbok Solar Co., Ltd. and others	20 years from the time of supply
Paju Energy Service Co., Ltd.	Contract for the long-term maintenance program	Siemens AG and others	2014.6 ~ 2031.6 (estimated)
	Contract for the REC trading	GeoGeum Solar Park Co., Ltd. and others	15 years from 2018
	Contract for LTSA	Doosan Fuelcell Co., Ltd.	10 years from performance warranty date
Narae Energy Service Co., Ltd.	Contract for the long-term maintenance program	Siemens AG and others	2015.1 ~ 2032.1 (estimated)
	Contract for the long-term maintenance program	Doosan Enerbility Co., Ltd. (formerly, Doosan Heavy Industries & Construction Co., Ltd.)	12 years from 2012
	Contract for the operation and Maintenance program	Jeonbuk Group Energy Co., Ltd. and Gimcheon Energy Service Co., Ltd.	2015.1 ~ 2025.1
	Contract for the supply of long-term natural gas	Korea Gas Corporation Co., Ltd.	20 years from 2015.5
	Contract for the REC trading	K Solar E Ho Co., Ltd. and others	20 years from contract
Narae Energy Service Co., Ltd. and Paju Energy Service Co., Ltd.	Contract for the use plumbing system	Korea Gas Corporation Co., Ltd.	20 years from 2017
SK E&S Co., Ltd. and Narae Energy Service Co., Ltd. and Paju Energy Service Co., Ltd.	Contract for the storage and vaporization service of natural gas	Boryeong LNG Terminal Co., Ltd.	20 years from 2017
Yeoju Energy Service Co., Ltd.	Integrated Environmental Management Licensing Service	SK Ecoengineering Co., Ltd. (*2)	2019.1 ~ 2023.10
	Contract for LTSA	Siemens Gas & Power GmbH	2019.12 ~ 2047.12 (estimated)
Busan City Gas Co., Ltd.	Rental contract	Siemens Energy Ltd. Megamart Co., Ltd. and others	2024.06.30 (agreement)
LNG Americas, Inc. (formerly, LAI LNG, LLC)	Contract for the liquefaction and storage of natural gas	FLNG Liquefaction 3, LLC	20 years from 2020
	Contract for the use pipeline of natural gas	Kinder Morgan, Inc.	20 years from 2020
Prism Energy International Pte. Ltd.	Contract of supply for natural gas	SHELL EASTERN TRADING PTE LTD and others	2019.6 ~ 2033.3
	Time charter contract	SK Shipping Co., Ltd.	20 years from ship delivery date
	Contract of supply for LNG	Generadora San Felipe Limited Partnership	10 years from commencement date
SK E&S Australia Pty. Ltd.	Contract for FPSO	BW Offshore Singapore Pte. Ltd. (Australia Branch)	15 years from service date
	Contract for the liquefaction service of natural gas	Darwin LNG Pty. Ltd. and others	2020.12 (contract) 15 years from service date (estimated)
Prism Energy International Zhoushan Limited	Contract for the storage and vaporization service of natural gas	ENN (Zhoushan) LNG Co., Ltd.	2020.7 ~ 2030.7

(*1) The Company has signed a contract with Korea Gas Corporation for natural gas supply for 20 years.

(*2) During the year ended December 31, 2022, SK Ecoengineering Co., Ltd. comprehensively succeeded to the contractual status with the consolidated entity and the rights and obligations accordingly through the division and merger of SK Ecoplant Co., Ltd.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

35. Commitments and contingencies (cont'd)

- 15) As of December 31, 2022, details of construction contracts about the subsidiaries of SK E&S Co., Ltd. are as follows (Korean won in millions):

Description of contract	Name of subsidiaries	Contract opponent	Term of contract	Amount
Contract for heat piping and others	Narae Energy Service Co., Ltd.	DREAMLINE.CO,LTD. and others	2022.04 ~ 2023.06	₩ 7,225
Yeoju natural gas power Plant EPC contract (*1)	Yeoju Energy Service Co., Ltd.	SK Ecoengineering Co., Ltd. (*2)	2019.12 ~ 2023.08	₩ 664,091
By-product hydrogen liquefaction Plant EPC contract (*1)	IGE Co., Ltd.	SK Ecoengineering Co., Ltd. (*2)	2021.07 ~ completion	₩ 444,950

(*1) For the purpose of performing the contract, Yeoju Energy Service Co., Ltd., IGE Co., Ltd. received blank checks from SK Ecoengineering Co., Ltd.

(*2) During the year ended December 31, 2022, SK Ecoengineering Co., Ltd. comprehensively succeeded to the contractual status with the consolidated entity and the rights and obligations accordingly through the division and merger of SK Ecoplant Co., Ltd.

- 16) As of December 31, 2022, details of material contracts of resource development by the subsidiaries of SK E&S Co., Ltd. are as follows:

Description of contract	Name of subsidiaries	Counterparty	Equity ownership
Barossa-Caldita, Australia	SK E&S Australia Pty. Ltd.	Santos NA Barossa Pty. Ltd.	37.5%
Woodford, USA	Dew Blaine Energy, LLC	Continental Resources, Inc.	49.9%
East Timor Bayu-Undan gas field and pipeline asset	BU12 Australia Pty. Ltd. BU13 Australia Pty. Ltd. SK E&S Australia Pty. Ltd. Prism DLNG Pte. Ltd.	Santos NA Darwin Pipeline Pty. Ltd. and others	25.0%

- 17) SK E&S Co., Ltd., a subsidiary of the Group, has agreed to invest a total of ₩10 billion in the Tcha Partners Asset Management Co., Ltd. for hydrogen business cooperation, and has completed 69.22% of the total investment agreement.

- 18) SK Energy Co., Ltd., SK Incheon Petrochem Co., Ltd., SK On Co., Ltd. and SK Geo Centric Co., Ltd., subsidiaries of the Group, pay electricity bills and tariffs through B2B corporate agreement contracts and national tax cards signed with some financial institutions, and pay the bill to the credit card Company at the end of the credit donation period under the agreement. As of December 31, 2022, the related payables and others are ₩976,213 million, which are classified as current liabilities.

- 19) SK Energy Co., Ltd., a subsidiary of the Group, signed an option contract regarding the shares of ordinary stocks held by non-controlling shareholders of goodsFLOW Co., Ltd. The terms of the contract for this option are as follows:

Description	Put option	Call option	Call option
Purpose of Contract	Acquisition of equity		
Option rights holder	Tae-jin Jung, Byung-wook Oh and others	SK Energy Co., Ltd.	SK Energy Co., Ltd.
Option obligor	SK Energy Co., Ltd.	Tae-jin Jung, Byung-wook Oh and others	Hanyu Energy Co., Ltd. and others
Payment method	Cash		
Object of exercise	A total of 1,014,362 shares (43.83%) of goodsFLOW Co., Ltd.'s shares held by Tae-jin Jung, Byung-wook Oh, shareholders of goodsFLOW Co., Ltd.		A total of 351,076 shares (15.17%) of goodsFLOW Co., Ltd.'s shares held by Hanyu Energy Co., Ltd., shareholders of goodsFLOW Co., Ltd.
Time of exercise	The date on which three years have elapsed from January 31, 2021 or the date agreed between the parties, whichever is earlier		
Price of exercise	Price per share ₩33,553		Fair value at the time of exercise of the call option.

34. Commitments and contingencies (cont'd)

20) SK Innovation Co., Ltd., a subsidiary of the Group, sold its holdings (40%) of SK Enmove Co., Ltd. (formerly, SK Lubricants Co., Ltd.), a subsidiary of the Group to Eco Solution Holdings Co., Ltd. (the "investor") on July 30, 2021. The shareholder agreement between the Investor and SK Innovation Co., Ltd., the largest shareholder of SK Enmove Co., Ltd. (formerly, SK Lubricants Co., Ltd.), in event of selling the stake, includes the following key terms:

- Investor's Tag-along right and Co-Sale Process
- Investor's right to make decisions on dividend policies, under certain conditions
- The largest shareholder's right to request for sale of shares and Investor's right to demand the purchase of shares, under certain conditions
- Restriction on disposal of shares of the largest shareholder and investor under certain conditions, etc.

Details of rights granted to investor are as follows:

Description	Conditions	Rights
Tag-Along Right	The largest shareholder sells shares when accomplishing certain conditions	The right to sell Investor's shares on the same conditions as the largest shareholder
Co-Sale Process	Failure of Initial Public Offering ("IPO") within the agreed period (8 years) and the total amounts of available for dividend are less than 2.5% of the annual interest rates based on IRR	The right to sell shares held by the largest shareholder along with shares held by
Dividend policy decision-making right	Failure of IPO within the agreed period (5 years)	The right to make decisions on dividend policies within
Default Put Option	In the event of a serious violation of a specific obligation clause agreed with Investor for a deliberate and malicious purpose	The right to sell the investors shares to the largest shareholder at an amount calculated by applying 10% annual interest rate based on IRR for the investment principal (₩1,091,948 million).

SKInnovation Co., Ltd., the Company's subsidiary, has signed a shareholders' agreement with investors related to shares newly issued through the paid-in capital increase of its subsidiary, SK ON Co., Ltd. The agreement between the largest shareholder, SK Innovation Co., Ltd., and investors includes the following key terms:

- Investor's tag-along right
- Investor's drag-along right and largest shareholder's call option responding to drag-along right exercised by investors
- Investor's put option
- Restriction on disposal of shares of the largest shareholder under certain conditions.

34. Commitments and contingencies (cont'd)

Details of rights granted to investor are as follows:

Description	Conditions	Rights
Tag-along right	In the case of transferring all or part of the shares held by the largest shareholder	Investors may sell their own shares on the same conditions as the largest shareholder.
Drag-along right	When a qualified listing requiring certain conditions, such as 7.5% or higher IRR, is not completed within 4 years of agreement period (which can be extended twice by one year, respectively).	Investors may request the largest shareholder to sell its shares along with shares held by investors.
Put option	In the event of a serious violation of a specific obligation clause agreed with investors for a deliberate and malicious purpose	Investors may sell their own shares to the largest shareholder at the exercise price of the put option for the investment principal (₩824,329 million).

The Group recognized ₩ 140,462 million of derivative liabilities for rights included in the shareholders' agreement above, such as the investor's drag-along rights and the largest shareholder's call option.

SK Battery America Inc., a subsidiary, has signed a project agreement with Jackson County Industrial Development Authority and the Georgia Department of Economic Development (hereinafter referred to as "contract") to provide incentives such as property tax reduction. Under the contract, SK Battery America, Inc. transferred legal ownership of assets subject to property tax reduction to state agencies and received bonds issued by state agencies. The Group recognized the bonds and financial liabilities generated in the transaction as net amounts as they meet the offsetting criteria of KIFRS 1032, and the amount of bonds and financial liabilities set off as of December 31, 2022 is USD 2,887 million, and the book value after offset is ₩0.

- 21) SK Telecom Co., Ltd., a subsidiary of the Group, sells its mobile handsets to customers on an installment payment plan through agents. SK Telecom Co., Ltd. entered into transfer agreements with the agents for the receivables of handset's installment payments, under which all the rights and obligations of the receivables are transferred to SK Telecom Co., Ltd. Then, SK Telecom Co., Ltd. entered into an asset securitization contract with a special purpose Company for the receivables, and accordingly, the balance of the receivables which is recorded as other receivables and long-term other receivables as of December 31, 2022 and December 31, 2021 is ₩357,467 million and ₩493,277 million, respectively.

34. Commitments and contingencies (cont'd)

- 22) SK Telecom Co., Ltd., a subsidiary, decided to purchase and sell shares to strengthen strategic cooperation with Hana Financial Group at its board of directors meeting on July 22, 2022. According to the resolution, on July 27, 2022, SK Telecom Co., Ltd. sold all of Hana Card Co., Ltd.'s common shares (39,902,323 shares) and Finnq Inc.'s common shares (6,370,000 shares) to Hana Financial Group Inc. for ₩330,032 million and ₩5,733 million, respectively. By the agreement with Hana Financial Group Inc., SK Telecom Co., Ltd. is obligated to purchase Hana Financial Group Inc.'s common shares from July 27, 2022 to January 31, 2024, after depositing ₩330,032 million in a specific money trust and has completed the purchase during the year ended December 31, 2022. As part of the above transaction, SK Telecom Co., Ltd. sold all of its common shares (767,011 shares) in SK Square to Hana Card Co., Ltd. for ₩31,563 million on July 27, 2022, and Hana Card Co., Ltd. is obligated to purchase SK Telecom Co., Ltd.'s common shares from July 27, 2022 to January 31, 2024 after depositing ₩68,437 million in a specific money trust. The shares acquired by SK Telecom Co., Ltd., Hana Financial Group Inc. and Hana Card Co., Ltd. cannot be sold until the end of March 2025.
- 23) SK Siltron Co., Ltd., a subsidiary, acquired redeemable convertible preferred shares from Korea Credit Guarantee Fund for the current period in connection with the acquisition of shares in Terraon Co., Ltd., a subsidiary investment. Depending on the nature of the financial instrument, the Group has the option to convert 9,740 shares of Terraon Co., Ltd. into common shares, and the duration is 10 years from the date of issuance and can be exercised until November 18, 2030.
- 24) SK ecoplant Co., Ltd., a subsidiary, settles the trade payables arising from main business activities by the arrangement for corporate purchase only card entered into with some financial institutions, and the payment is made to the credit card company at the end of the credit offering period. As of December 31, 2022, there are no related outstanding payables.
- 25) SK Ecoplant Co., Ltd., a Subsidiary, holds call options for shares held by non-controlling shareholders of its subsidiary, Eco Frontier PTE. LTD., and has signed a shareholders' agreement prescribing that when SK Ecoplant Co., Ltd. does not exercise the call option and non-controlling shareholders sell their shares to the third party, the difference between the exercise price of call option and sale price of non-controlling shareholders' share shall be preserved.
- 26) In February 2019, SK Biopharmaceuticals Co., Ltd., a subsidiary, signed a technology transfer contract with the European-based entity, Arvelle Therapeutics International GmbH (formerly Arvelle Therapeutics GmbH), in order to grant the exclusive rights of Cenobamate, an epilepsy treatment, in Europe. At the time of signing the technology transfer contract, SK Biopharmaceuticals Co., Ltd. received an Upfront Payment of USD 100,000,000 and recognized as a profit at the time of the receipt. In addition, in March 2021, the Milestone Payment of USD 110,000,000 was recognized as a profit at the time of notification of the permit in accordance with the marketing permission of European regulators (March 30, 2021). Following the merger of Arvelle Therapeutics International GmbH and Angelini Pharma S.p.A. in December 2022, the counterparty to the technology transfer agreement has changed and the terms of the agreement remain unchanged. When the terms under the agreement are fulfilled in future periods, additional Milestone Payment of up to USD 320,000,000 will be recognized.

In October 2020, SK Biopharmaceuticals Co., Ltd. signed a technology transfer contract with Ono Pharmaceutical Co., Ltd., an entity located in Japan, in order to grant the exclusive rights of Cenobamate in Japan and received an upfront payment of JPY 5,000,000,000. The upfront payment is recognized as a profit by allocating the amount in a reasonable way according to the contract. When the rights are approved by the Japanese regulator and succeed in commercializing in the future, SK Biopharmaceuticals Co., Ltd. will recognize the Milestone Payments of up to JPY 48,100,000,000 as a profit.

34. Commitments and contingencies (cont'd)

27) During November 2021, SK Biopharm Co., Ltd., a subsidiary, signed a license agreement to grant commercialization rights for nine new drugs, including Ignis Therapeutics and Cenobamate in the Cayman Islands (China, Hong Kong, Macau, Taiwan), and received USD 20,000,000 in cash and 150 million preferred shares (USD 150,000,000). In the case of the down payment, the intellectual property right transfer fee and the clinical trial obligation were allocated, and the intellectual property right recognizes revenue at once with the license, and the completion of the service over the expected period of service. In the event licensing and commercialization is achieved, up to USD 15,000,000 Milestone Payment and Royalty Payment may be recognized.

In addition, during December 2021, a technology transfer agreement with Endo Ventures Limited was entered into in Canada to grant exclusive rights of Cenobamate in Canada and a down payment of USD 20,000,000 was received. The down payment was recognized as revenue at the same time as the right-of-use for intellectual property rights, and the maximum amount of milestone payment of CAD 21,000,000 may be recognized as revenue under the permission and commercialization of Canadian regulators in the future.

28) SK Biopharmaceuticals Co., Ltd., a subsidiary, signed a technology transfer contract with DEXCEL LTD. in Israel in May 2022 to grant exclusive rights of Cenobamate in Israel and Palestine (West bank, including Gaza district), and received a deposit of USD 3,000,000 (Upfront Payment), which has been allocated to the transfer consideration of intellectual property right and performance obligation of supplying semi-finished product at no cost. Revenue will be recognized for intellectual property right as right-of-use asset at a point in time and the revenue for semi-finished product will be recognized at the time of supply.

In addition, in July 2022, SK Biopharmaceuticals Co., Ltd., a subsidiary, signed a technology transfer agreement with Eurofarma Laboratorios S.A. based in Brazil to grant exclusive rights of Cenobamate in 17 Latin American countries, including Brazil and Mexico, and received an upfront payment of USD 15,000,000. The upfront payment has been recognized at a point in time, considering the right-of-use for the intellectual property rights. In the future, Milestone Payments of up to USD 47,000,000 shall be recognized as revenue if the terms of the agreement are satisfied, such as permission by regulators and commercialization in Brazil and Mexico.

29) SK Biopharmaceuticals Co., Ltd., a subsidiary, is a limited partner in the LifeSci Venture Partners Fund in the United States. As of December 31, 2022, investments in the fund amount to USD 8,926,355 (investments in money: USD 7,781,455, revenue distributions reinvested: USD 1,144,900), and the investment period agreed between the parties has ended, but additional investments can be made up to USD 1,800,000 for subsequent investments in existing investments.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

34. Commitments and contingencies (cont'd)

(5) Hybrid bonds

Details of hybrid bonds as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Issue segment	Description	Issue date	Maturity date (*1)	Interest rate (%) (*2)	For the years ended	
					December 31, 2022	December 31, 2021
Group of SK Innovation	1st private equity bond type	2019.03.15	2049.03.15	4.20	₩ 600,000	₩ 600,000
Group of SK Telecom	2-1 private equity bond type	2018.06.07	2078.06.07	3.70	300,000	300,000
	2-2 private equity bond type	2018.06.07	2078.06.07	3.65	100,000	100,000
Group of SK E&S	2nd Korean currency type	2019.10.11	2049.10.11	3.30	330,000	330,000
	3rd Korean currency type	2020.07.14	2050.07.14	3.60	400,000	400,000

(*1) The issuing company may decide on early repayment and extension of maturity date when certain period is lapsed.

(*2) After a certain period from the issue date, the interest rate will fluctuate in accordance with the contract.

(6) Others

As of December 31, 2022, 43 notes (including 41 blank notes) and 74 checks (including 73 blank checks) are provided to financial institutions as collateral for borrowings.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

35. Pledged assets

The following assets were pledged as collateral for the Group's borrowings and others as of December 31, 2022 (Korean won in millions and foreign currencies in thousands):

Company	Asset	Currency	Collateralized amount (*1)	Provided to	Description
SK Innovation Co., Ltd.	Investments in associates	KRW	-	Yemen LNG Company and others	Collateral for project financing
Netruck Co., Ltd.	Property, plant and equipment	KRW	4,500	Shinhan Bank	Collateral for borrowing
Won Poll Co., Ltd.	Property, plant and equipment	KRW	3,360	Shinhan Bank	Collateral for borrowing
	Financial instruction	KRW	430	Shinhan Bank	Collateral for borrowing
SK Broadband Co., Ltd.	Property, plant and equipment	KRW	1,513	Industrial Bank of Korea and others	Restricted real rights for office lease
Panasia Semiconductor Materials, LLC	Investment securities	KRW	21,981	Hana Securities Co., Ltd. and others	Collateral for borrowing
Incross Co., Ltd.	Financial instruction	KRW	24,921	Naver Co., Ltd. and others	Performance guarantees for contract
One store Co., Ltd.	Investment property	KRW	612	Shinhan Bank	Collateral for borrowing
SK Networks Co., Ltd.	Property, plant and equipment and others	KRW	390,526	Korea Development Bank and others	Collateral for borrowing and others
SK Magic Co., Ltd.	Property, plant and equipment	KRW	96,000	Korea Development Bank	Collateral for borrowing
SK Rent-a-Car Co., Ltd.	Property, plant and equipment	KRW	287,876	Korea Development Bank and others	Collateral for borrowing
	Financial instruction	KRW	300	Kodit 2022 the 5 th Securitization Specialty Co., Ltd.	Collateral for borrowing
SKC Solmics Co., Ltd.	Property, plant and equipment	KRW	300	Kodit Global 2022-1 Co., Ltd.	Collateral for borrowing
SK pucore Co., Ltd.	Property, plant and equipment	KRW	91,100	Korea Development Bank	Collateral for borrowing
		KRW	63,349	Korea Development Bank and others	Collateral for borrowing
SKCFTH Co., Ltd.	Investment subsidiaries	KRW	828,000	Korea Development Bank and others	Collateral for stock
SK Nexilis Co., Ltd.	Property, plant and equipment	KRW	396,000	Korea Development Bank and others	Collateral for borrowing
	Investment subsidiaries	KRW	240,570	Korea Development Bank and others	Collateral for stock
SK PIC Global Co., Ltd.	Property, plant and equipment	KRW	33,600	Korea Development Bank	Collateral for borrowing
SKC, Inc.	Financial instruction	KRW	166,000	KEB Hana Bank	Collateral for pledging and others
SK E&S Co., Ltd.	Investments in subsidiaries	KRW	470,000	Korea Development Bank and others	Collateral for PF
		VND	1,059,599,930	Joint Stock Commercial Bank For Foreign Trade of Vietnam	Collateral for PF
	Investments in joint ventures	KRW	179,220	Korea Development Bank and others	Collateral for PF
		USD	14,000	BANGKOK BANK PUBLIC COMPANY LIMITED	Collateral for PF
	Investments in associates	KRW	18,621	Industrial Bank of Korea and others	Collateral for PF
Ko-one energy service Co., Ltd. (formerly, Daehan City Gas Co., Ltd.)	Investments in associates	KRW	2,711	Kookmin Bank and others	Collateral for PF
New Renewable Energy No.1 JSC	Investments in the application of equity method	VND	1,042,074,648	Joint Stock Commercial Bank For Foreign Trade of Vietnam	Collateral for PF
Pusan City Gas Co., Ltd.	Investments in associates	KRW	5,645	Shinhan Bank and others	Collateral for PF
	Investment property	KRW	3,840	Megamart Co., Ltd. and others	Leasehold deposits
Paju Energy Service Co., Ltd.	Property, plant and equipment	KRW	360,000	Kookmin Bank and others	Collateral for borrowing
Chonnam City Gas Co., Ltd.	Property, plant and equipment	KRW	81	LG Hello Vision Co., Ltd.	Collateral for deposits received
Narae Energy Service Co., Ltd.	Property, plant and equipment and others	KRW	505,000	Korea Development Bank and others	Collateral for borrowing
Yeosu Energy Service Co., Ltd.	Property, plant and equipment	KRW	601,200	Korea Development Bank and others	Collateral for PF
Busan Jungkwan Energy Co., Ltd.	Property, plant and equipment	KRW	100,800	NH Bank and others	Collateral for borrowing
IGE Co., Ltd.	Property, plant and equipment and others	KRW	493,800	Korea Development Bank	Collateral for borrowing
Key Capture Energy, LLC.	Financial instruction	USD	99,605	CIT/RABOBANK/SIEMENS	Collateral for service use
SK Ecoplant Co., Ltd.	Investment securities and others	KRW	226,658	CAPE Investment & Securities Co., Ltd. and others	Collateral for borrowing and others
	Investments in subsidiaries	KRW	1,369,343	Korea Development Bank and others	Collateral for borrowing
Seongju Tech Co., Ltd.	Property, plant and equipment	KRW	10,206	Woori Bank	Collateral for borrowing
DDS Co., Ltd.	Property, plant and equipment	KRW	3,000	Korea Development Bank	Collateral for borrowing
Samwon ENT Co., Ltd.	Others	KRW	58,800	KB Securities	A pledge of insurance and others
Daewon Green Energy Co., Ltd.	Property, plant and equipment	KRW	5,280	Korea Development Bank	Collateral for borrowing
Green Environment Technology Co., Ltd.	Property, plant and equipment	KRW	9,600	Korea Development Bank	Collateral for borrowing
JA Green Co., Ltd.	Property, plant and equipment	KRW	14,400	Kyungnam Bank	Collateral for borrowing
DY Indus Co., Ltd.	Property, plant and equipment	KRW	6,222	Industrial Bank of Korea	Collateral for borrowing
DY Polymer Co., Ltd.	Property, plant and equipment	KRW	3,800	Industrial Bank of Korea	Collateral for borrowing
SK Oceanplant Co., Ltd.	Property, plant and equipment	KRW	228,980	Industrial Bank of Korea and others	Collateral for borrowing
	Financial instruction	KRW	35,229	Industrial Bank of Korea and others	Collateral for borrowing
	Financial instruction and others	USD	555	Shinhan Bank and others	Collateral for guarantee and others
	Debt instrument	KRW	7,578	Korea Defense Guarantee Cooperative and others	Collateral for guarantee
	Others	KRW	93,466	Seoul Guarantee Insurance	Insurance pledge and others

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

35. Pledged assets (cont'd)

Company	Asset	Currency	Collateralized amount (*1)	Provided to	Description		
Environment Management Corporation Co., Ltd.	Property, plant and equipment	KRW	33,973	KEB Hana Bank and others	Collateral for borrowing		
	Investments in subsidiaries	KRW	529,311			Korea Development Bank and others	Collateral for borrowing
	Investment securities and others	KRW	10,470	Industrial Bank of Korea and others	Collateral for borrowing		
	Others	KRW	1,485,616	KEB Hana Bank and others	Establishing pledge and others		
SK Industrial Development China Co., Ltd.	Others	CNY	2,000,000	Bank of China communications	Collateral for borrowing		
SK Specialty Co., Ltd.	Property, plant and equipment	KRW	137,000	Korea Development Bank	Collateral for borrowing		
		USD	3,500			Korea Development Bank	Collateral for borrowing
		JPY	3,690,000			Korea Development Bank	Collateral for borrowing
		KRW	1,668			Yeongju city and Gyeongsang Buk-do	Government subsidy
	Financial instruction	KRW	60	Kodit 2022 the 9th Securitization Specialty Co., Ltd.	Collateral for borrowing		
		KRW	75	Kodit 2022 the 10th Securitization Specialty Co., Ltd.	Collateral for borrowing		
SK Specialty Japan Co., Ltd.	Property, plant and equipment	KRW	165	Kodit Global 2022-1 Co., Ltd.	Collateral for borrowing		
SK Materials Airplus Inc.	Property, plant and equipment	JPY	315,000	MUFG Bank	Collateral for borrowing		
SK Tri Chem Co., Ltd.	Property, plant and equipment	KRW	60,000	Kyungnam Bank and others	Collateral for borrowing		
		KRW	3,692			Sejong City	Local investment promotion subsidy support collateral
SK Resonac Corporation SK Siltron Co., Ltd.	Property, plant and equipment and others	KRW	30,000	Korea Development Bank	Collateral for borrowing		
		KRW	529,672			Korea Development Bank and others	Collateral for borrowing
SK Biotek Co., Ltd.	Property, plant and equipment	KRW	90,000	Korea Development Bank	Collateral for borrowing		
		KRW	13,440			KEB Hana Bank	Collateral for borrowing
Hweechan Co., Ltd.	Property, plant and equipment	KRW	1,147,466	The lender and the lessor	Collateral for borrowing		
		KRW	572,314			The lender and the lessor	Collateral for borrowing
SK REITs Co., Ltd.	Investment property	KRW					
Clean Energy REITs Co., Ltd.	Investment property	KRW					
SK China Company, Ltd.	Financial instruction	USD	2,600	Kookmin Bank (Beijing)	Collateral for Subsidiary stake sale		
SK South East Asia Investment Pte. Ltd.	Property, plant and equipment and others	VND	236,214,010	ADB and Vietcombank	Collateral for borrowing and others		
Yespowertech Co., Ltd.	Property, plant and equipment	KRW	1,320	Industrial Bank of Korea	Collateral for borrowing		
SK Materials Performance Co., Ltd.	Property, plant and equipment	KRW	16,650	Korea Development Bank	Collateral for borrowing		
Total Value 1 REITs Co., Ltd.	Investment property	KRW	315,601	The lender and the lessor	Collateral for borrowing		

(*1) The carrying amount of securities provided as collaterals for PF loans and facility borrowings are included.

SK Sheildus Co., Ltd., a subsidiary, provides its shares in Capstec Co., Ltd. as collateral for its long-term borrowing of ₩1,713,291 million.

Tmap Mobility Co., Ltd., a subsidiary, has signed a stock pledge establishment contract with the seller in connection with the acquisition of common shares of Seoul Airbus Co., Ltd. The seller has established the shares equivalent to 20% of the total number of shares issued by Seoul Airbus Co., Ltd. as the first priority in order to secure all debts to be borne in the future under Tmap Mobility Co., Ltd.'s stock trading contract and shareholder contract.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

36. Guarantees provided among the Group entities

Guarantees provided among the Group entities as of December 31, 2022 are as follows (Korean won in millions and foreign currencies in thousands):

Guarantor	Guarantee	Currency	Amount	Description of guarantee
SK Inc.	Abrasax Investment Inc.	USD	315,000	Cash deficiency support of debt
	Hudson Energy NY, LLC	USD	226,000	Cash deficiency support of debt
SK Innovation Co., Ltd.	SK Battery America, Inc.	USD	1,670,000	Guarantee of debt
	SK On Hungary Kft.	USD	250,000	Guarantee of debt
	SK Hi-tech Battery Materials (Jiangsu) Co., Ltd.	USD	5,000	Guarantee of debt
	BlueOval SK, LLC	USD	125,000	Guarantee of debt
	SK Battery Manufacturing Kft.	USD	500,000	Guarantee of debt
			HUF	34,194,000
	BlueOval SK, LLC and others	USD	6,600,000	Performance guarantees for invest
		USD	7,000,000	Performance guarantees for contract
	SK Earthon Co., Ltd.	USD	34,000	Guarantee of mandatory work load
SK Innovation Co., Ltd. and SK On Co., Ltd.	SK On Hungary Kft.	HUF	9,810,000	Guarantee of local factory construction
SK Geo Centric Co., Ltd.	SK Global Chemical Americas, Inc.	USD	160,000	Guarantee of payment for principal of debt
	SK Functional Polymer, S.A.S	EUR	181,000	Guarantee of payment for principal of debt
SK ie technology Co., Ltd.	SK Hi-Tech Battery Materials(Jiang Su) Co., Ltd.	CNY	1,180,000	Guarantee of debt
	SK hi-tech battery materials Poland sp. z o.o.	USD	369,200	Guarantee of debt
SK Networks Co., Ltd.	SK Networks Hong Kong Ltd.	USD	90,600	Standing surety for investee
	SK Networks (Shanghai) Co., Ltd.	USD	12,000	Standing surety for investee
		CNY	54,000	Standing surety for investee
	SK Networks (Xiamen) Steel Processing Center Co., Ltd.	CNY	68,000	Standing surety for investee
SKC Co., Ltd.	SK Telesys Co., Ltd.	KRW	10,000	Guarantee of corporate bond
	SKC (Natong) PU Specialty Co., Ltd.	CNY	110,700	Guarantee of payment
		USD	7,000	Guarantee of payment
	SKC (Natong) Semiconductor Materials Technology Co., Ltd.	USD	4,680	Guarantee of payment
SK E&S Co., Ltd.	LNG Americas, Inc. (formerly, CAILIP Gas Marketing, LLC)	USD	210,000	Guarantee for derivative hedge and others
	Paju Energy Service Co., Ltd.	KRW	350,000	Guarantee of debt
	Narae Energy Service Co., Ltd.	KRW	270,000	Guarantee of debt
	Yeoju Energy Service Co., Ltd.	KRW	200,000	Guarantee of debt
	Prism Energy International Pte. Ltd.	USD	761,000	Guarantee for derivative hedge and others
	LNG Americas, Inc. (formerly, LAI LNG, LLC)	USD	99,000	Guarantee for derivative hedge and others
	IGE Co., Ltd.	KRW	130,000	Guarantee of debt
	BU12 Australia Pty. Ltd., BU13 Australia Pty. Ltd.	USD	306,650	Guarantee for BU gas field recovery cost
	New Renewable Energy No.1 Joint Stock Company	USD	20,000	Guarantee of debt
	LNG Americas, Inc. (formerly, CAILIP Gas Marketing, LLC)	USD	40,000	Performance guarantee for contract and others
SK E&S Americas, Inc.	GridSolutionII, LLC	USD	100,000	Performance guarantee for contract
	LNG Americas, Inc. (formerly, LAI LNG, LLC)	USD	14,342	Performance guarantee for contract and others
	PassKey, Inc.	USD	52,313	Performance guarantee for contract
	SKEC Anadolu, LLC	EUR	30,666	Performance guarantee for contract and others
	Silvertown Investco Co., Ltd.	GBP	10,671	Guarantee of financial obligation
	Sunlake Co., Ltd.	CAD	6,000	Guarantee of financial obligation
	SK E&C Betek Corporation	USD	108,500	Guarantee of financial obligation
	Environment Management Corporation Co., Ltd.	KRW	46,413	Fund supplement agreement for loan agreement
	Samwon ENT Co., Ltd.	KRW	85,000	Conditional debt acquisition
	Eco Frontier (Singapore) Pte. Ltd.	USD	420,000	Guarantee of payment and others
Environment Management Corporation Co., Ltd	SK Oceanplant Co., Ltd.	KRW	58,203	Guarantee of payment and others
	Gyeongsan Clean Water Way Co., Ltd.	KRW	8,200	Guarantee of debt and others
	Daiseong Maleunmulgil Co., Ltd.	KRW	3,200	Guarantee of debt and others
SK Oceanplant Co., Ltd.	Honam Environment Energy Co., Ltd.	KRW	4,920	Guarantee of debt
	SAM KANG S&C Co., Ltd.	KRW	76,910	Guarantee of debt
SK Specialty Co., Ltd.	SK Specialty Jiangsu Co., Ltd.	USD	26,000	Guarantee of debt
	SK Specialty Taiwan Co., Ltd.	USD	2,000	Guarantee of debt
	SK Specialty Japan Co., Ltd.	JPY	276,000	Guarantee of debt
	SK Biotek Co., Ltd.	USD	30,000	Guarantee for credit limit
SK Siltron Co., Ltd.	SK Biotek Ireland Limited.	EUR	10,000	Performance guarantees
	SK Siltron CSS, LLC	USD	133,000	Guarantee of debt

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

37. Deposits restricted in use

Deposits restricted in use as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Account	Classification	Institution	December 31, 2022	December 31, 2021	Description of restriction
Cash and cash equivalents	Borrowing-related pledge establishment and others	KB Securities and others	₩ 43,175	₩ 2,017	Pledged on collateral and others
Short-term financial instruments	Charitable fund and others	Industrial Bank of Korea and others	432,267	189,146	Money on deposits and others
Long-term financial instruments	CO2 emission allowances fund and others	Samsung Securities and others	105,190	38,548	Money on deposits and others
Others	Refund guarantee and others	Korea Software Financial Cooperative and others	3,917	3,853	Deposits and others
			<u>₩ 584,549</u>	<u>₩ 233,564</u>	

38. Financial risk management

Regarding financial instruments, the Group is exposed to a variety of financial risks: credit, liquidity and market. This note presents information related to risk exposures of the Group and the main objective, strategy, evaluation of risk, management process and capital management. Additional quantitative information is stated throughout the condensed consolidated financial statements.

38.1 Financial risk management

38.1.1 Risk management activities

The board of directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The board of directors has established the risk management committee, which is responsible for developing and monitoring the Group's risk management policies. The risk management committee reports regularly to the board of directors on its activities. The Group audit committee is assisted in its oversight role by internal audit.

Internal audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Group audit committee. The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

38.1.2 Credit risk

Credit risk is the risk of financial loss of the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. In addition, the maximum exposure to credit risk as of December 31, 2022 and 2021 is as follows (Korean won in millions):

	December 31, 2022	December 31, 2021
Financial assets measured at FVTPL	₩ 9,121,159	₩ 10,871,691
Financial assets measured at FVOCI	663	7,799
Financial assets measured at amortized cost	38,367,580	25,365,205
Derivatives designated as hedging instruments	563,170	263,779
	<u>₩ 48,052,572</u>	<u>₩ 36,508,474</u>

On the other hand, the Group has provided payment guarantees for others including related parties, associates and others. The Group, due to its payment guarantees, is exposed to credit risk (See Note 34).

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

38.1.2.1 Trade and other receivables

The Group enters into transactions only with customers that are credit worthy. Credit quality of a customer is assessed based on an extensive credit rating scored and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and credit quality may be adjusted to reflect the appropriate appetite of credit risk in accordance with the Group's risk management policies.

The Group applies a simplification method that recognizes lifetime expected credit losses as a loss allowance for trade and other receivables. To measure expected credit losses, sales receivables and contract assets were divided based on credit risk characteristics and past due dates.

As of December 31, 2022 and 2021, the aging of trade receivables and other receivables for which a loss allowance has not been accrued, as the allowance is deemed to be recoverable from a customer or counterparty later although the amount is past due, are as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
	Trade receivables	Other receivables	Trade receivables	Other receivables
Less than one month	₩ 832,908	₩ 185,391	₩ 296,524	₩ 42,096
One~three months	302,880	18,073	220,408	42,640
Three~six months	289,265	17,120	97,056	42,822
More than six months	235,445	353,048	263,456	372,119
	<u>₩ 1,660,498</u>	<u>₩ 573,632</u>	<u>₩ 877,444</u>	<u>₩ 499,677</u>

Changes in the loss allowance on trade receivables and others for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

	For the years ended	
	December 31, 2022	December 31, 2021
Beginning balance	₩ 916,879	₩ 902,777
Bad debt expense	82,489	93,158
Write-off	(119,587)	(211,319)
Others (*1)	577,792	132,263
Ending balance	<u>₩ 1,457,573</u>	<u>₩ 916,879</u>

(*1) Others include net foreign currency translation differences, changes in the scope of consolidation and others.

38.1.2.2 Guarantee

SK Ecoplant Co., Ltd., one of the subsidiaries, offers payment guarantees for loans of project financing. The financing liabilities related to the payment guarantees recognized are ₩23,772 million as of December 31, 2022. The Group recognizes the financial guarantee liabilities related to the payment guarantees contracted with the Group, such as SK Ecoplant Co., Ltd., as of December 31, 2022 (Korean won in millions):

	December 31, 2022	December 31, 2021
SK Innovation Co., Ltd.	₩ 321	₩ 1,137
SK Ecoplant Co., Ltd.	23,772	15,921
SKC Co., Ltd.	563	-
SK Biotek Co., Ltd.	237	472
SK Resonac Corporation	15	22
	<u>₩ 24,908</u>	<u>₩ 17,552</u>

In addition, the Group has provided payment guarantees for others, including subsidiaries and others. (See Notes 34 and 36).

38.1.2.3 Other financial assets

Credit risk arising from other financial assets consists of long-term and short-term financial instruments, occurrence of trade opponent arising from the bankruptcy, etc. In this case, the credit risk exposure of the Group will be the same as the book value of the maximum applicable financial instruments. On the other hand, the management of the Group's credit rating, because it is excellent to deal with financial institutions, is judged to have limited impact on the credit risk of the financial institutions of the Group.

38.1.3 Liquidity risk

Liquidity risk is the risk that the Group encounters difficulty in meeting the obligations of the financial liabilities. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The contractual maturity of financial liabilities as of December 31, 2022 is as follows. Amounts include interests paid and presented at gross amounts (Korean won in millions):

	Book value	Contractual cash flow	Less than 3 months	3 ~ 12 months	1 ~ 5 years	More than 5 years
Borrowings	₩ 38,609,196	₩ 40,839,226	₩ 6,719,801	₩ 14,814,754	₩ 16,395,073	₩ 2,909,598
Bonds	35,862,966	38,812,925	1,288,043	7,713,556	23,287,784	6,523,542
Derivative financial liabilities	581,365	581,365	52,223	154,839	374,303	-
Trade payables	14,024,892	14,024,892	12,636,093	1,388,799	-	-
Lease liabilities	5,506,447	6,180,528	144,150	1,193,242	3,300,151	1,542,985
Other liabilities	14,374,262	14,519,962	7,919,143	4,393,690	1,957,431	249,698
	<u>₩ 108,959,128</u>	<u>₩ 114,958,898</u>	<u>₩ 28,759,453</u>	<u>₩ 29,658,880</u>	<u>₩ 45,314,742</u>	<u>₩ 11,225,823</u>

38.1.4 Market risk

Market risk is the fluctuating risk in fair value of the financial instruments or future cash flows caused by the changes in market price. Market risk consists of currency risk, interest rate risk, crude oil and petroleum product price risk, and others. The fundamental goal of market price management is the maximization of the profit and the limit of the exposure to market risk within an acceptable level. The Group sells and purchases financial derivatives and financial instruments or financial liabilities for the purpose of controlling the market risk. In general, the Group applies hedge accounting in order to minimize the volatility of profit.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

38.1.4.1 Currency risk

The Group is exposed to foreign currency risk arising from sales and purchases denominated in currencies other than functional currency. Main currencies used for these transactions are USD, JPY, CNY and EUR.

Details of foreign currencies and liabilities as of December 31, 2022 and 2021 are as follows (Korean won in millions and foreign currencies in thousands):

	Currency	December 31, 2022		December 31, 2021	
		Foreign currencies	Korean won equivalent	Foreign currencies	Korean won equivalent
Assets	USD	10,858,465	₩ 13,760,933	7,542,986	₩ 8,942,210
	JPY	15,508,882	147,828	16,318,984	168,125
	CNY	2,467,000	447,612	2,468,361	459,757
	EUR	428,677	579,228	400,449	537,539
	Others		851,123		912,134
			₩ 15,786,724		₩ 11,019,765
Liabilities	USD	15,930,325	₩ 20,188,501	11,908,339	₩ 14,117,336
	JPY	18,068,553	172,226	10,970,493	113,022
	CNY	7,443,749	1,350,594	1,024,139	190,756
	EUR	427,227	577,269	167,922	225,408
	Others		392,210		531,211
			₩ 22,680,800		₩ 15,177,733

Should the exchange rate of the aforementioned currencies fluctuate by 10%, the effects on equity would be as follows (Korean won in millions):

Currency	December 31, 2022		December 31, 2021	
	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%
USD	₩ (642,757)	₩ 642,757	₩ (517,513)	₩ 517,513
JPY	(2,440)	2,440	5,510	(5,510)
CNY	(90,298)	90,298	26,900	(26,900)
EUR	196	(196)	31,213	(31,213)

The Group is hedging currency risk by using derivative financial instruments such as currency swaps, currency forwards and others (See Note 21).

38.1.4.2 Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates. As of December 31, 2022, floating-rate bonds payable and floating-rate borrowings are ₩14,769,154 million (December 31, 2021: ₩8,562,981 million). The Group's management has entered into the foreign currency swap and interest rate swap contracts to manage its interest rate risk (See Note 21).

When all other variables are fixed and the interest rates are changed for the years ended December 31, 2022 and 2021, the effects of interest expense by fluctuated interest-bearing loan are as follows (Korean won in millions):

	For the years ended			
	December 31, 2022		December 31, 2021	
Interest expenses	100 basis point increase	₩ 147,692	100 basis point increase	₩ 85,630

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

38.1.4.3 Crude oil and petroleum product price risk

Crude oil and petroleum product price risk is the risk that profit or cash flow will fluctuate because of changes in international market prices of crude oil and petroleum products. The Group manages these risks to maintain stable margins through the use of fixed-price contracts with customers and derivative contracts of fluctuations in fair values according to changes in international market prices. Key management of the Group determined that the risk from changes in the price of crude oil and petroleum products and the risk to fluctuations in fair values are approximately managed.

38.1.5 Enforceable master netting agreement or similar agreement

Carrying amount of financial instruments recognized for which offset agreements are applicable as of December 31, 2022 and 2021 is as follows (Korean won in millions):

December 31, 2022			
	Gross financial instruments recognized	Gross financial instruments offset	Net financial instruments presented in the consolidated statement of financial position
Financial assets:			
Trade receivables and other receivables	₩ 421,311	₩ (261,664)	₩ 159,647
Financial liabilities:			
Other payables and other liabilities	₩ 380,583	₩ (261,664)	₩ 118,919
December 31, 2021			
	Gross financial instruments recognized	Gross financial instruments offset	Net financial instruments presented in the consolidated statement of financial position
Financial assets:			
Trade receivables and other receivables	₩ 368,869	₩ (214,549)	₩ 154,320
Financial liabilities:			
Other payables and other liabilities	₩ 341,738	₩ (214,549)	₩ 127,189

38.2 Capital risk management

The fundamental goal of capital management is to keep a sound financial structure. The Group is using the debt ratio, calculated as total debt divided by total amount of capital, as an indicator of capital management. The Group maintains a debt ratio of 170.9% as of December 31, 2022. The maturity of the debt is dispersed in the long term; so, debt-repayments are not demanding.

The Group's debt ratio as of December 31, 2022 and 2021 is as follows (Korean won in millions):

	December 31, 2022		December 31, 2021	
Total liabilities	₩	122,697,070	₩	99,815,712
Total equity		71,808,790		65,552,651
Debt ratio		170.9%		152.3%

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

39. Greenhouse Gas Emissions and Emissions Liabilities

(1) As of December 31, 2022, the quantity of free allocation emission rights for each year of implementation in the third planned period (2021-2025) is as follows (in tCO₂-eq):

	2021	2022	2023	2024	2025	Total
Free-allocated emission rights(*1)	24,628,894	24,031,690	23,694,537	18,077,020	18,124,254	108,556,395

(*1) Presents the amount of free-allocated emission right granted initially plus the amount granted additionally less the amount cancelled.

(2) Changes in the quantity of emission rights held for the purpose of performing obligations and the carrying amount as of December 31, 2022 are as follows (in tCO₂-eq and Korean won in millions):

	2021(*1)		2022		2023 ~ 2025		Total	
	Quantity	Book value	Quantity	Book value	Quantity	Book value	Quantity	Book value
Beginning balance allocated for free	24,628,894	1,305	24,031,690	-	59,895,811	-	108,556,395	1,305
Carried over	305,002	1,178	1,761,666	2,139	-	-	2,066,668	3,317
Purchase (disposal)	272,067	13,599	(583,789)	705	-	-	(311,722)	14,304
Government submission	(23,473,590)	(13,943)	-	-	-	-	(23,473,590)	(13,943)
Carried forward	(1,761,666)	(2,139)	-	-	-	-	(1,761,666)	(2,139)
Others	29,293	-	116,416	-	-	-	145,709	-
Ending balance	-	-	25,325,983	2,844	59,895,811	-	85,221,794	2,844

(*1) Changes in the quantity of emission rights for the year ended December 31 include the amount of estimates for the year ended December 31, 2021 which has been adjusted to fixed value for the year ended December 31, 2022.

Meanwhile, as of December 31, 2022, there are no emission rights provided as collateral and no emission rights held for gains on trading.

(3) The details of changes in emission liabilities for the year ended December 31, 2022 are as follows (Korean won in millions):

Segments	For the year ended December 31, 2022
Beginning balance	18,402
Transferred	11,460
Returned	(21,395)
Ending balance(*1)	8,467

(*1) Emissions liabilities are included in current provisions.

Meanwhile, the estimated amount of greenhouse gas emissions for the year ended December 31, 2022 is 21,603,627 tonnes (tCO₂-eq).

40. Business combination

As of December 31, 2022, details of business combination are as follows.

(1) General information

SKC Co., Ltd., a subsidiary, acquired real control over 100% of SK Pucore Co., Ltd. as the deemed acquisition date on January 1, 2022, and included it in the scope of its connection to strengthen its manufacturing and sales business of Polyol.

Mobility Solution II Inc., a subsidiary, gained control by acquiring a 100% stake in EverCharge, Inc. on March 23, 2022.

SK Ecoplant Co., Ltd., a subsidiary, established Eco Frontier (Singapore) Pte. Ltd. during the year ended December 31, 2022 to enter the electronic electrical waste recycling business and acquired a 100% stake in Tes-Envirocorp Pte. Ltd. on April 30, 2022. In addition, for the purpose of expanding the environmental business portfolio during the year ended December 31, 2022, the company acquired a 100% stake in JA Green Co., Ltd. with June 30, 2022 as the deemed acquisition date.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

40. Business combination (cont'd)

In order to strengthen the SiC power semiconductor business, which is expected to grow high, the company acquired control as its stake became 74.89% through the acquisition of an additional stake in Yespowertech in May 2022. Meanwhile, additional acquisition was made in July and August 2022, and the stake at the end of the current term is 98.59%.

T Map Mobility Co., Ltd., a subsidiary, acquired a 100% stake in Seoul Airbus Co., Ltd. on May 2, 2022 to expand and strengthen its business portfolio.

T Map Mobility Co., Ltd., a subsidiary, acquired 100% stake in Logisoft Co., Ltd. on August 8, 2022 to expand and strengthen its business portfolio.

SK Ecoplant Co., Ltd., a subsidiary, acquired a 31.52% stake in SK Oceanplant Co., Ltd. with August 31, 2022 as the deemed acquisition date for the purpose of entering the offshore wind power business.

In order to strengthen its G-class substrate business for computing, SKC Co., Ltd., a subsidiary, acquired 80.58% of its stake on December 31, 2022 as the deemed acquisition date and gained real control over Absolute Inc. This changed the classification of Absolics Inc. from joint venture investment to subsidiary investment.

The above business combinations that occurred during the year ended December 31, 2022 were accounted for by the acquisition method, and the consolidated financial statements include the financial performance of the acquiree from the acquisition date to the end of the current period.

(2) Identifiable assets acquired and liabilities assumed

Identifiable assets acquired and liabilities assumed due to merger are as follows (Korean won in millions):

	SK pucore Co., Ltd.	Evercharge Co., Ltd.	Tes- Envirocorp Pte., Ltd.	JA GREEN Co., Ltd.	YESPOWER TECHNIX Co., Ltd.	SEOUL AIRPORT LIMOUSINE	LOGISOFT. Co., Ltd.	SK Oceanplant Co., Ltd.	Absolics Inc.
Assets:									
Cash and cash equivalents	₩ 11,986	₩ 967	₩ 80,531	₩ 1,198	₩ 12,677	₩ 328	₩ 11,659	₩ 483,274	₩ 129,023
Trade and other receivables	119,230	1,138	126,204	2,278	601	1,019	49	146,594	186
Inventories	96,576	2,906	19,298	-	7,665	36	-	3,305	-
Property, plant and equipment	103,718	186	75,796	38,865	8,064	7,240	25	422,617	43,101
Right-of-use assets	10,204	-	36,738	-	1,259	5	4	11,257	6,458
Intangible assets operations	133,545	132,825	209,145	117,231	26,426	44,461	41,049	2,714	83,642
Other assets	414,536	637	53,022	1,899	1,942	2,710	6,690	154,989	1,234
	889,795	138,659	600,734	161,471	58,634	55,799	59,476	1,224,750	263,644
Liabilities:									
Trade and other payables	102,359	1,527	133,597	4,199	1,849	1,560	25,386	84,406	13,202
Borrowing liabilities	113,774	-	47,791	12,100	4,497	-	61	406,538	-
Lease liabilities	10,204	-	36,738	-	1,234	5	-	14,350	6,645
Current income tax liabilities	3,878	-	3,479	-	-	-	82	7,745	-
Defined benefit liabilities	682	-	-	-	80	163	355	1,227	-
Deferred tax liabilities	18,540	35,428	41,157	28,748	6,364	9,695	4,016	175	-
Other Liabilities	12,815	350	1,190	11,082	141	213	15,808	236,485	287
	262,252	37,305	263,952	56,129	14,165	11,636	45,708	750,926	20,134
Fair value of identifiable net assets	₩ 627,543	₩ 101,354	₩ 336,782	₩ 105,342	₩ 44,469	₩ 44,163	₩ 13,768	₩ 473,824	₩ 243,510

As of December 31, 2022, the fair value of the assets acquired and liabilities assumed was determined tentatively because independent valuation was not completed.

SK Inc. and its subsidiaries
Notes to the consolidated financial statements
December 31, 2022 and 2021

40. Business combination (cont'd)

(3) Goodwill

Goodwill arising from business combination is as follows (Korean won in millions):

	SK pucore Co., Ltd.	Evercharge Co., Ltd.	Tes- Envirocorp Pte., Ltd.	JA GREEN Co., Ltd.	YESPOWER TECHNIX Co., Ltd.	SEOUL AIRPORT LIMOUSINE	LOGISOFT. Co., Ltd.	SK Oceanplant Co., Ltd.	Absolics Inc.
Assets:									
a. The total consideration transferred (*1)	₩ 741,760	₩ 338,102	₩ 1,342,873	₩ 175,568	₩ 84,068	₩ 57,797	₩ 53,703	₩ 342,595	₩ 196,227
b. Fair value of proportionate share of acquired net assets:									
Fair value of the net identifiable assets	627,543	101,354	336,782	105,342	44,469	44,163	13,768	473,824	243,510
Non-controlling Interests (*2)	-	-	-	-	(11,166)	-	-	(324,488)	(47,283)
c. Goodwill(c=a-b)	₩ 114,217	₩ 236,748	₩ 1,006,091	₩ 70,226	₩ 50,765	₩ 13,634	₩ 39,935	₩ 149,336	₩ 196,227

(*1) It includes the fair value of interests of investments in associates and joint ventures held before the business combination.

(*2) Non-controlling interests arising from the merger are measured in proportion to the non-controlling interests in identifiable net assets of the merged company.

41. Events after the reporting period

41.1 Sale of Turo Inc.

The Company decided to dispose of 7,496,251 shares of Turo Inc. (Ownership percentage: 2.98%) at the Board of Directors meeting on February 14, 2023. Shares amounting to USD 67 million was disposed of on February 17, 2023.

41.2 Disposal of treasury stocks of SK Telecom Co., Ltd.

SK Telecom Co., Ltd., the Company's subsidiary, decided to dispose of its treasury stock at the Board of Directors meeting on February 7, 2023, and completed the disposal as follows.

	Details
Type and number of shares	324,580 common shares
Price of shares subject to disposal	₩46,700 per share
Total disposal value	₩15,158 million
Date of disposition	February 9, 2023.
Purpose of disposal	Bonus payment for treasury stocks
Method of disposal	Off-site disposal

41.3 Sales of SK Square Co., Ltd.'s shares in SK Shields Co., Ltd.

SK Square Co., Ltd., the Company's subsidiary, will acquire 47,903,598 shares (Ownership percentage: 63.1%) of Korea Security Holdings Co., Ltd., the entity to be newly established as a result of legally bounding inclusive share transfer requiring SK Square Co., Ltd. to transfer the entire amount of shares in SK Shields Co., Ltd., and signed a stock trading agreement to sell 21,870,273 shares (Ownership percentage: 28.8%) of the common shares to be acquired to Soteria Bidco SCSp. The total sale amount is ₩864,600 million, of which ₩414,600 million will be received on the scheduled date of disposal, and ₩450,000 million will be received within two years from the scheduled date of disposal. The scheduled disposal date is September 19, 2023, and will be confirmed upon the achievement of the prerequisites, including the acceptance of the Fair Trade Commission's business combination report under the stock trading agreement.

Meanwhile, Blue Security Investment Ltd., a shareholder of SK Shields Co., Ltd., will sell 27,982,239 common shares (36.9% stake) of Korea Security Holdings Co., Ltd. to Soteria Bidco SCSp on the scheduled date of disposal.

41.4 The merger of SK Telesys Co., Ltd. by SK NPulse Co., Ltd. (formerly, SKC Solmix Co., Ltd.)

SK ENPULSE Co., Ltd. (formerly, SKC Solmix Co., Ltd.), the Company's subsidiary, merged SK Telesys Co., Ltd. on February 1, 2023. SK ENPULSE Co., Ltd. decided to merge with SK Telesys Co., Ltd. at the Board of Directors meeting held on November 7, 2022 to accelerate growth and improve management efficiency through integrated operation of the semiconductor business. The merger was finally approved at an extraordinary shareholders' meeting held for the merger on December 30, 2022. The key points related to the merger are as follows.

- Surviving company after merger: SK ENPULSE Co., Ltd.
- Company extinguished after merger: SK Telesys Co., Ltd.
- Merger date: February 1, 2023
- Merger ratio: SK ENPULSE Co., Ltd. : SK Telesys Co., Ltd. = 1 : 0.1443182

41.5 Issuance of preferred stocks by SK E&S Co., Ltd.

SK E&S Co., Ltd., the Company's subsidiary, issued 625,000 convertible preferred shares without voting rights on January 11, 2023, and the total amount of the shares issued is ₩367,500 million. The Company shall have the right to repay all of its preferred shares in cash or other assets depending on the Company's decision made by resolution of the Board of Directors. If the preferred shareholder issues a written notice of scheduled conversion to the Company within the conversion request period and a written notice to the Company presenting its intention to exercise the right to repay or not to exercise the right to repay within two months from the date when the Company receives the notice, the preferred shareholder may exercise the right to convert.

41.6 Issuance of bonds by SK E&S Co., Ltd.

SK E&S Co., Ltd., the Company's subsidiary, issued unguaranteed public bonds after the reporting period, and the details of issuance are as follows.

	<u>Issuance date</u>	<u>Expiration date</u>	<u>Interest rate</u>	<u>Amount of issuance</u>
18-1st Unguaranteed Company Bonds	March 03, 2023	March 03, 2026	4.488%	₩ 150,000
18-2nd Unguaranteed Company Bonds	March 03, 2023	March 03, 2026	4.766%	₩ 250,000
Total				₩ 400,000

41.7 Issuance of preferred bonds by SK Ecoplant Co., Ltd.

On February 23, 2023, SK Ecoplant Co., Ltd., a subsidiary of the Company, issued ₩200,000 million of unguaranteed bonds with bearer certificates.

42. Introduction and impact of Global Minimum Tax

The Organization for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shift (BEPS) addresses the tax challenges arising from the digitalization of the global economy. Global Minimum Tax (Pillar Two) were released and they apply to Multinational Enterprises (MNEs) with revenue in excess of EUR 750 million per their consolidated financial statements. National Assembly of South Korea passed into law new Global Minimum Tax rules to align with the OECD BEPS Pillar Two in December 2022. The regulation will be included in the Adjustment of International Taxes Act and will be effective for fiscal years beginning on or after January 1, 2024. However, the Enforcement Decrees that provide further detail on the application of the legislation is not amended as of December 31, 2022. In South Korea, Pillar Two legislation is not yet considered substantively enacted as of December 31, 2022. The Group therefore has not recognized any tax effect arising from the Global Minimum Tax in its consolidated financial statements as of and for the year ended December 31, 2022.