SONGWON

FINANCIAL STATEMENTS 2023

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INTRODUCTION TO THE CONSOLIDATED FINANCIAL STATEMENTS

On the following pages (7–96), consolidated financial statements for the year 2023 are presented. The financial statements disclosed are prepared according to International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") and represent the statements submitted for approval to the Annual General Shareholders' Meeting on March 15, 2024, in Ulsan, Korea.

While the management of the Group is responsible for the preparation and presentation of the financial statements, the Group's independent auditor is responsible for expressing an opinion on these financial statements. The report on the consolidated financial statements – issued by our Group auditor, Ernst & Young Han Young – can be found on pages (4–6).

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Ernst & Young Han Young
2-4F, 6-8F, Taeyoung Building, 111, Yeouigongwon-ro,
Yeongdeungpo-gu, Seoul 07241 Korea

Tel: +82 2 3787 6600
Fax: +82 2 783 5890
ey.com/kr

Independent auditor's report

(English Translation of a Report Originally Issued in Korean)

The Shareholders and Board of Directors
Songwon Industrial Co., Ltd.

Opinion

We have audited the consolidated financial statements of Songwon Industrial Co., Ltd. (the "Company") and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for each of the two years in the period ended December 31, 2023, and the notes to the financial statements, including material accounting policy information.

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, 2023 and 2022, and its consolidated financial performance and its consolidated cash flows for each of the two years in the period ended December 31, 2023 in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS").

Basis for opinion

We conducted our audit in accordance with 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 opinion thereon, and we do not provide a separate opinion on these matters.

The Group consists of the Company, its 13 subsidiaries and a joint venture, and the volume of intragroup transactions, such as sales and purchases, are significant. Due to the significant impact of the aggregation of such sales and purchases and their related receivables and payables balances, and of the completeness and accuracy of the elimination of intragroup transactions on the consolidated financial statements, we have selected this area as key audit matters.

The main audit procedures we have performed in relation to these key audit matters are as follows:

- We performed an analytical procedure on the Group's significant intragroup sales and purchases as well as related receivables and payables of the current and prior reporting periods.
- We confirmed the consistency of the major intragroup sales, purchases and related balances that are subject to elimination by comparing those to the input data used in the consolidation system.
- We reviewed whether all intragroup sales and purchases aggregated were eliminated during the consolidation process.

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 *Yoon, Jung Won.*

Ernst & Young Han Young

February 23, 2024

This audit report is effective as of February 23, 2024, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the independent auditor's report date 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.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As of December 31, 2023 and 2022

Assets	Notes	**2023** Million KRW	2022 Million KRW
Non-current assets		520,514	536,604
Property, plant and equipment	4.2.2, 5, 23, 24	435,321	441,541
Right-of-use assets	4.2.2, 5.1	18,379	16,969
Investment properties	4.2.2, 6, 23, 24	3,448	3,456
Intangible assets	4.2.2, 7, 11, 23	14,789	11,427
Investments accounted for using the equity method	8	8,131	7,818
Other non-current assets	21	23,046	30,778
Other non-current financial assets	13, 30, 32	11,345	16,030
Deferred tax assets	27	6,055	8,585
Current assets		569,230	680,707
Inventories	9, 23	291,466	377,129
Trade and other receivables	10, 30, 32	150,975	177,174
Income tax receivables		2,189	2,047
Other current assets	12	13,606	12,920
Other current financial assets	13, 20, 32	12,410	6,677
Cash and cash equivalents	14, 32	98,584	104,760
Total assets		1,089,744	1,217,311

Equity and liabilities			
Equity		705,592	682,622
Non-controlling interests		–	–
Equity attributable to owners of the parent		*705,592*	*682,622*
Issued capital	15.1	12,000	12,000
Capital surplus	15.2	20,482	20,482
Reserves	15.3	30,303	29,103
Retained earnings	15.3	638,217	622,951
Other components of equity	15.4	4,590	-1,914
Non-current liabilities		76,459	130,667
Bonds, interest-bearing loans and borrowings	16, 23, 24, 31, 32	5,250	65,745
Pension liability	21	4,269	2,682
Other long-term employee-related liabilities	22	10,780	9,061
Non-current lease liabilities	5.1, 31, 32	16,087	14,564
Other non-current financial liabilities	19, 31, 32	2,579	1
Other non-current liabilities		434	453
Deferred tax liabilities	27	37,060	38,161
Current liabilities		307,693	404,022
Interest-bearing loans and borrowings	16, 23, 24, 31, 32	164,696	208,070
Trade and other payables	17, 30, 31, 32	119,245	139,275
Current lease liabilities	5.1, 31, 32	2,357	2,334
Other current financial liabilities	19, 20, 31, 32	1,640	554
Other current liabilities	18	5,149	5,440
Income tax payable		14,606	48,349
Total liabilities		384,152	534,689
Total equity and liabilities		1,089,744	1,217,311

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As of December 31, 2023 and 2022 (see note 2.3)

Assets	2023 Thousand USD	2022 Thousand USD
Non-current assets	403,687	416,164
Property, plant and equipment	337,615	342,439
Right-of-use assets	14,254	13,160
Investment properties	2,674	2,680
Intangible assets	11,470	8,862
Investments accounted for using the equity method	6,306	6,063
Other non-current assets	17,873	23,870
Other non-current financial assets	8,799	12,432
Deferred tax assets	4,696	6,658
Current assets	441,469	527,925
Inventories	226,048	292,484
Trade and other receivables	117,089	137,408
Income tax receivables	1,698	1,588
Other current assets	10,552	10,020
Other current financial assets	9,625	5,178
Cash and cash equivalents	76,457	81,247
Total assets	845,156	944,089
Equity and liabilities		
Equity	547,226	529,410
Non-controlling interests	–	–
Equity attributable to owners of the parent	*547,226*	*529,410*
Issued capital	9,307	9,307
Capital surplus	15,885	15,885
Reserves	23,502	22,571
Retained earnings	494,971	483,131
Other components of equity	3,561	-1,484
Non-current liabilities	59,298	101,339
Bonds, interest-bearing loans and borrowings	4,072	50,989
Pension liability	3,311	2,080
Other long-term employee-related liabilities	8,360	7,027
Non-current lease liabilities	12,476	11,295
Other non-current financial liabilities	2,000	1
Other non-current liabilities	337	351
Deferred tax liabilities	28,742	29,596
Current liabilities	238,632	313,340
Interest-bearing loans and borrowings	127,731	161,370
Trade and other payables	92,481	108,015
Current lease liabilities	1,828	1,810
Other current financial liabilities	1,272	430
Other current liabilities	3,992	4,218
Income tax payable	11,328	37,497
Total liabilities	297,930	414,679
Total equity and liabilities	845,156	944,089

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

for the years ended December 31, 2023 and 2022

	Notes	**2023** Million KRW	2022 Million KRW
Sales	4.1, 4.2, 30	1,029,975	1,329,509
Cost of sales	25.5, 30	-880,026	-1,027,889
Gross profit		**149,949**	**301,620**
Selling and administration costs	25.2, 25.5, 30	-91,480	-116,504
Operating profit		58,469	185,116
Other income	25.3	4,111	3,833
Other expenses	25.4, 25.5	-5,170	-3,447
Share of result from investments accounted for using the equity method	8	847	2,020
Finance income	26.1, 26.3	42,792	63,807
Finance expenses	26.2, 26.3	-51,555	-70,229
Profit before tax		49,494	181,100
Income tax expenses	27	-14,647	-49,168
Profit for the period		**34,847**	**131,932**
Other comprehensive income, net of taxes			
Net other comprehensive income to be reclassified to profit or loss in subsequent periods		*6,502*	*-242*
Gain on valuation of interest rate swaps	15.4	–	25
Exchange differences on translation of foreign operations	15.4	6,502	-267
Net other comprehensive income not to be reclassified to profit or loss		*-6,379*	*12,478*
Gain / (loss) on valuation of financial assets at FVOCI	15.4	2	-89
Re-measurement (loss) / gain on defined benefit plans	15.4, 21	-6,381	12,567
Total other comprehensive income, net of taxes		123	12,236
Total comprehensive income		**34,970**	**144,168**
Profit for the period attributable to:			
Owners of the parent	28	34,847	131,932
Non-controlling interests		–	–
Profit for the period		**34,847**	**131,932**
Total comprehensive income attributable to:			
Owners of the parent		34,970	144,168
Non-controlling interests		–	–
Total comprehensive income		**34,970**	**144,168**
Earnings per share		KRW	KRW
Basic / diluted, profit for the period attributable to ordinary equity holders of the parent	28	1,452	5,497

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

for the years ended December 31, 2023 and 2022 (see note 2.3)

	2023 Thousand USD	2022 Thousand USD
Sales	798,802	1,031,106
Cost of sales	-682,508	-797,184
Gross profit	116,294	233,922
Selling and administration costs	-70,948	-90,355
Operating profit	45,346	143,567
Other income	3,188	2,973
Other expenses	-4,010	-2,673
Share of result from investments accounted for using the equity method	657	1,567
Finance income	33,188	49,486
Finance expenses	-39,984	-54,467
Profit before tax	38,385	140,453
Income tax expenses	-11,359	-38,133
Profit for the period	27,026	102,320
Other comprehensive income, net of taxes		
Net other comprehensive income to be reclassified to profit or loss in subsequent periods	*5,043*	*-188*
Gain / (loss) on valuation of interest rate swaps	–	19
Exchange differences on translation of foreign operations	5,043	-207
Net other comprehensive income not to be reclassified to profit or loss	*-4,946*	*9,677*
Gain / (loss) on valuation of financial assets at FVOCI	2	-69
Re-measurement (loss) / gain on defined benefit plans	-4,948	9,746
Total other comprehensive income, net of taxes	97	9,489
Total comprehensive income	27,123	111,809
Profit for the period attributable to:		
Owners of the parent	27,026	102,320
Non-controlling interests	–	–
Profit for the period	27,026	102,320
Total comprehensive income attributable to:		
Owners of the parent	27,123	111,809
Non-controlling interests	–	–
Total comprehensive income	27,123	111,809
Earnings per share	USD	USD
Basic / diluted, profit for the period attributable to ordinary equity holders of the parent	1.13	4.26

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

for the years ended December 31, 2022 and 2023

	Attributable to owners of the parent									
					Other components of equity					
	Issued capital	Capital surplus	Reserves	Retained earnings	Cash flow hedge reserve	Fair value reserve of financial assets at FVOCI	Foreign currency translation reserve	Total	Non-controlling interests	Total equity
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KR W
As of January 1, 2022	12,000	20,482	28,623	483,732	-25	-614	-944	543,254	–	543,254
Profit for the period	–	–	–	131,932	–	–	–	131,932	–	131,932
Other comprehensive income	–	–	–	12,567	25	-89	-267	12,236	–	12,236
Total comprehensive income	**–**	**–**	**–**	**144,499**	**25**	**-89**	**-267**	**144,168**	**–**	**144,168**
Dividends	–	–	–	-4,800	–	–	–	-4,800	–	-4,800
Appropriation to reserves	–	–	480	-480	–	–	–	–	–	–
As of December 31, 2022	12,000	20,482	29,103	622,951	–	-703	-1,211	682,622	–	682,622

	Issued capital	Capital surplus	Reserves	Retained earnings	Cash flow hedge reserve	Fair value reserve of financial assets at FVOCI	Foreign currency translation reserve	Total	Non-controlling interests	Total equity
As of January 1, 2023	12,000	20,482	29,103	622,951	–	-703	-1,211	682,622	–	682,622
Profit for the period	–	–	–	34,847	–	–	–	34,847	–	34,847
Other comprehensive income	–	–	–	-6,381	–	2	6,502	123	–	123
Total comprehensive income	**–**	**–**	**–**	**28,466**	**–**	**2**	**6,502**	**34,970**	**–**	**34,970**
Dividends	–	–	–	-12,000	–	–	–	-12,000	–	-12,000
Appropriation to reserves	–	–	1,200	-1,200	–	–	–	–	–	–
As of December 31, 2023	12,000	20,482	30,303	638,217	–	-701	5,291	705,592	–	705,592

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

for the years ended December 31, 2022 and 2023 (see note 2.3)

	Attributable to owners of the parent									
					Other components of equity					
	Issued capital	Capital surplus	Reserves	Retained earnings	Cash flow hedge reserve	Fair value reserve of financial assets at FVOCI	Foreign currency translation reserve	Total	Non-controlling interests	Total equity
	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD	Thous. USD
As of January 1, 2022	9,307	15,885	22,198	375,161	-19	-476	-732	421,324	–	421,324
Profit for the period	–	–	–	102,320	–	–	–	102,320	–	102,320
Other comprehensive income	–	–	–	9,746	19	-69	-207	9,489	–	9,489
Total comprehensive income	**–**	**–**	**–**	**112,066**	**19**	**-69**	**-207**	**111,809**	**–**	**111,809**
Dividends	–	–	–	-3,723	–	–	–	-3,723	–	-3,723
Appropriation to reserves	–	–	373	-373	–	–	–	–	–	–
As of December 31, 2022	9,307	15,885	22,571	483,131	–	-545	-939	529,410	–	529,410
As of January 1, 2023	9,307	15,885	22,571	483,131	–	-545	-939	529,410	–	529,410
Profit for the period	–	–	–	27,026	–	–	–	27,026	–	27,026
Other comprehensive income	–	–	–	-4,948	–	2	5,043	97	–	97
Total comprehensive income	**–**	**–**	**–**	**22,078**	**–**	**2**	**5,043**	**27,123**	**–**	**27,123**
Dividends	–	–	–	-9,307	–	–	–	-9,307	–	-9,307
Appropriation to reserves	–	–	931	-931	–	–	–	–	–	–
As of December 31, 2023	9,307	15,885	23,502	494,971	–	-543	4,104	547,226	–	547,226

CONSOLIDATED STATEMENTS OF CASH FLOWS

for the years ended December 31, 2023 and 2022

	Notes	**2023** Million KRW	2022 Million KRW
Profit for the period		34,847	131,932
Total adjustments	29	74,182	102,471
Changes in operating assets and liabilities	29	102,211	-98,782
Interest received		1,353	524
Payments of income tax		-45,813	-34,590
Net cash flows provided by operating activities		166,780	101,555
Proceeds from sale of property, plant and equipment	5, 29	80	79
Purchases of property, plant and equipment	5	-38,392	-45,073
Purchases of intangible assets	7	-4,203	-3,114
Dividends received from investments using the equity method	8	578	581
Increase in other financial assets, net		-1,859	-6,064
Net cash flows used in investing activities		-43,796	-53,591
Proceeds from borrowings	16, 29	341,188	697,848
Repayments of borrowings	16, 29	-445,377	-719,157
Payment of lease liabilities	16, 29	-3,332	-3,419
Increase in other financial liabilities, net	16, 29	3,575	94
Interest paid		-8,997	-8,183
Dividends paid	15	-12,000	-4,800
Net cash flows used in financing activities		-124,943	-37,617
(Decrease) / increase in cash and cash equivalents		-1,959	10,347
Net foreign exchange differences		-4,217	-3,331
Cash and cash equivalents as of January 1	14	104,760	97,744
Cash and cash equivalents as of December 31	14	98,584	104,760

CONSOLIDATED STATEMENTS OF CASH FLOWS

for the years ended December 31, 2023 and 2022 (see note 2.3)

	2023 Thousand USD	2022 Thousand USD
Profit for the period	27,026	102,320
Total adjustments	57,532	79,472
Changes in operating assets and liabilities	79,270	-76,611
Interest received	1,049	406
Payments of income tax	-35,530	-26,826
Net cash flows provided by operating activities	129,347	78,761
Proceeds from sale of property, plant and equipment	62	61
Purchases of property, plant and equipment	-29,775	-34,957
Purchases of intangible assets	-3,260	-2,415
Dividends received from investments using the equity method	448	451
Increase in other financial assets, net	-1,442	-4,703
Net cash flows used in investing activities	-33,967	-41,563
Proceeds from borrowings	264,610	541,219
Repayments of borrowings	-345,414	-557,745
Payment of lease liabilities	-2,584	-2,652
Increase in other financial liabilities, net	2,773	73
Interest paid	-6,978	-6,346
Dividends paid	-9,307	-3,723
Net cash flows used in financing activities	-96,900	-29,174
(Decrease) / increase in cash and cash equivalents	-1,520	8,024
Net foreign exchange differences	-3,270	-2,583
Cash and cash equivalents as of January 1	81,247	75,806
Cash and cash equivalents as of December 31	76,457	81,247

1. CORPORATE INFORMATION

1.1. THE GROUP

SONGWON Industrial Group (the "Group") consists of the parent company Songwon Industrial Co., Ltd. (the "Company") and its consolidated subsidiaries as listed below. The Company was incorporated on December 15, 1965, under the law of the Republic of Korea to engage in the manufacture and commercial sale of polymer stabilizers, tin intermediates, PVC stabilizers and specialty chemicals, among others. The Company's main manufacturing plants are located in Korea in Ulsan, Maeam and Suwon and in India in Ankleshwar. The address of the registered office (Songwon Industrial Co., Ltd.) can be found at the end of the annual report.

The Company has listed its common shares on the Korea Exchange since June 1977, pursuant to the Korean Securities and Exchange Act.

1.2. SCOPE OF CONSOLIDATION

1.2.1. CHANGE IN THE SCOPE OF CONSOLIDATION

As of December 31, 2023, the scope of consolidation for the consolidated financial statements encompasses 14 entities (2022: 14 entities). Additionally, one entity is classified as a joint venture (2022: one entity) and accounted for using the equity method.

During the twelve months of 2023, there were no changes in the legal structure of the Group or the scope of consolidation. During the twelve months of 2022, there were no changes in the legal structure of the Group or the scope of consolidation.

The consolidated financial statements include the financial statements of the Company and of the subsidiaries listed in the following table. The table also includes joint ventures which are accounted for using the equity method.

		2023		2022	
		December 31		December 31	
Consolidated entities	Location	Status	Interest	Status	Interest
Songwon Industrial Co., Ltd.	Korea	Parent		Parent	
Songwon International – Japan K.K.	Japan	Subsidiary	100%	Subsidiary	100%
Songwon Specialty Chemicals-India Pvt. Ltd.	India	Subsidiary	100%	Subsidiary	100%
Songwon International – Americas Inc.	USA	Subsidiary	100%	Subsidiary	100%
Songwon International AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon Group Holding AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon Management AG	Switzerland	Subsidiary	100%	Subsidiary	100%
Songwon ATG GmbH	Germany	Subsidiary	100%	Subsidiary	100%
Songwon Europe GmbH	Germany	Subsidiary	100%	Subsidiary	100%
Songwon Chemicals GmbH	Germany	Subsidiary	100%	Subsidiary	100%
Songwon Trading GmbH	Germany	Subsidiary	100%	Subsidiary	100%
Songwon International – Qingdao Co., Ltd.	China	Subsidiary	100%	Subsidiary	100%
Songwon International Middle East FZE	UAE	Subsidiary	100%	Subsidiary	100%
Songwon Polysys Additives – Sole Proprietorship LLC	UAE	Subsidiary	100%	Subsidiary	100%
Entity accounted for using the equity method (joint venture)					
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	China	Joint venture	30%	Joint venture	30%

1.2.2. SUMMARIZED STATEMENTS OF FINANCIAL POSITION AND COMPREHENSIVE INCOME OF SUBSIDIARIES

The summarized statements of financial position and comprehensive income of subsidiaries are as follows:

2023 as of December 31	**Total assets** Million KRW	**Total liabilities** Million KRW	**Total equity** Million KRW	**Total revenue** Million KRW	**Net income** Million KRW	**Total comp. income** Million KRW
Songwon International – Japan K.K.	35,867	25,682	10,185	97,271	1,295	1,295
Songwon Specialty Chemicals-India Pvt. Ltd.	50,930	8,379	42,551	27,946	7,269	7,426
Songwon International – Americas Inc.	99,069	57,866	41,203	237,256	3,747	3,747
Songwon International AG	99,419	67,256	32,163	263,157	4,450	4,337
Songwon Group Holding AG	138,892	3,144	135,748	–	23,351	23,351
Songwon Management AG	24,520	16,650	7,870	–	1,899	255
Songwon-ATG GmbH	7,939	3,617	4,322	7,561	321	321
Songwon Europe GmbH	422	94	328	2,617	82	82
Songwon Chemicals GmbH	149	18	131	1,544	42	42
Songwon Trading GmbH	132	16	116	1,406	36	36
Songwon International – Qingdao Co., Ltd.	10,965	6,407	4,558	25,929	459	459
Songwon International – Middle East FZE	12,983	9,664	3,319	37,797	1,889	1,889
Songwon Polysys Additives – Sole Proprietorship LLC	38,549	15,623	22,926	31,385	1,370	1,370

2022 as of December 31						
Songwon International – Japan K.K.	62,789	50,664	12,125	139,524	870	870
Songwon Specialty Chemicals-India Pvt. Ltd.	50,388	9,531	40,857	31,651	3,054	3,161
Songwon International – Americas Inc.	134,021	94,813	39,208	333,753	5,851	5,851
Songwon International AG	127,717	97,458	30,259	338,812	7,519	7,947
Songwon Group Holding AG	134,625	4,125	130,500	–	14,211	14,211
Songwon Management AG	23,284	15,103	8,181	–	2,010	5,053
Songwon-ATG GmbH	7,539	3,769	3,770	9,051	551	551
Songwon Europe GmbH	2,051	1,821	230	4,736	166	166
Songwon Chemicals GmbH	92	7	85	1,065	24	24
Songwon Trading GmbH	81	6	75	944	19	19
Songwon International – Qingdao Co., Ltd.	10,648	6,213	4,435	26,336	729	729
Songwon International – Middle East FZE	10,517	7,215	3,302	34,771	1,851	1,851
Songwon Polysys Additives – Sole Proprietorship LLC	34,787	11,442	23,345	43,369	1,956	1,956

2. SUMMARY OF MATERIAL ACCOUNTING POLICIES

2.1. BASIS OF PREPARATION

The Group prepares statutory financial statements in the Korean language 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 consolidated financial statements have been prepared on a historical cost basis, except for certain items, such as financial instruments, which are mentioned separately in the following accounting principles. The consolidated financial statements are presented in Korean won (KRW) and all values are rounded to the nearest million (000,000), except when otherwise indicated.

The Group maintains its official accounting records in Korean won. 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.

2.2. BASIS OF CONSOLIDATION

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as of December 31, 2023. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

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

Generally, there is a presumption that a majority of voting rights results in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- The contractual arrangement with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

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. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when it loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statements of comprehensive income from the date that the Group gains control until the date that it ceases to control the subsidiary.

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

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

2.3. CONVENIENCE TRANSLATION INTO UNITED STATES DOLLAR AMOUNTS

The parent company operates primarily in Korean won and its official accounting records are maintained in KRW. The USD amounts provided in the financial statements represent supplementary information solely for the convenience of the reader. All KRW amounts are expressed in USD at the rate of 1,289.40 KRW to 1 USD, the exchange rate in effect on December 31, 2023. Such a presentation is not in accordance with generally accepted accounting principles and should not be construed as a representation that the KRW amounts shown could be readily converted, realized or settled in USD at this or at any other rate.

2.4. BUSINESS COMBINATIONS AND GOODWILL

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at the acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

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 reassesses whether it has correctly identified all of the assets acquired as well as all of the liabilities assumed, and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregated consideration transferred, then the gain is recognized in profit or loss.

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

Where goodwill has been allocated to a CGU and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the CGU retained.

2.5. INTEREST IN JOINT ARRANGEMENTS

Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. 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 considerations made in determining joint control are similar to those necessary to determine control over subsidiaries.

The Group's investments in its joint ventures are accounted for using the equity method. Under the equity method, the investment in a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the joint venture since the acquisition date.

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

The aggregate of the Group's share of profit or loss in a joint venture is shown on the face of the statements of profit or loss outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the joint venture.

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

At each reporting date, the Group determines whether there is objective evidence that the investment in the joint venture is impaired. If there is such evidence, the Group calculates the amount of impairment as the difference between the recoverable amount of the joint venture and its carrying value, and then recognizes the loss as "Share of profit of a joint venture" in the statements of comprehensive income.

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

Joint operations

A joint operation is defined as an arrangement in which the parties with joint control have rights to the assets and obligations for the liabilities relating to that arrangement. In respect of its interest in a joint operation, a joint operator must recognize all of its assets, liabilities, revenues and expenses, including its relative share of jointly controlled assets, liabilities, revenue and expenses.

The considerations made in determining joint control are similar to those necessary to determine control over subsidiaries.

2.6. FOREIGN CURRENCY TRANSLATION

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

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

The assets, including goodwill and liabilities of foreign subsidiaries, where the functional currency is other than the KRW, are translated using the exchange rate at the end of the reporting period, while the statements of comprehensive income are translated using the average exchange rates during the period. Differences arising from such translations are recognized within equity and reclassified to net income when the gain or loss on disposal of the foreign subsidiary is recognized.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

2.7. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are valued at cost less accumulated depreciation and accumulated impairment losses. If the recognition criteria are met, such costs include the cost of replacing part of the property, plant and equipment and borrowing costs for long-term construction projects. Other repair and maintenance costs are recognized in the statements of comprehensive income as incurred. If the costs of certain components of an item of property, plant and equipment are material in relation to the total cost of the item, they are accounted for and depreciated separately.

Depreciation expenses are calculated by using the straight-line method. The following useful lives are assumed:

Land	No depreciation
Buildings	18–60 years
Structures	10–40 years
Machinery	10–20 years
Other	1–39 years

Residual values and useful lives are reviewed annually and adjusted accordingly if expectations differ from previous estimates.

The gain or loss arising from the derecognition of a property, plant or equipment shall be determined as the difference between the net disposal proceeds and the carrying amount of the asset. It shall be recognized in the income statement when the asset is derecognized.

2.8. INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses.

Intangible assets with useful finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. Changes in the expected useful life, or the expected consumption pattern of future economic benefits embodied in the asset, are accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the income statement under cost of sales and selling and administration costs in the expense category that is consistent with the function of the intangible assets.

Intangible assets with indefinite useful lives (such as goodwill and memberships) are not amortized, but are tested for impairment annually either individually, or at the cash-generating unit level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the income statement when the asset is derecognized.

Intangible assets with finite useful lives are amortized using the straight-line method with the following useful lives:

Software	3–10 years
Industrial rights	10 years

2.9. INVESTMENT PROPERTY

The Group classifies the property to earn rentals or for capital appreciation, or both, as investment properties. As investment properties are accounted for using a cost model, the same accounting policies applied to property, plant and equipment are used for their accounting treatment, except for their classification and presentation.

2.10. LEASES

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

Group as a lessee

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

- *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. 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 (see note 5.1).

- *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 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 (see note 31.3).

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. The carrying amount of the right-of-use asset and lease liability is re-measured 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.

- *Short-term leases and leases of low-value assets*
  The Group applies the short-term lease recognition exemption to its short-term leases of tools and other equipment (i.e., those leases that have a lease term of twelve 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 USD). Lease payments on short-term leases and leases of low-value assets are recognized as an expense on a straight-line basis over the lease term.

- *Material judgment in determining the lease term of contracts with renewal options*
  The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised. The Group has the option, under some of its leases to lease the assets for additional terms. The Group applies judgment in evaluating whether it is reasonably certain to exercise the option to renew. That is, it considers all relevant factors that create an economic incentive for it to exercise the renewal. After the commencement date, the Group reassesses the lease term if there is a material event or change in circumstances that is within its control and affects its ability to exercise (or not to exercise) the option to renew (e.g., a change in business strategy).

Group as a lessor

Leases in which the Group does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned. In the financial year 2022, the Group has not entered into lease agreements as a lessor.

2.11. IMPAIRMENT OF NON-FINANCIAL ASSETS

The Group reviews non-financial assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If any indication exists, or when annual impairment testing for assets, such as membership is required, the Group estimates the asset's recoverable amount. Recoverability of assets is measured by the comparison of the carrying amount of the asset to the recoverable amount, which is the higher of the asset's value in use and its fair value less costs to sell. If assets do not generate cash inflows that are largely independent of those from other assets or groups of assets, the impairment test is not performed at an individual asset level; instead, it is performed at the level of the cash-generating unit (CGU) that the asset belongs to.

Where the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such an indication exists, the Group estimates the asset or cash-generating unit's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited, so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such a reversal is recognized in the income statement.

The following criteria are also applied in assessing impairment of specific assets:

Goodwill

Goodwill is tested for impairment annually as of December 31, and whenever there are events or changes in circumstances (triggering events), which suggest that the carrying amount may not be recoverable. Goodwill is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to the (groups of) cash-generating unit(s) that is expected to benefit from the synergies of the business combination. If the carrying amount of the cash-generating unit(s), to which the goodwill is allocated, exceeds its recoverable amount, an impairment loss on goodwill is recognized. The recoverable amount is the higher of the cash-generating unit(s) fair value less costs to sell and its value in use.

Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives

Intangible assets with indefinite useful lives are tested for impairment annually as of December 31, either individually, or at the cash-generating unit level, as appropriate and when circumstances indicate that the carrying value may be impaired.

2.12. BORROWING COSTS

Borrowing costs directly attributable to the acquisition, construction or production of an asset, that requires a substantial period of time to get ready for its intended use or sale, are capitalized as part of the cost of the respective assets.

2.13. INVENTORIES

Inventory is valued at the lower of the acquisition or production cost and net realizable value, cost being generally determined on the basis of a weighted average. Production costs comprise direct material and labor and applicable manufacturing overheads, including depreciation charges based on normal operating capacity. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

2.14. CASH AND CASH EQUIVALENTS

Cash and cash equivalents in the statements of financial position comprise cash at banks, as well as on-hand and short-term deposits with a maturity of three months or less.

2.15. PROVISIONS

A provision is recognized when the Group has a present legal or constructive obligation as a result of a past event. It is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. If the effect is material, provisions are recognized at present value by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money.

Greenhouse gas emissions

The Group receives free emission rights as a result of emission trading schemes. The rights are received on an annual basis and, in return, the Group is required to remit rights equal to its actual emissions. The Group has adopted the net liability approach to the emission rights granted. Therefore, a provision is recognized only when actual emissions exceed the emission rights granted and still held. The emission costs are recognized as other operating costs. Where emission rights are purchased from other parties, they are recorded at cost, and treated as a reimbursement right, whereby they are matched to the emission liabilities and re-measured to fair value. The changes in fair value are recognized in the statement of profit or loss and other comprehensive income.

2.16. PENSIONS AND OTHER LONG-TERM EMPLOYMENT BENEFITS

Pensions

The Group operates three defined benefit pension plans: one in Korea, one in Switzerland and one in India. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method.

Re-measurements, comprising actuarial gains and losses, the effect of the asset ceiling, excluding net interest and the return on plan assets (excluding net interest), are recognized immediately in the statements of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Re-measurements are not reclassified to profit or loss in subsequent periods.

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

- the plan amendment or curtailment
- that the Group recognizes restructuring-related costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The pension expenses are recognized in the income statement under cost of sales and selling and administration costs.

Other long-term employment benefits

The parent company also implements a bonus plan designed to present a prescribed quantity of gold and entitles compensated vacation to long-term service employees. Accounting policies of the bonus plan are mostly the same as the defined benefit plan, except that re-measurements are recognized immediately in profit or loss.

2.17. TAXES

Current income tax

Current income tax assets and liabilities for the current period are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted, or substantively enacted, at the reporting date in the countries where the Group operates and generates taxable income.

Deferred tax

Deferred tax is provided using the liability method on temporary differences at the reporting date between the tax basis of assets and liabilities, and their carrying amounts for financial reporting purposes.

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

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

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

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

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction, either in other comprehensive income, or directly in equity.

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

2.18. REVENUE FROM CONTRACTS WITH CUSTOMERS

The Group's business is the manufacture and commercial sale of antioxidants, stabilizers and polyurethane. Revenue from contracts with customers is recognized when control of the goods or services is transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group has generally concluded that it is the principal in its revenue arrangements, except for the agency services below, because it typically controls the goods or services before transferring them to the customer.

Sales of goods

The Group has concluded that revenue from the sale of goods should be recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods.

Sale of services

The Group provides transportation services in combination with the sales of goods. The services can be provided by others and are not materially modified or customized. There are two performance obligations in a contract for bundled sales of goods and transportation services, because its promises to transfer goods and provide transportation services, are capable of being distinct and separately identifiable. The Group allocates the transaction price based on the relative stand-alone selling prices of goods and transportation services. The Group concluded that revenue for transportation services, will be recognized over time because the customer simultaneously receives and consumes the benefits provided by the Group.

Contract balances

1) Contract assets

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 a consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

2) Trade receivables

A receivable represents the Group's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due). Refer to the accounting policies of financial assets in note 2.19.

3) Contract liabilities

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 under the contract.

2.19. FINANCIAL INSTRUMENTS

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

Financial assets

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

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

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

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

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

1) Subsequent measurement

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

- Financial assets at amortized cost (debt instruments);
- Financial assets at FVOCI with recycling of cumulative gains and losses (debt instruments);
- Financial assets designated at FVOCI with no recycling of cumulative gains and losses upon derecognition (equity instruments);
- Financial assets at FVtPL.

2) Financial assets at amortized cost (debt instruments)

This category is the most relevant to the Group. The Group measures financial assets at amortized cost if both of the following conditions are met:

- the financial asset is held within a business model with the objective of holding financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

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

3) Financial assets at FVOCI (debt instruments)

The Group measures debt instruments at FVOCI if both of the following conditions are met:

- the financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

For debt instruments at FVOCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss. The Group's debt instruments at FVOCI includes investments in quoted debt instruments included under other non-current financial assets.

4) Financial assets designated at FVOCI (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at FVOCI when they meet the definition of equity under KIFRS 1032 and are not held for trading. The classification is determined on an instrument-by-instrument basis.

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

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

5) Financial assets at FVtPL

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

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

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

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

6) Derecognition

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

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

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

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

7) Impairment of financial assets

Further disclosures relating to the impairment of financial assets are also provided in the sections:

- material accounting judgments, estimates and assumptions
- debt instruments at FVOCI
- trade and other receivables

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

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

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

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

The Group considers a financial asset in default when contractual payments are 180 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

Financial liabilities

1) Initial recognition and measurement

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

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

The Group's financial liabilities include mainly trade and other payables, interest-bearing loans and borrowings as well as derivative liabilities.

2) Subsequent measurement

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

3) Financial liabilities at FVtPL

Financial liabilities at FVtPL include financial liabilities held for trading and financial liabilities designated upon initial recognition as at FVtPL.

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

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

Financial liabilities designated upon initial recognition at FVtPL are designated at the initial date of recognition, and only if the criteria in KIFRS 1109 are satisfied.

4) Loans and borrowings

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

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the statement of profit or loss.

This category generally applies to interest-bearing loans and borrowings. For more information, refer to note 16.

5) Derecognition

A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit or loss.

Offsetting of financial instruments

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

Derivative financial instruments and hedge accounting

1) Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward exchange contracts and interest rate swaps, to hedge its foreign currency risks, interest rate risks and commodity price risks. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

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

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

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

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

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

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

2) Fair value hedges

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

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

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

When an unrecognized firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognized as an asset or liability with a corresponding gain or loss recognized in profit or loss. The Group has forward exchange contracts as well as currency and interest rate swaps (CRS) in order to hedge the risk of foreign exchange rate fluctuation of assets and liabilities denominated in foreign currencies and floating interest rates on corporate bonds. The Group applies fair value hedge accounting for forward exchange contracts (note 20.1.1) and currency and interest rate swaps (note 20.1.2).

3) Cash flow hedges

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

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

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

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

The Group had interest rate swap agreements about some borrowings that had been terminated early. The Group applied cash flow hedge accounting for interest rate swap contracts.

4) Hedges of a net investment

Hedges of a net investment in a foreign operation, including a hedge of a monetary item that is accounted for as part of the net investment, are accounted for in a way similar to cash flow hedges. Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized as OCI while any gains or losses relating to the ineffective portion are recognized in the statement of profit or loss. On disposal of the foreign operation, the cumulative value of any such gains or losses recorded in equity is transferred to the statement of profit or loss.

Fair value measurement

The Group measures financial instruments such as derivatives at fair value at each balance sheet date.

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

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

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

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

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

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

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

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

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

The Group determines the policies and procedures for both recurring fair value measurement, such as investment properties and unquoted AFS financial assets, and for non-recurring measurement, such as assets held for sale in discontinued operation.

External valuers are involved for material assets, such as AFS financial assets, and material liabilities. Selection criteria include market knowledge, reputation, independence and whether professional standards are maintained.

At each reporting date, the Group analyses the movements in the values of assets and liabilities that are required to be remeasured or re-assessed as per the Group's accounting policies. For this analysis, the Group verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The Group, in conjunction with the Group's external valuers, also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an interim basis, the Group and the Group's external valuers present the valuation results to the Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

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

2.20. GOVERNMENT GRANTS

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as income in equal amounts over the expected useful life of the related asset.

When the Group receives grants of non-monetary assets, the asset and the grant are recorded at nominal amounts and released to profit or loss over the expected useful life of the asset, based on the pattern of consumption of the benefits of the underlying asset by equal annual installments.

2.21. NEW AND AMENDED STANDARDS AND INTERPRETATIONS

The Group applied certain standards and amendments for the first time, which are effective for annual periods beginning on or after January 1, 2023 (unless otherwise stated). The Group has not adopted early any other standard, interpretation or amendment that has been issued but is not yet effective.

KIFRS 1117 *Insurance Contracts*

In May 2017, the IASB issued KIFRS 1117 *Insurance Contracts,* a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. KIFRS 1117 replaces KIFRS 1104 *Insurance Contracts* that was issued in 2005. KIFRS 1117 applies to all types of insurance contracts (i.e., life, non-life, direct insurance and re-insurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features; a few scope exceptions will apply. The overall objective of KIFRS 1117 is to provide an accounting model for insurance contracts that is more useful and consistent for insurers. In contrast to the requirements in KIFRS 1104, which are largely based on grandfathering previous local accounting policies, KIFRS 1117 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects. KIFRS 1117 is based on a general model, supplemented by:

- a specific adaptation for contracts with direct participation features (the variable fee approach)
- a simplified approach (the premium allocation approach) mainly for short-duration contracts

This new accounting standard had no impact on the consolidated financial statements of the Group as SONGWON Industrial Group is not involved in the insurance business.

Amendments to KIFRS 1008 *Definition of Accounting Estimates*

The amendments to KIFRS 1008 clarify the distinction between changes in accounting estimates, changes in accounting policies and the correction of errors. They also clarify how entities use measurement techniques and inputs to develop accounting estimates.

These amendments had no impact on the consolidated financial statements of the Group as there were no changes in accounting estimates and accounting policies on or after the beginning of the earliest period presented.

Amendments to KIFRS 1001 *Disclosure of Accounting Policies*

The amendments to KIFRS 1001 provide guidance and examples to help entities apply materiality judgments to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their "significant" accounting policies with a requirement to disclose their "material" accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures.

The amendments have had an impact on the Group's disclosures of accounting policies, but not on the measurement, recognition or presentation of any items in the Group's financial statements.

Amendments to KIFRS 1012 *Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction*

The amendments to KIFRS 1012 *Income Tax* narrow the scope of the initial recognition exception, so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences such as leases and decommissioning liabilities.

These amendments had no impact on the consolidated financial statements of the Group as there were no transactions leading to initial recognition exceptions that gave rise to equal taxable and deductible temporary differences within the scope of these amendments arising during the period.

2.22. STANDARDS ISSUED BUT NOT YET EFFECTIVE

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's consolidated financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Amendments to KIFRS 1116 *Lease Liability in a Sale and Leaseback*

The amendments to KIFRS 1116 specify the requirements that a seller-lessee uses in measuring the lease liability arising in a sale and leaseback transaction, to ensure the seller-lessee does not recognize any amount of the gain or loss that relates to the right of use it retains.

The amendments are effective for annual reporting periods beginning on or after January 1, 2024, and must applied retrospectively to sale and leaseback transactions entered into after the date of initial application of KIFRS 1116. Earlier application is permitted, and that fact must be disclosed.

The amendments are not expected to have a material impact on the Group's financial statements.

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

The amendments to paragraphs 69 to 76 of KIFRS 1001 specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

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

In addition, a requirement has been introduced to require disclosure when a liability arising from a loan agreement is classified as non-current and the entity's right to defer settlement is contingent on compliance with future covenants within twelve months.

The amendments are effective for annual reporting periods beginning on or after January 1, 2024, and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice and whether existing loan agreements may require renegotiation.

Amendments to KIFRS 1007 and KIFRS 1107 *Supplier Finance Arrangements*

The amendments to KIFRS 1007 *Statement of Cash Flows* and KIFRS 1107 *Financial Instruments: Disclosures* clarify the characteristics of supplier finance arrangements and require additional disclosure of such arrangements. The disclosure requirements in the amendments are intended to assist users of financial statements in understanding the effects of supplier finance arrangements on an entity's liabilities, cash flows and exposure to liquidity risk.

The amendments will be effective for annual reporting periods beginning on or after January 1, 2024. Early adoption is permitted but will need to be disclosed.

The amendments are not expected to have a material impact on the Group's financial statements.

3. MATERIAL ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the Group's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods. The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, which have a material risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

Notes	Description	Nature of estimation
5, 6, 7, 11	Impairment of non-financial assets / goodwill	Impairment exists when the carrying value of an asset or cash-generating unit exceeds its recoverable amount, which is the higher of its fair value less costs to sell and its value in use. The determination of the recoverable amount of a cash-generating unit involves the use of estimates by management. The fair value less costs to sell calculation is based on available data from binding sales transactions in an arm's length transaction of similar assets or observable market prices less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow model. The cash flows are derived from the expectations for the next three to five years and do not include restructuring activities that the Group is not yet committed to or material future investments that will enhance the asset performance of the cash-generating unit being tested. The recoverable amount based on the value in use is most sensitive to the discount rate used for the discounted cash flow model (WACC), as well as the expected future cash-inflows and the growth rate used for extrapolation purposes. The recoverable amount based on the fair value less cost to sell is most sensitive to the market prices, premiums and the estimate of cost to sell. These estimates, including the methodologies used, can have a material impact on the fair value and ultimately, the amount of any goodwill impairment.
21, 22	Pension and other employment benefits	The cost of defined benefit pension plans and other similar long-term employee benefits, and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions, which may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions.
27.1, 27.2	Income tax / deferred tax assets	The Group applies material judgment in identifying uncertainties over income tax treatments. Since the Group operates in a complex multinational environment, it assesses on a yearly base whether these uncertainties have an impact on its consolidated financial statements. Deferred tax assets are recognized for all unused tax losses, to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Material management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.
32	Fair value of financial instruments	Where the fair value of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, their fair value is determined using valuation techniques including the discounted cash flow model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include consideration of inputs, such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

31.3 Leases – determination of lease term and incremental borrowing rate

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised. The Group applies judgment in evaluating whether it is reasonably certain whether or not to exercise the option to renew or terminate the lease. That is, it considers all relevant factors that create an economic incentive for it to exercise either the renewal or termination. After the commencement date, the Group reassesses the lease term if there is a material event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate (e.g., construction of material leasehold improvements or material customization to the leased asset).

The Group cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

4. SEGMENT INFORMATION

The Group is organized into two main reporting segments "Industrial Chemicals" and "Performance Chemicals". The segments are defined based on SONGWON's product portfolio and its respective product families.

- **Industrial Chemicals**
  Industrial Chemicals operating segment mainly includes the product lines "Polymer Stabilizers", "Fuel and Lubricant Additives" and "Coatings".

- **Performance Chemicals**
  Performance Chemicals operating segment mainly includes the product lines "Thermoplastic Polyurethanes / Solution Polyurethanes", "Tin Intermediates / PVC Stabilizers and Plasticizers" and "Specialty Chemicals".

The Chief Operating Decision Makers (CODM), at Songwon, leaders of respective divisions, monitor the sales and operating profits or losses of its operating segments separately for the purpose of making decisions about resource allocation and performance assessment. However, certain income and expense positions such as other income / expenses, finance income / expenses and income tax expenses are managed on a Group basis and therefore not allocated to operating segments. The Group does not disclose a measure of total assets and liabilities for each reportable segment as such amounts are not reported to the CODM.

There are no inter-company transactions between the two operating segments.

4.1. REPORTED KEY FIGURES

The following key figures are presented each month to the CODM. For the segment reporting, the same accounting policies and methods of computation as were followed in the most recent annual financial statement are used.

For the twelve months ended
December 31

	2023	2022	**2023**	2022	**2023**	2022
	Industrial Chemicals		**Performance Chemicals**		**Total**	
Description	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
Sales	765,743	983,239	264,232	346,270	1,029,975	1,329,509
Operating profit	56,536	179,470	1,933	5,646	58,469	185,116

4.2. GEOGRAPHIC INFORMATION

4.2.1. SALES

The sales information below is based on the location of the customer. Korea is disclosed separately due to the size of the Korean market whereas all other countries have been summarized into regions. Therefore, no other country's revenues are disclosed separately.

	2023	2022
	Million KRW	Million KRW
Korea	198,256	240,554
Rest of Asia	287,729	363,393
Europe	238,094	302,286
North and South America	235,432	334,558
Australia	2,285	4,817
Middle East and Africa	68,179	83,901
Total sales	1,029,975	1,329,509

As of December 31, 2023, one customer referring to the reporting segment "Industrial Chemicals" accounted for more than 10% of the Group's total sales with a total amount of revenues of 114,115 Million KRW. (As of December 31, 2022: no customer accounted for more than 10% of the Group's total sales.)

4.2.2. NON-CURRENT ASSETS

Non-current assets information presented below consists of property, plant and equipment, right-of-use assets, investment properties and intangible assets.

	2023	2022
	Million KRW	Million KRW
Korea	410,232	411,991
Rest of Asia	23,582	24,036
Europe	7,444	7,619
North and South America	12,409	10,388
Middle East and Africa	18,270	19,359
Total	471,937	473,393

5. PROPERTY, PLANT AND EQUIPMENT

	Land	Buildings	Structures	Machinery	Other	Construction in progress	Total
Acquisition cost	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2022	149,656	93,377	71,856	497,806	45,026	15,127	872,848
Additions	–	144	431	1,802	830	45,352	48,559
Disposals	–	-51	-421	-4,641	-745	–	-5,858
Reclassifications	–	9,293	1,052	37,692	-23,112	-24,925	–
Net exchange differences	–	575	–	-192	54	-56	381
As of December 31, 2022	149,656	103,338	72,918	532,467	22,053	35,498	915,930
As of January 1, 2023	149,656	103,338	72,918	532,467	22,053	35,498	915,930
Additions	–	242	163	2,111	587	27,057	30,160
Disposals	–	-3,612	-1,512	-56,397	-3,005	–	-64,526
Reclassifications	–	2,452	7,633	44,103	-95	-54,940	-847
Net exchange differences	–	545	–	1,255	151	–	1,951
As of December 31, 2023	149,656	102,965	79,202	523,539	19,691	7,615	882,668
Accumulated depreciation and impairment							
As of January 1, 2022	–	-30,675	-44,676	-335,178	-38,020	–	-448,547
Depreciation charge	–	-2,761	-3,253	-21,516	-1,681	–	-29,211
Disposals	–	14	308	3,337	689	–	4,348
Impairment	–	-27	–	-891	–	–	-918
Reclassifications	–	-1,535	-26	-20,100	21,661	–	–
Net exchange differences	–	-113	–	164	-112	–	-61
As of December 31, 2022	–	-35,096	-47,647	-374,184	-17,462	–	-474,389
As of January 1, 2023	–	-35,096	-47,647	-374,184	-17,462	–	-474,389
Depreciation charge	–	-3,613	-4,104	-23,254	-1,394	–	-32,365
Disposals	–	1,862	1,314	54,143	2,978	–	60,297
Reclassifications	–	–	–	-533	533	–	–
Net exchange differences	–	-109	–	-701	-80	–	-890
As of December 31, 2023	–	-36,956	-50,437	-344,529	-15,425	–	-447,347
Net book value							
As of December 31, 2023	149,656	66,009	28,765	179,010	4,266	7,615	435,321
As of December 31, 2022	149,656	68,242	25,271	158,283	4,591	35,498	441,541

During the year ending 2023, no impairment was recognized on property, plant and equipment.

During the year ending 2022, there were impairment losses of property, plant and equipment within Songwon Specialty Chemicals-India Pvt. Ltd of 918 Million KRW due to the scrapping of the pilot plant.

Non-cash acquisition of property, plant and equipment decreased during the year ending 2023 by 9,079 Million KRW (2022: increased by 3,486 Million KRW) and accounts payables relating to non-cash transactions amounted to 3,511 Million KRW as at the year ending 2023 (2022: 12,590 Million KRW).

In 2023, tenant improvements of 847 Million KRW within Songwon International – Americas Inc. were reclassified from "construction in progress" in "right-of-use assets buildings" (refer to note 5.1) including recognition of the respective lease liabilities.

Capitalized borrowing costs

Borrowing costs, which are directly attributable to the acquisition or production of a qualifying asset, are capitalized as part of the cost of that asset. As of December 31, 2023, the balance of capitalized borrowing costs within property, plant and equipment amounted to 731 Million KRW (2022: 267 Million KRW).

Contractual commitments and pledged assets

A pledged asset is an asset that is transferred to a lender for the purpose of securing debt. The lender of the debt maintains possession of the pledged asset but does not have ownership unless a default occurs (refer to note 24). For contractual commitments to purchase property, plant and equipment refer to note 23.3.

5.1. RIGHT-OF-USE ASSETS AND LEASES

Set out below are the carrying amounts of right-of-use assets recognized and the movements during the period:

	Right-of-use assets:				
	Buildings	**Structures**	**Machinery**	**Other**	**Total**
Acquisition cost	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2022	20,704	2,178	1,235	1,077	25,194
Additions	84	80	–	110	274
Disposals	–	–	–	-126	-126
Modification of contract	5	578	–	213	796
Net exchange differences	859	1	-35	23	848
As of December 31, 2022	21,652	2,837	1,200	1,297	26,986
As of January 1, 2023	21,652	2,837	1,200	1,297	26,986
Additions	1,737	–	264	397	2,398
Disposals	-75	-2,819	–	-8	-2,902
Reclassifications	847	–	–	–	847
Modification of contract	-370	654	–	-57	227
Net exchange differences	843	1	37	59	940
As of December 31, 2023	24,634	673	1,501	1,688	28,496
Accumulated depreciation					
As of January 1, 2022	-4,530	-1,731	-364	-668	-7,293
Depreciation charge	-1,644	-610	-155	-305	-2,714
Disposals	–	–	–	126	126
Modification of contract	–	–	–	20	20
Net exchange differences	-141	-1	9	-23	-156
As of December 31, 2022	-6,315	-2,342	-510	-850	-10,017
As of January 1, 2023	-6,315	-2,342	-510	-850	-10,017
Depreciation charge	-1,703	-660	-157	-276	-2,796
Disposals	75	2,819	–	8	2,902
Modification of contract	–	–	–	76	76
Net exchange differences	-235	–	-9	-38	-282
As of December 31, 2023	-8,178	-183	-676	-1,080	-10,117
Net book value					
As of December 31, 2023	16,456	490	825	608	18,379
As of December 31, 2022	15,337	495	690	447	16,969

No impairment losses were recognized in 2023 on right-of-use assets (2022: none).

In 2023, tenant improvements of 847 Million KRW within Songwon International – Americas Inc. were reclassified from "construction in progress" in "right-of-use assets buildings" (refer to note 5) including recognition of the respective lease liabilities.

Further, the Group recognized rent expenses from short-term leases of 170 Million KRW (2022: 229 Million KRW), leases of low-value assets of 78 Million KRW (2022: 81 Million KRW) and variable lease payments of 54 Million KRW (2022: 41 Million KRW) in the consolidated statements of comprehensive income.

Set out below are the carrying amounts of lease liabilities and the movements during the year:

	2023	2022
Description	Million KRW	Million KRW
As of January 1	16,898	17,934
Additions	3,245	274
Modifications	303	816
Net exchange differences	665	689
Accretion of interest	665	604
Payments	-3,332	-3,419
As of December 31	18,444	16,898

The maturity analysis of lease liabilities is disclosed in note 31.3.

6. INVESTMENT PROPERTIES

	Land	Buildings	Total
Acquisition cost	Million KRW	Million KRW	Million KRW
As of January 1, 2022	3,280	504	3,784
Net exchange differences	-2	-6	-8
As of December 31, 2022	3,278	498	3,776
Net exchange differences	-1	-4	-5
As of December 31, 2023	3,277	494	3,771
Accumulated depreciation			
As of January 1, 2022	–	-317	-317
Depreciation charge	–	-10	-10
Net exchange differences	–	7	7
As of December 31, 2022	–	-320	-320
Depreciation charge	–	-7	-7
Net exchange differences	–	4	4
As of December 31, 2023	–	-323	-323
Net book value			
As of December 31, 2023	3,277	171	3,448
As of December 31, 2022	3,278	178	3,456

Investment properties are stated at cost less any accumulated depreciation and impairment losses, if any. The same useful lives have been applied to property, plant and equipment.

	2023	2022
Description	Million KRW	Million KRW
Rental income	16	15
Operational expenses	-39	-37

The Company owns an office building in Busan which is subleased. The fair value of the office building and land amounts to 8,184 Million KRW as of December 31, 2023 (2022: 8,607 Million KRW). In addition, Songwon International –Japan K.K. owns an object that is subleased. The fair value of the building and land is 24 Million KRW (2022: 19 Million KRW). The fair value of investment properties is calculated based on the valuation of an independent rating agency taking into consideration the location and category of the investment property being valued. It is classified as Level 3 based on the valuation technique of the fair value hierarchy.

During the current year, the Company did not dispose of any investment properties (2022: no disposed investment properties).

Disclosure of pledged assets can be found in note 24.

7. INTANGIBLE ASSETS

	Industrial rights	Software	Memberships	Goodwill	Construction in progress	Total
Acquisition cost	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
As of January 1, 2022	6,643	3,058	831	44,038	2,114	56,684
Additions	344	411	–	–	2,359	3,114
Disposals	-453	-11	–	–	-133	-597
Reclassifications	1,154	–	–	–	-1,154	–
Net exchange differences	–	100	–	-3,304	–	-3,204
As of December 31, 2022	7,688	3,558	831	40,734	3,186	55,997
As of January 1, 2023	7,688	3,558	831	40,734	3,186	55,997
Additions	27	92	–	–	4,084	4,203
Disposals	-5	-32	–	–	–	-37
Reclassifications	340	208	–	–	-548	–
Net exchange differences	–	35	–	6,168	–	6,203
As of December 31, 2023	8,050	3,861	831	46,902	6,722	66,366
Accumulated amortization and impairment						
As of January 1, 2022	-3,602	-2,673	–	-40,759	–	-47,034
Amortization charge	-632	-168	–	–	–	-800
Disposals	586	11	–	–	–	597
Impairment	-391	–	–	–	–	-391
Net exchange differences	–	-92	–	3,150	–	3,058
As of December 31, 2022	-4,039	-2,922	–	-37,609	–	-44,570
As of January 1, 2023	-4,039	-2,922	–	-37,609	–	-44,570
Amortization charge	-657	-265	–	–	–	-922
Disposals	4	33	–	–	–	37
Net exchange differences	–	-25	–	-6,097	–	-6,122
As of December 31, 2023	-4,692	-3,179	–	-43,706	–	-51,577
Net book value						
As of December 31, 2023	3,358	682	831	3,196	6,722	14,789
As of December 31, 2022	3,649	636	831	3,125	3,186	11,427

Intangible assets with a definite useful life are amortized over the useful life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. During the year ended 2023, no impairment loss on intangible assets was recognized by the Group (2022: 391 Million KRW).

The intangible assets with an indefinite useful life are tested for impairment on an annual basis. An impairment test was carried out for goodwill and memberships based on the recoverable amount of each asset. For further details of the impairment test, refer to note 11. The goodwill items consist of items acquired in a business combination. In the financial years 2023 and 2022, no business combination took place that led to a recognition of goodwill.

Capitalized borrowing costs

Borrowing costs, which are directly attributable to the acquisition or production of a qualifying asset, are capitalized as part of the cost of that asset. As of December 31, 2023, the balance of capitalized borrowing costs within intangible assets amounts to 193 Million KRW (2022: none).

7.1. DETAILS OF INDIVIDUAL MATERIAL INTANGIBLE ASSETS

		2023	2022	
		December 31	December 31	
Description	**Remark**	Million KRW	Million KRW	**Remaining life**
Industrial rights	REACH	2,876	3,073	5.7
Industrial rights	1330 Technology	238	357	2.0
Membership	New Seoul Country	778	778	Indefinite
Goodwill	Acquisition of Business SeQuent Scientific Limited	3,196	3,125	Indefinite
Construction-in-progress	D-365	6,378	2,781	n/a
Construction-in-progress	REACH	344	273	n/a
Construction-in-progress	IT LIMS system	–	132	n/a
Material intangible assets total		13,810	10,519	

8. INVESTMENT ACCOUNTED FOR USING THE EQUITY METHOD

The Group has a 30% interest in Songwon Baifu Chemicals (Tangshan) Co., Ltd., classified as a jointly controlled entity that primarily engages in the production of thioesters. Determination was driven by the contractually agreed sharing of control with regard to relevant activities, requiring unanimous consent of the control-sharing parties.

The summarized statements of financial position and summarized statements of comprehensive income of joint ventures (accounted for using the equity method) are as follows:

Statement of financial position	Cash and cash equivalents Million KRW	Total current assets Million KRW	Total non-current assets Million KRW	Current financial liabilities Million KRW	Total current liabilities Million KRW	Non-current financial liabilities Million KRW	Total non-current liabilities Million KRW	Equity Million KRW	Carrying amount Million KRW
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	5,981	15,765	13,722	2,363	3,366	28	62	26,059	7,818
December 31, 2022	5,981	15,765	13,722	2,363	3,366	28	62	26,059	7,818
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	6,986	16,093	13,464	2,374	2,418	–	37	27,102	8,131
December 31, 2023	6,986	16,093	13,464	2,374	2,418	–	37	27,102	8,131

Statement of comprehensive income	Revenue Million KRW	Depreciation & Amortization Million KRW	Interest income Million KRW	Interest expense Million KRW	Profit before tax Million KRW	Income tax expenses Million KRW	Profit for the period Million KRW	Other comp. income Million KRW	Total comp. income Million KRW
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	43,077	-176	4	-5	8,723	-1,990	6,733	-290	6,443
December 31, 2022	43,077	-176	4	-5	8,723	-1,990	6,733	-290	6,443
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	31,632	-180	61	-4	3,270	-447	2,823	147	2,970
December 31, 2023	31,632	-180	61	-4	3,270	-447	2,823	147	2,970

The investment in the joint venture is accounted for by using the equity method. The joint venture is continuing its operations as of December 31, 2023, and its reporting period is the same as that of the Group. In 2023, dividends of 578 Million KRW were received from Songwon Baifu Chemicals (Tangshan) Co., Ltd. (2022: 581 Million KRW).

Changes in the investments in joint ventures are summarized as follows:

	As of January 1	Dividends	Share of result from equity method revaluation	Exchange rate effects	As of December 31
2022	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	6,466	-581	2,020	-87	7,818
Total	6,466	-581	2,020	-87	7,818
2023					
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	7,818	-578	847	44	8,131
Total	7,818	-578	847	44	8,131

9. INVENTORIES

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Raw materials and supplies	57,850	85,687
Work in progress	1,132	1,250
Finished and semi-finished goods	175,478	232,946
Goods in transit	54,594	54,131
Consignment stocks	2,412	3,115
Total inventories at the lower of cost and net realizable value	291,466	377,129

As of December 31, 2023, the inventory allowance balance amounted to 6,178 Million KRW for raw materials, work in progress, finished and semi-finished goods (2022: 4,853 Million KRW). The Group recognized inventory allowance expenses of 2,413 Million KRW in the financial year 2023 (2022: none) and reversed inventory allowances recognized in prior periods of 1,088 Million KRW (2022: reversal of inventory allowance of 276 Million KRW).

For the year ended 2023, the Group recognized impairment losses of 2,638 Million KRW within inventory (2022: 1,777 Million KRW).

10. TRADE AND OTHER RECEIVABLES

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Trade and notes receivables	148,170	176,734
Allowances for trade and notes receivables	-1,375	-1,371
Trade and notes receivables (related parties) (note 30)	65	63
Other accounts receivables	3,948	1,670
Allowances for other accounts receivables	-13	-18
Accrued income	180	96
Total	150,975	177,174

Other accounts receivables include customs duty refunds, rental income receivables and others.

Changes in the allowance for doubtful accounts for trade and other receivables are as follows:

	Million KRW
January 1, 2022	-1,295
Charge for the period	-106
Unused amounts reversed	12
December 31, 2022	-1,389
January 1, 2023	-1,389
Charge for the period	-279
Unused amounts reversed	280
December 31, 2023	-1,388

The aging analysis of trade and other receivables is as follows:

			Days past due			
	Total	**Current**	**≤ 90**	**91-120**	**121-180**	**> 180**
	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW	Million KRW
December 31, 2023	152,363	139,998	11,759	–	–	606
December 31, 2022	178,563	166,012	11,689	51	261	550

Refer to note 31.2 on credit risk of trade receivables, which describes how the Group manages and measures credit quality of trade receivables that are neither past due, nor impaired.

As the right of recourse is granted to the transferee, the balance of trade receivables that are not derecognized at the end of the financial year amounts to 47,877 Million KRW (2022: 68,440 Million KRW). The total amount of deposits received was carried in the financial statements under interest-bearing loans and borrowings.

11. IMPAIRMENT TESTING OF GOODWILL AND INTANGIBLES WITH INDEFINITE USEFUL LIFE

11.1. IMPAIRMENT TESTING OF GOODWILL AND INTANGIBLE ASSETS WITH INDEFINITE USEFUL LIFE

Goodwill acquired through business combinations and memberships with an indefinite useful life have been allocated to the cash-generating units (CGUs) according to their business activities. Goodwill acquired in a business combination is allocated to each CGU expected to benefit from the synergies of the business combination.

The goodwill resulting from the business acquisition of SeQuent Scientific Limited was allocated to the individual CGU of Songwon Specialty Chemicals – India Pvt. Ltd., India (SWDM-IN).

Details of the allocation of goodwill and intangible assets with an indefinite useful life to the CGU are as follows:

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Goodwill of Songwon Specialty Chemicals-India Pvt. Ltd., India (SWDM-IN)	3,196	3,125
Memberships with indefinite useful lives of the rest of the Group	831	831
Total tested goodwill and intangible assets with indefinite useful lives	4,027	3,956

The Group performed its annual impairment test in December 2023 and 2022. The recoverable amount of the CGU – to which goodwill and intangible assets with an indefinite useful life are allocated – has been determined based on its value in use, calculated using the discounted cash flow (DCF) model.

CGU of SWDM-IN

As of December 31, 2023, the recoverable amount of the CGU of Songwon Specialty Chemicals – India Pvt. Ltd., India amounts to 54,266 Million KRW or 3,487 Million INR (2022: 46,919 Million KRW or 3,082 Million INR) and exceeds the carrying amount of the respective CGU.

Memberships with indefinite useful lives of the rest of the Group

As of December 31, 2023, no impairment loss is recognized according to the impairment test on memberships with indefinite useful lives (2022: no impairment loss).

11.2. KEY ASSUMPTIONS USED IN CALCULATION OF VALUE IN USE

The calculation of the CGU value in use reflects the future free cash flows for the next five years for SWDM-IN discounted to the present value at the WACC and an estimated residual value. The projected free cash flows for SWDM-IN's CGU are estimated on the basis of the Business Plan 2024 – 2028, as approved by management, and mid-term assumptions. For the free cash flows extending beyond the detailed planning period, a terminal value was computed by capitalizing the normalized cash flows using a constant growth rate. The long-term growth rate was calculated in consideration of the long-term inflation expectations for relevant countries.

In addition, a market risk premium of 5.16% (2022: 6.00%) and a small cap premium of 3.05% (2022: 3.02%) were applied for the calculation of the WACC.

The key assumptions underlying the calculation are as follows:

Parameters for the determination of the recoverable amount of the CGU	Description
Average annual growth rate	Average annual growth is calculated on the basis of mid-term assumptions.
WACC	WACC, which is the weighted average of cost of equity and cost of debt, is calculated using the Capital Asset Pricing Model (CAPM). The application of pre-tax WACC and post-tax WACC yields the same value in use.
Long-term growth rate	Long-term growth rate is calculated based on the long-term inflation expectations for the relevant countries.

Parameters for the determination of the recoverable CGU amount of SWDM-IN	2023	2022
Average annual growth rate	10.07%	6.27%
Pre-tax WACC	15.56%	16.05%
Post-tax WACC	11.19%	11.80%
Long-term growth rate	2.71%	2.82%

The following changes in key assumptions in 2023 led to a situation where the value in use for the CGU SWDM-IN equals the carrying amount:

Parameters for the determination of the recoverable CGU amount	Sensitivity analysis SWDM-IN
Average annual growth rate	3.78%
Pre-tax WACC	20.94%
Post-tax WACC	14.72%
Long-term growth rate	0.00%

12. OTHER CURRENT ASSETS

Other current assets as of December 31, 2023 and 2022, consist of the following:

Description	2023 December 31 Million KRW	2022 December 31 Million KRW
Advance payments	701	1,030
Prepaid expenses	4,961	4,623
VAT refundables	7,944	7,267
Total	13,606	12,920

13. OTHER FINANCIAL ASSETS

	2023 December 31		2022 December 31	
	Non-current	**Current**	**Non-current**	**Current**
Description	Million KRW	Million KRW	Million KRW	Million KRW
Financial instruments at amortized cost (bank deposit)	539	2,400	529	1,826
Financial instruments at FVtPL	9,450	5,823	11,847	2,591
Derivative assets at FVtPL (note 20)	–	3,556	2,293	1,849
Guarantee and other deposits at amortized cost	1,323	631	1,328	411
Guarantee and other deposits at amortized cost (related parties) (note 30)	33	–	33	–
Total	11,345	12,410	16,030	6,677

As of December 31, 2023, financial instruments at amortized cost (bank deposit) include restricted cash of 5 Million KRW (2022: 7 Million KRW) as well as pledged bank deposits of 804 Million KRW (December 31, 2022: 481 Million KRW).

13.1. EQUITY INSTRUMENTS AT FVOCI

Details of equity instruments at FVOCI as of December 31, 2023 and 2022 are as follows:

	2023 December 31				2022 December 31			
	Number of shares	**% to equity**	**Cost**	**Fair value**	**Number of shares**	**% to equity**	**Cost**	**Fair value**
Description			Million KRW	Million KRW			Million KRW	Million KRW
Ulsan Broadcasting Corporation	180,000	3.00%	900	–	180,000	3.00%	900	–
Total			900	–			900	–

Investments in equity instruments that do not have a quoted market price in an active market are measured using an appropriate valuation technique.

14. CASH AND CASH EQUIVALENTS

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Cash on hand	103	59
Bank accounts	66,566	76,069
Time deposits (< 3 months)	31,915	28,632
Total	98,584	104,760

Cash at banks earns interest at floating rates based on daily bank deposit rates. Time deposits are made for various periods from one day to three months, depending on the Group's immediate cash requirements, and earn interest at the respective short-term deposit rates.

As of December 31, 2023, time deposits included restricted cash of 125 Million KRW (December 31, 2022: none).

15. ISSUED CAPITAL AND RESERVES

15.1. SHARE CAPITAL

In accordance with the Articles of Incorporation, the Company is authorized to issue 100,000,000 shares of common stock with a par value of 500 KRW per share. As of December 31, 2023 and 2022, the Company issued 24,000,000 shares of common stocks outstanding with a carrying value of 12,000 Million KRW.

15.2. CAPITAL SURPLUS

As of December 31, 2023 and 2022, the Group's capital surplus is composed of the following:

	2023	2022
	December 31	December 31
Description	Million KRW	Million KRW
Paid-in capital in excess of par value	20,065	20,065
Gain on disposal of treasury stock	4,296	4,296
Loss on change in non-controlling interest due to interest acquisition	-3,879	-3,879
Total	20,482	20,482

15.3. RESERVES

	2023	2022
	December 31	December 31
Description	Million KRW	Million KRW
Legal reserve	4,488	3,288
Asset revaluation surplus	25,815	25,815
Total	30,303	29,103

Legal reserves

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 paid-in 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 capital. Appropriation to the legal reserve from retained earnings, pursuant to the approval of the General Meeting of Shareholders on March 17, 2023, amounted to 1,200 Million KRW (2022: 480 Million KRW).

Asset revaluation reserve

The Group re-valued certain parts of its property, plant and equipment in accordance with the Korean Asset Revaluation Act on January 1, 1984, and January 1, 1999, resulting in a revaluation surplus of 2,884 Million KRW and 64,277 Million KRW, respectively. An asset revaluation surplus amounting to 62,343 Million KRW, net of related revaluation tax, was credited to capital surplus. As of December 31, 2023 and 2022, the asset revaluation surplus is 25,815 Million KRW. The asset revaluation surplus of 23,312 Million KRW and 13,216 Million KRW were utilized in the disposition of accumulated deficit pursuant to the approval of the stockholders on March 6, 2008, and March 7, 2009, respectively. The asset revaluation surplus may not be utilized for cash dividends, but may only be used to offset a deficit, if any, or be transferred to capital.

Dividends

Dividends approved by the shareholders are as follows:

Description	2023 December 31	2022 December 31
Subject to the year	2022	2021
Dividends on ordinary shares in KRW	12,000,000,000	4,800,000,000
Number of shares	24,000,000	24,000,000
Dividends per share in KRW	500	200

15.4. ACCUMULATED OTHER COMPREHENSIVE INCOME

Accumulated other comprehensive income, net of tax, as of December 31, 2023 and 2022, is composed of the following:

Description	2023 December 31 Million KRW	2022 December 31 Million KRW
Re-measurement of defined benefit plans	-10,749	-4,368
OCI recognized within retained earnings	-10,749	-4,368
Fair value reserve of financial assets at FVOCI	-701	-703
Foreign currency translation reserve	5,291	-1,211
OCI recognized within other components of equity	4,590	-1,914

Details of other comprehensive income for the year ended December 31, 2023 and 2022, are as follows:

Description	2023 Million KRW	2022 Million KRW
Pre-tax amounts		
Gains on valuation of interest rate swaps	–	33
Losses on valuation of financial assets FVOCI	–	-103
Exchange differences on translation of foreign operations	6,502	-267
Re-measurement (losses) / gains on defined benefit plans	-8,009	15,726
Pre-tax amounts total	-1,507	15,389
Tax effects on:		
Gains on valuation of interest rate swaps	–	-8
Losses on valuation of financial assets at FVOCI	2	14
Re-measurement (losses) / gains on defined benefit plans	1,628	-3,159
Tax effects total	1,630	-3,153
Net amounts		
Gains on valuation of interest rate swaps	–	25
Gains / (losses) on valuation of financial assets FVOCI	2	-89
Exchange differences on translation of foreign operations	6,502	-267
Re-measurement (losses) / gains on defined benefit plans	-6,381	12,567
Net amounts total	123	12,236

16. BONDS, INTEREST-BEARING LOANS AND BORROWINGS

Interest-bearing loans and borrowings as of December 31, 2023 and 2022, are as follows:

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Corporate bonds	–	56,905
Long-term borrowings	5,250	8,840
Non-current interest-bearing loans and borrowings	5,250	65,745
Current portion of corporate bonds	57,529	–
Current portion of long-term borrowings	3,590	1,930
Short-term borrowings	103,577	206,140
Current interest-bearing loans and borrowings	164,696	208,070
Total	169,946	273,815

Details of corporate bonds that the Group entered in the form of a private placement bond and floating rate note (FRN) as of December 31, 2023 and 2022 are as follows:

2023
As of December 31

Contractual party	Form	Contract amount	Carrying amount Million KRW	Maturity dates	Interest rate
Hana Bank	Private placement bond	26,000 Million KRW	26,000	24.09.2021 – 24.09.2024	2.09% (fixed rate)
Woori Bank	Private placement bond (FRN)	24,500 Thousand USD	31,529	17.09.2021 – 13.09.2024	SOFR Compounding +0.8%
Total			57,529		

2022
As of December 31

Contractual party	Form	Contract amount	Carrying amount Million KRW	Maturity dates	Interest rate
Hana Bank	Private placement bond	26,000 Million KRW	26,000	24.09.2021 – 24.09.2024	2.09% (fixed rate)
Woori Bank	Private placement bond (FRN)	24,500 Thousand USD	30,905	17.09.2021 – 13.09.2024	3M Libor +0.8%
Total			56,905		

Details of long-term borrowings as of December 31, 2023 and 2022, are as follows:

Banks	Description	Maturity date	Annual interest rate (%)	2023 December 31 Million KRW	2022 December 31 Million KRW
Busan Bank	General Loan	08.05.2024	4.99	590	1,770
Korea Development Bank	General Loan	24.08.2026	4.48	8,250	9,000
Subtotal				8,840	10,770
Less current portion				-3,590	-1,930
Non-current portion				5,250	8,840

Details of short-term borrowings as of December 31, 2023 and 2022, are as follows:

Banks	Description	Annual interest rate (%)	2023 December 31 Million KRW	2022 December 31 Million KRW
Hana Bank	Trade loan	4.57~6.31	13,740	23,842
Woori Bank	General & trade loan	4.90~6.20	17,876	24,890
Korea Development Bank	General & trade loan	4.78~4.82	32,250	81,446
Busan Bank	General & trade loan	4.57~5.03	14,442	17,759
Kyongnam Bank	General& trade loan	4.91~6.35	20,269	28,203
NH Bank	General loan	5.12	5,000	20,000
KB Bank	General loan	4.80	–	10,000
Subtotal			103,577	206,140

17. TRADE AND OTHER PAYABLES

Description	2023 December 31 Million KRW	2022 December 31 Million KRW
Trade payables	74,675	78,386
Trade payables (related parties) (note 30)	1,062	1,361
Other accounts payables	18,186	28,744
Other accounts payables (related parties) (note 30)	7	7
Withholdings	1,966	1,835
Accrued expenses	23,334	28,904
Guarantee deposits	15	38
Total	119,245	139,275

Trade and other payables do not bear interest and usually become due within 30-60 days.

18. EMISSION RIGHTS AND EMISSION LIABILITIES

Details of the annual quantity of allocated emission allowances as of December 31, 2023, are as follows (Unit: Korean Allowance Unit – KAU):

	2021	2022	2023	2024	2025	Total
Allocated emission allowance	138,875	138,875	138,875	137,574	137,574	691,773

Changes in emission rights and emission allowances during each planned period are as follows (Units: KAU and Million KRW):

	2022(*)		2023		2024		2025	
	Quantity	**Book value**	**Quantity**	**Book value**	**Quantity**	**Book value**	**Quantity**	**Book value**
Beginning	3,171	348	3,063	27	–	–	–	–
Allocation	138,875	–	138,875	–	137,574	–	137,574	–
Allocation cancellation	–	–	–	–	–	–	–	–
Additional allocation	–	–	–	–	–	–	–	–
Purchase	–	–	–	–	–	–	–	–
Disposal	-1,531	-26	–	–	–	–	–	–
Delivery to government	-137,452	-295	–	–	–	–	–	–
Carryforward	-3,063	-27	–	–	–	–	–	–
Ending	–	–	141,938	27	137,574	–	137,574	–

(*) In the current period 2023, the details of emission rights approved by the government in 2022 are stated.

There are no emission rights provided as collateral as of December 31, 2023.

Changes in emission liabilities included in other current liabilities during the current and prior reporting period are as follows (in Million KRW):

	2023	2022
As of January 1	–	14
Increase	–	–
Decrease	–	-14
As of December 31	–	–

Allocated greenhouse gas emissions free of charge in 2023 were 138,875 KAU.

Estimated greenhouse gas emissions in 2023 132,285 KAU (2022: 141,118 KAU).

19. OTHER FINANCIAL LIABILITIES

Other financial liabilities as of December 31, 2023 and 2022, are as follows:

	2023 December 31		2022 December 31	
Description	**Non-current** Million KRW	**Current** Million KRW	**Non-current** Million KRW	**Current** Million KRW
Derivative liabilities (note 20)	–	89	–	–
Deposits	2,579	1,290	1	–
Accrued interest expenses	–	261	–	554
Total	2,579	1,640	1	554

20. ADDITIONAL INFORMATION ON FINANCIAL INSTRUMENTS

20.1. DERIVATIVES FINANCIAL INSTRUMENTS

	2023 December 31		2022 December 31	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Description	Million KRW		Million KRW	
Forward exchange contracts (current portion)	96	89	624	–
Currency and interest rate swaps (current portion)	3,460	–	1,225	–
Currency and interest rate swaps (non-current portion)	–	–	2,293	–
Total	3,556	89	4,142	–

20.1.1. FORWARD EXCHANGE CONTRACTS

Details of forward exchange contracts that the Group entered into with financial institutions in order to hedge the risk of foreign exchange rate fluctuation of assets denominated in foreign currencies as of December 31, 2023 and 2022 are as follows:

				2023 As of December 31
Contractual party	**Position**	**Contract amount**	**Maturity dates**	**Contractual exchange rate (KRW)**
Woori Bank	sell	EUR 15,000,000	31.01.2024 – 28.06.2024	1,456.10 ~ 1,457.10
Citibank Korea	sell	EUR 10,800,000	16.01.2024 – 28.06.2024	1,403.50 ~ 1,454.20

				2022 As of December 31
Contractual party	**Position**	**Contract amount**	**Maturity dates**	**Contractual exchange rate (KRW)**
Citibank Korea	sell	JPY 1,608,000,000	31.01.2023~30.06.2023	10.7500
Citibank Korea	sell	EUR 15,660,000	31.01.2023~30.06.2023	1,425.00~1,467.00
Woori Bank	sell	EUR 15,660,000	31.01.2023~30.06.2023	1,425.40~1,467.80

20.1.2. CURRENCY AND INTEREST RATE SWAPS

The Group is exposed to exchange rate and interest rate risks due to the corporate bond issuance in the form of a floating rate note (refer to note 16). To hedge these risks, the Group has entered into the following currency and interest rate swaps (CRS) as of December 31, 2023 and 2022 are as follows:

2023
As of December 31

Contractual party	Target	Contract amount	Interest exchange condition	Contract date	Maturity date
Hongkong Woori Investment	Corporate bond (foreign currency FRN)	Receipt: 24,500 TUSD	SOFR Compounding +0.8%	17.09.2021	13.09.2024
		Payment: 28,643 MKRW	Fixed 1.96%		

2022
As of December 31

Contractual party	Target	Contract amount	Interest exchange condition	Contract date	Maturity date
Hongkong Woori Investment	Corporate bond (foreign currency FRN)	Receipt: 24,500 TUSD	3M Libor +0.8%	17.09.2021	13.09.2024
		Payment: 28,643 MKRW	Fixed 1.96%		

21. PENSION LIABILITY

Pension plan	2023 Million KRW	2022 Million KRW
Net defined benefit liability (incl. in pension liability)	4,269	2,682
Korean	–	–
Swiss	4,201	2,658
Indian	68	24
Net defined benefit asset (incl. in other non-current assets)	22,062	30,622
Korean	22,062	30,622

The Group has three defined benefit pension plans: one pension plan in Korea, one in Switzerland and one in India.

The following tables summarize the components of net benefit expense recognized in the consolidated statements of comprehensive income and the funded status and amounts recognized in the consolidated statement of financial position for the respective plans.

21.1. DEFINED BENEFIT OBLIGATION

Changes in the defined benefit obligation:

	Korean plan Million KRW	**Swiss plan** Million KRW	**Indian plan** Million KRW	**Total** Million KRW
Defined benefit obligation as of January 1, 2022	74,778	33,785	393	108,956
Pension cost charged to profit or loss				
Service costs	4,999	1,465	36	6,500
Interest costs	2,636	123	27	2,786
Sub-total included in profit or loss	*7,635*	*1,588*	*63*	*9,286*
Benefits (paid) / received	-2,699	2,053	-31	-677
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	24	–	–	24
Actuarial changes arising from changes in financial assumptions	-15,424	-7,549	-1	-22,974
Experience adjustments	1,335	711	-1	2,045
Sub-total included in OCI	*-14,065*	*-6,838*	*-2*	*-20,905*
Employee contributions	–	780	–	780
Exchange differences	–	1,707	-21	1,686
Defined benefit obligation as of December 31, 2022	65,649	33,075	402	99,126
Pension cost charged to profit or loss				
Service costs	3,817	1,127	32	4,976
Interest costs	3,793	800	31	4,624
Sub-total included in profit or loss	*7,610*	*1,927*	*63*	*9,600*
Benefits (paid) / received	-4,873	326	-26	-4,573
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	-9	–	-3	-12
Actuarial changes arising from changes in financial assumptions	4,750	3,920	38	8,708
Experience adjustments	3,123	-305	4	2,822
Sub-total included in OCI	*7,864*	*3,615*	*39*	*11,518*
Employee contributions	–	878	–	878
Plan amendments	–	-963	–	-963
Exchange differences	–	4,093	9	4,102
Defined benefit obligation as of December 31, 2023	76,250	42,951	487	119,688
Weighted average duration 2022 (years)	10.00	12.36	6.52	
Weighted average duration 2023 (years)	10.31	12.28	6.01	

21.2. PLAN ASSETS

Changes in the fair value of plan assets:

	Korean plan Million KRW	Swiss plan Million KRW	Indian plan Million KRW	Total Million KRW
Plan assets as of January 1, 2022	80,795	27,878	355	109,028
Pension cost charged to profit or loss				
Interest income	2,845	103	23	2,971
Administration expenses	-194	-16	–	-210
Sub-total included in profit or loss	*2,651*	*87*	*23*	*2,761*
Benefits (paid) / received	-2,398	2,053	-31	-376
Re-measurement gains / (losses) in OCI				
Return on plan assets (excluding amounts included in interest expenses)	-2,441	-2,745	7	-5,179
Sub-total included in OCI	*-2,441*	*-2,745*	*7*	*-5,179*
Employer contributions	17,664	948	43	18,655
Employee contributions	–	780	–	780
Exchange differences	–	1,416	-19	1,397
Plan assets as of December 31, 2022	96,271	30,417	378	127,066
Pension cost charged to profit or loss				
Interest income	5,583	756	27	6,366
Administration expenses	-329	-16	–	-345
Sub-total included in profit or loss	*5,254*	*740*	*27*	*6,021*
Benefits (paid) / received	-5,203	326	-26	-4,903
Re-measurement gains / (losses) in OCI				
Return on plan assets (excluding amounts included in interest expenses)	1,990	1,518	1	3,509
Sub-total included in OCI	*1,990*	*1,518*	*1*	*3,509*
Employer contributions	–	1,063	31	1,094
Employee contributions	–	878	–	878
Exchange differences	–	3,808	8	3,816
Plan assets as of December 31, 2023	98,312	38,750	419	137,481

The Group expects to make a contribution in the following year at the amount comparable to the contribution made during the current reporting period, and the composition of plan assets as of December 31, 2023 and 2022 is as follows:

	Korean plan		Swiss plan		Indian plan	
Structure of plan assets:	**2023**	2022	**2023**	2022	**2023**	2022
Equity	–	–	31%	31%	–	–
Debt instruments	–	–	24%	23%	–	–
Real estate	–	–	28%	28%	–	–
Investment funds	87%	98%	–	–	100%	100%
Alternative investments	–	–	17%	17%	–	–
Cash and cash equivalents	13%	2%	–	1%	–	–
Total	100%	100%	100%	100%	100%	100%

The category equity, debt instruments, real estate and alternative investments are quoted or daily traded with the exception of cash and cash equivalents. With only a few exceptions, there is no active market for plan assets in investment funds.

21.3. NET PENSION LIABILITY / ASSET

Changes in the net defined benefit liability / asset are as follows:

	Korean plan Million KRW	**Swiss plan** Million KRW	**Indian plan** Million KRW	**Total** Million KRW
Net defined benefit asset as of January 1, 2022	6,017	–	–	6,017
Net defined benefit liability as of January 1, 2022	–	-5,907	-38	-5,945
Pension cost charged to profit or loss				
Service costs	-4,999	-1,465	-36	-6,500
Administration expenses	-194	-16	–	-210
Net interests	209	-20	-4	185
Sub-total included in profit or loss	*-4,984*	*-1,501*	*-40*	*-6,525*
Benefits received	301	–	–	301
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	-24	–	–	-24
Actuarial changes arising from changes in financial assumptions	15,424	7,549	1	22,974
Return on plan assets (excluding amounts included in interest expenses)	-2,441	-2,745	7	-5,179
Experience adjustments	-1,335	-711	1	-2,045
Sub-total included in OCI	*11,624*	*4,093*	*9*	*15,726*
Employer contributions	17,664	948	43	18,655
Employee contributions	–	–	–	–
Exchange differences	–	-291	2	-289
Net defined benefit asset as of December 31, 2022	30,622	–	–	30,622
Net defined benefit liability as of December 31, 2022	–	-2,658	-24	-2,682
Pension cost charged to profit or loss				
Service costs	-3,817	-1,127	-32	-4,976
Administration expenses	-329	-16	–	-345
Net interests	1,790	-44	-4	1,742
Sub-total included in profit or loss	*-2,356*	*-1,187*	*-36*	*-3,579*
Benefits paid	-330	–	–	-330
Re-measurement gains / (losses) in OCI				
Actuarial changes arising from changes in demographic assumptions	9	–	3	12
Actuarial changes arising from changes in financial assumptions	-4,750	-3,920	-38	-8,708
Return on plan assets (excluding amounts included in interest expenses)	1,990	1,518	1	3,509
Experience adjustments	-3,123	305	-4	-2,822
Sub-total included in OCI	*-5,874*	*-2,097*	*-38*	*-8,009*
Employer contributions	–	1,063	31	1,094
Employee contributions	–	–	–	–
Plan amendments	–	963	–	963
Exchange differences	–	-285	-1	-286
Net defined benefit asset as of December 31, 2023	22,062	–	–	22,062
Net defined benefit liability as of December 31, 2023	–	-4,201	-68	-4,269

The re-measurement losses recognized in the statements of other comprehensive income are losses of 6,381 Million KRW (2022: gains of 12,567 Million KRW), net of tax. The total amount as of December 31, 2023, of accumulated losses included in retained earnings is 10,749 Million KRW (2022: accumulated losses of 4,368 Million KRW), net of tax.

The principal assumptions used in determining pension benefit obligations for the Group's plans are shown below:

	Determining net benefit expense		Determining pension benefit obligation	
	2023	2022	**2023** December 31	2022 December 31
Discount rate				
Korean plan	5.88%	3.58%	5.13%	5.88%
Swiss plan	1.50%	2.30%	1.50%	2.30%
Indian plan	7.45%	7.45%	7.20%	7.45%
Future salary increases				
Korean plan	3.78%	3.75%	3.76%	3.78%
Swiss plan	2.50%	2.50%	2.50%	2.50%
Indian plan	8.00%	8.00%	10.00%	8.00%

A quantitative sensitivity analysis for material assumptions as of December 31, 2023, is as follows:

	Sensitivity level	Impact on defined benefit obligation
Discount rate	Change	Million KRW
Korean plan	+1.00%	6,261
	-1.00%	-7,370
Swiss plan	+0.25%	-1,229
	-0.25%	1,301
Indian plan	+1.00%	-18
	-1.00%	19
Salary increase		
Korean plan	+1.00%	-7,537
	-1.00%	6,498
Swiss plan	+0.25%	106
	-0.25%	-104
Indian plan	+1.00%	19
	-1.00%	-18

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

22. OTHER LONG-TERM EMPLOYEE-RELATED LIABILITIES

Other long-term employee-related liabilities consist of the following:

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Other long-term employee benefits – Korea	8,777	7,002
Other long-term employee benefits – Others	857	704
Share-based payment-related liability	1,146	1,355
Total other long-term employee-related liabilities	10,780	9,061

22.1. OTHER LONG-TERM EMPLOYEE BENEFITS – KOREA

The parent company implements a bonus plan designed to compensate employees with a prescribed quantity of gold and entitle compensated vacation to long-term service employees. Accounting policies of the bonus plan are mostly the same as those of the defined benefit plan, except that all the past service costs and actuarial variances are recognized immediately in profit or loss.

Description	Million KRW
As of January 1, 2022	4,911
Current service costs	474
Interest costs	164
Re-measurement losses	1,944
Total payment	-491
As of December 31, 2022	7,002
Current service costs	629
Interest costs	378
Re-measurement gains	1,552
Total payment	-784
As of December 31, 2023	8,777

Description	**2023** December 31	2022 December 31
Discount rate	4.98%	5,79%
Compensation increase	2.00%	2.00%
Compensation per day for vacation	KRW 106,623 – 230,417	KRW 101,760 – 222,480
Rate of increase in gold price	7.45%	6.90%
Gold price per 3.75 grams	KRW 368,800	KRW 320,000

22.2. OTHER LONG-TERM EMPLOYEE BENEFITS – OTHERS

The remaining other long-term employee benefits refer to legally established termination benefits of subsidiaries located in the United Arab Emirates of 745 Million KRW (as of December 31, 2022: 581 Million KRW) and expenses for the defined contribution plan of Songwon Specialty Chemicals India Pvt. Ltd. of 112 Million KRW (as of December 31, 2022: 123 Million KRW).

22.3. SHARE-BASED PAYMENT-RELATED LIABILITY

On March 31, 2013, the Group granted virtual stock options to eligible employees of subsidiaries according to the Virtual Stock Option and Long-term Incentive Plan ("LTIP"). The virtual stock options granted are an entitlement of cash compensation, and are neither a stock option, nor any other listed or unlisted security and do not grant any right to physically acquire stocks. Settlement of options exercised is in cash only. When the virtual stock option is exercised, the Group shall pay the holder the greater of the difference between the fair market value at the exercise date (the listed stock price of Songwon Industrial Co., Ltd.) minus the strike price or nil (zero). The virtual stock options, granted under the LTIP, are subject to a vesting period of two to four years during which the holder of the options must be continuously employed by the Group.

The fair value of options, granted as of December 31, 2023 and 2022, was estimated using the following assumptions:

Description	2023	2022
Dividend yield	0.73%	0.87%
Expected volatility	45.00%	45.00%
Risk-free interest rate	3.74%	2.26%
Weighted average expected life of share options (years)	2.05	2.84
Model used	Binomial tree	Binomial tree

The carrying amount of the liability relating to the LTIP on December 31, 2023 amounts to 1,146 Million KRW (December 31, 2022: 1,355 Million KRW) and the corresponding number of share options vested as of December 31, 2023 and 2022 is 164,329 and 125,001, respectively.

The decrease of the LTIP liability led to a negative expense (income) for employee services received during the year 2023, recognized in the statements of comprehensive income, which amounts to 60 Million KRW (2022: income of 452 Million KRW). There were no cancellations and modifications to the awards during the years 2023 and 2022.

Movements during the year

The following table illustrates the number and weighted average exercise prices (WAEP) of, and movements in, share options during the reporting period:

	2023		2022	
Description	Number	KRW	Number	KRW
Outstanding as of January 1	407,064	18,879	471,089	17,552
Granted during the year	1,000	17,100	101,625	21,450
Forfeited during the year	-13,800	19,906	-40,800	20,256
Exercised during the year	-34,200	15,602	-124,850	15,516
Outstanding as of December 31	360,064	19,146	407,064	18,879
Exercisable as of December 31	164,329	19,932	125,001	20,605

The weighted average of remaining contractual life for the share options, outstanding as of December 31, 2023, was 2.0 years (December 31, 2022: 3.0 years). The weighted average fair value of options granted during the reporting period was 7,183 KRW (2022: 4,244 KRW).

The exercise price for options outstanding at the end of the reporting period ranges from 8,120 KRW – 27,000 KRW (2022: 8,120 KRW – 27,000 KRW).

23. COMMITMENTS AND CONTINGENCIES

23.1. CONTINGENT LIABILITIES

There are no current proceedings of lawsuits, claims, investigations and negotiations in relation to product liability, mercantile law, environmental protection, health and safety etc., which could have a significant impact on business operations and on the Group's consolidated financial position or income. Contingent liabilities in the Group are related to tax appeals of 909 Million KRW (December 31, 2022: 224 Million KRW). A new customer complaint concerning the quality of SONGWON products occurred as of December, 2023, referring to a product delivery in the amount of 285 Million KRW taken place in 2022. Currently it is not possible to assess probable economic resource outflow relating to this contingent liability. As of December 31, 2022, a customer complaint assessed damage was valued at 157 Million KRW. The latter case was closed as per June 30, 2023, with no financial impact on SONGWON.

23.2. OTHER LEASE COMMITMENTS

The Group has entered into short-term and low-value leases on certain buildings, vehicles, furniture and fixtures. The lease periods for low-value leases are below 5 years. There are no restrictions placed upon the Group by entering into these leases. Future minimum short-term and low-value lease payments as of December 31, 2023 and 2022 are as follows:

Description	**2023** December 31 Million KRW	2022 December 31 Million KRW
Short-term lease commitments		
Within one year	-2	-2
Total short-term lease commitments	*-2*	*-2*
Low-value lease commitments		
Within one year	-59	-66
After one year but not more than five years	-25	-61
Total low-value lease commitments	*-84*	*-127*
Total	-86	-129

23.3. OTHER COMMITMENTS

As part of the ordinary business activities, the Group enters into various contractual commitments for the purchase of inventories, property, plant and equipment, intangible assets and investment properties. As of December 31, 2023, the Group entered into commitments to purchase property, plant and equipment, as well as raw materials amounting to 6,344 Million KRW (December 31, 2022: 11,444 Million KRW).

Details of the Group's available short-term credit line facilities (excluding general loans) as of December 31, 2023, are as follows:

Description	Currency	Credit limit	Used	Unused
USANCE and L/C for import	Thousand USD	20,000	3,601	16,399
D/A and D/P	Million KRW	12,000	5,269	6,731
	Thousand USD	103,000	33,045	69,955
Secured loan of credit sales	Million KRW	9,000	1,225	7,775
Other foreign currency guarantees	Thousand USD	8,750	2,619	6,131
Bond issuance payment guarantee	Million KRW	26,000	26,000	–
	Thousand USD	24,990	24,990	–
	Total Million KRW	47,000	32,494	14,506
	Total Thousand USD	156,740	64,255	92,485

24. ASSETS PLEDGED AS COLLATERAL AND GUARANTEES

Details of property, plant and equipment and investment property pledged by the Group as collateral for interest-bearing loans and borrowings as of December 31, 2023 and 2022, presented in the maximum pledge amount, are as follows:

Pledged to	Pledged assets		2023 December 31	2022 December 31
Property, plant and equipment (Joint collateral in connection with long-term loan)				
Busan Bank	Land, buildings and machinery	Million KRW	30,000	30,000
Kyongnam Bank	Land, buildings and machinery	Million KRW	18,000	18,000
Property, plant and equipment and investment property (Collateral for other than long-term loan)				
Woori Bank	Land, buildings and machinery	Million KRW	120,000	120,000
Hana Bank	Land, buildings and machinery	Million KRW	80,400	80,400
Korea Development Bank	Land, buildings, investment properties and machinery	Million KRW	96,600	96,600
Busan Bank	Land, buildings and machinery	Thousand USD	24,000	24,000
Total		Million KRW	345,000	345,000
		Thousand USD	24,000	24,000

No other items of property, plant and equipment are pledged as collateral for interest-bearing loans and borrowings as of December 31, 2023 and 2022.

Payment guarantee to Seoul Gurantee Insurance Company

In the financial year ended December 31, 2023, the Group held a deposit guarantee of 500 Million KRW for return payment of government subsidies concerning the greenhouse gas energy reduction project for companies participating in the emissions trading system from November 2021 till November 2023.

Additionally, as of December 31, 2023, the Group held a deposit guarantee of 1,100 Million KRW for return payment of government subsidies concerning the greenhouse gas energy reduction project for companies participating in the emissions trading system from July 2023 till February 2024.

Moreover, as of December 31, 2023, the Group held a deposit guarantee of 106.7 Million KRW for return payment of government subsidies concerning the greenhouse gas energy reduction project for companies participating in the emissions trading system from November 2023 till March 2025.

As of December 31, 2022, the Group held payment guarantees from Seoul Guarantee Insurance Company for a government subsidy return guarantee of 71.5 Million KRW. Additionally, the Group held a deposit guarantee for approval of development activity and urban planning facility business of 49.6 Million KRW.

25. OPERATING PROFIT AND OTHER INCOME / EXPENSES

25.1. RESEARCH AND DEVELOPMENT EXPENSE

Research and development expenses of 5,162 Million KRW (2022: 6,284 Million KRW) are recorded in the consolidated statements of comprehensive income. Development expenses are not capitalized because the conditions for capitalization have not been met.

25.2. SELLING AND ADMINISTRATION EXPENSES

	2023	2022
Description	Million KRW	Million KRW
Sales-related costs	-18,097	-45,559
Personnel expenses	-47,270	-49,270
Travelling and entertainment	-5,559	-4,416
Depreciation and amortization	-2,389	-2,356
Administration expenses	-11,829	-9,294
IT expenses	-4,630	-3,547
Others	-1,706	-2,062
Total	-91,480	-116,504

25.3. OTHER INCOME

	2023	2022
Description	Million KRW	Million KRW
Fee income	84	72
Income resulting from government grants received	2,021	1,454
Gains on disposal of property, plant and equipment	16	6
R&D sales income	855	860
Rental income	16	15
Miscellaneous income	1,119	1,426
Total	4,111	3,833

25.4. OTHER EXPENSES

Description	2023 Million KRW	2022 Million KRW
Miscellaneous expenses	-1,005	-701
Losses on disposal of property, plant and equipment	-4,165	-1,437
Impairment of tangible assets	–	-918
Impairment of intangible assets	–	-391
Total	-5,170	-3,447

25.5. EXPENSES CLASSIFIED BY NATURE

Description	2023 Million KRW	2022 Million KRW
Purchased material	-660,551	-818,604
Freight and logistic costs	-16,652	-43,186
Energy costs	-55,190	-53,741
Personnel expenses	-127,990	-130,702
Depreciation and amortization	-39,921	-33,524
Other expenses	-76,372	-68,083
Total	-976,676	-1,147,840
Thereof recorded in cost of sales	-880,026	-1,027,889
Thereof recorded in selling and administration costs	-91,480	-116,504
Thereof recorded in other expenses	-5,170	-3,447
Total	-976,676	-1,147,840

26. FINANCE INCOME / EXPENSE

26.1. FINANCE INCOME

Description	2023 Million KRW	2022 Million KRW
Gains on foreign exchange transactions	25,126	33,915
Gains on foreign exchange translations	13,986	23,564
Gains on derivative transactions	1,440	1,688
Gains on valuation of derivatives	96	3,816
Gain on valuation of financial assets FVtPL	308	189
Interest on loans and receivables	1,836	635
Total finance income	42,792	63,807

26.2. FINANCE EXPENSES

Description	2023 Million KRW	2022 Million KRW
Interest on borrowings	-9,297	-8,773
Total interest expenses	-9,297	-8,773
Losses on foreign exchange transactions	-28,295	-32,084
Losses on foreign exchange translations	-12,312	-28,649
Losses on derivative transactions	-1,280	-337
Losses on valuation of derivatives	-147	–
Loss on disposal of financial assets FVtPL	–	-67
Loss on valuation of financial assets FVtPL	–	-31
Bank charges	-224	-288
Total finance expenses	-51,555	-70,229

26.3. NET GAINS AND LOSSES OF FINANCIAL INSTRUMENT CLASSES

Description	2023 Million KRW	2022 Million KRW
Financial assets at amortized cost	24,691	7,549
Financial assets at FVOCI	2	-63
Financial assets at FVtPL	564	5,258
Financial liabilities at amortized cost	-33,647	-18,941
Financial liabilities at FVtPL	-147	–
Total net losses of the classes of financial instruments	-8,537	-6,197
Net losses of financial instruments recognized in the consolidated statement of comprehensive income		
Finance expense*	-51,331	-69,941
Finance income	42,792	63,807
Total	*-8,539*	*-6,134*
Net gains / (losses) of financial instruments recognized in the consolidated statement of other comprehensive income		
Financial assets at FVOCI	2	-63
Total	*2*	*-63*
Total	-8,537	-6,197

* Excluding bank charges

27. INCOME TAX EXPENSES

The major components of income tax expense in the statements of comprehensive income are as follows:

27.1. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Description	**2023** Million KRW	2022 Million KRW
Current income tax charge	-13,648	-53,921
Adjustments in respect of current income tax of previous year	1,677	963
Deferred income taxes related to changes of temporary differences, net	-178	5,605
Deferred income taxes related to tax loss carryforwards	–	-195
Deferred income taxes related to changes in tax rate	-868	-4,773
Deferred income taxes recognized directly in other comprehensive income	-1,630	3,153
Income tax expenses	-14,647	-49,168

Description	**2023** Million KRW	2022 Million KRW
Accounting profit before income taxes	49,494	181,100
At parent company's statutory income tax rate of 21.15% (2022: 23.93%)	-10,468	-43,330
Increase in income tax expens resulting from:		
Adjustments in respect of current income tax of previous years	1,677	963
Non-temporary differences	-606	-576
Tax credits	2,186	603
Non-taxable income	-56	-46
Effect of different tax rates in tax jurisdiction	-7,829	-6,890
Others	449	108
At the effective income tax rate of 29.59% (2022: 27.15%)	-14,647	-49,168

27.2. DEFERRED TAX

Deferred tax relates to the following:

	Consolidated statements of financial position		Consolidated statements of comprehensive income	
	2023	2022	**2023**	2022
	December 31	December 31	December 31	December 31
Description	Million KRW	Million KRW	Million KRW	Million KRW
Net pension obligation	-1,729	-2,585	-772	-290
Other long-term employment benefits	2,058	1,666	392	266
Trade receivables	118	145	-27	-31
Inventories	2,508	4,113	-1,605	1,876
Fixed assets	-7,863	-8,853	990	635
Gain on revaluation of land	-26,446	-26,159	-287	1,237
Other non-current financial assets	-279	-267	-12	12
Other current financial assets	-533	361	-896	120
Other current assets	595	826	-231	-360
Other non-current financial liabilities	-6	-39	33	62
Current lease liabilities	295	282	13	-12
Other current financial liabilities	712	1,194	-482	648
Other current liabilities	101	74	27	-136
Intangible assets	-3	3	-6	-57
Loss available for offsetting against future taxable income	–	–	–	-195
Investments in subsidiaries	-533	-337	-196	-63
Translation difference	–	–	383	78
Deferred tax income			-2,676	3,790
Net deferred tax liabilities	-31,005	-29,576		

Reflected in the statements of financial positions as follows:

Deferred tax assets	6,055	8,585
Deferred tax liabilities	-37,060	-38,161

The Group offsets tax assets and liabilities if, and only if, it has a legally enforceable right to do so, and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same tax authority.

Reconciliation of deferred tax liabilities, net:

Description	2023 Million KRW	2022 Million KRW
Opening balance as of January 1	-29,576	-30,135
Deferred tax recognized in statements of comprehensive income	-2,676	3,790
Deferred tax recognized in other comprehensive income (note 15.4)	1,630	-3,153
Translation differences	-383	-78
Closing balance as of December 31	-31,005	-29,576

Expecting sufficient taxable income, the Group recognized deferred income tax assets to the extent of future taxable income. For the following deductible temporary differences, no deferred tax assets as of December 31, 2023 and 2022, were recognized.

Description	2023 Million KRW	2022 Million KRW
Temporary differences related to investments in subsidiaries	10,186	8,655
Total	10,186	8,655

In the financial years 2023 and 2022, the Group did not recognize any tax loss carryforwards and tax credit carryforwards.

28. EARNINGS PER SHARE

Basic earnings per share are calculated by dividing net profit for the year attributable to ordinary equity holders of the parent company by the average number of ordinary shares outstanding during the year. There is no difference between basic and diluted earnings per share in 2023 and 2022, as no securities with dilutive features have been issued as of the end of the reporting periods.

The following reflects the income and share data used in the basic per-share computations:

	2023	2022
Description	KRW	KRW
Net profit attributable to ordinary equity holders of the parent	34,846,592,809	131,931,556,030
Weighted average number of ordinary shares	24,000,000	24,000,000
Earnings per share (basic / diluted)	1,452	5,497

29. CASH FLOW STATEMENT

Cash and cash equivalents in the consolidated statements of cash flows are equal to those in the consolidated statements of financial position.

The Group's consolidated statement of cash flows is prepared using the indirect method. The adjustments to the net profit for the period of the non-cash and non-operating items and changes in operating assets and liabilities for the years ended December 31, 2023 and 2022, are as follows:

		2023	2022
Adjustments	Notes	Million KRW	Million KRW
Depreciation of property, plant and equipment	5	32,365	29,211
Depreciation of right-of-use assets	5.1	2,796	2,714
Depreciation of investment properties	6	7	10
Amortization of intangible assets	7	922	800
Impairment of tangible assets	5	–	918
Impairment of intangible assets	7	–	391
Impairment of inventories	9	2,638	1,777
Losses on disposals of property, plant and equipment, net	5	4,149	1,431
Share of result from investments accounted using the equity method	8	-847	-2,020
Share-based compensation (income) / expenses	22.3	-60	-452
Pension costs	21.3	3,579	6,525
Other long-term employee benefits expenses	22.1, 22.2	2,712	2,521
Finance income		-1,647	-11,645
Finance expenses		12,921	21,122
Income tax expenses	27	14,647	49,168
Total		74,182	102,471

	2023	2022
Changes in operating assets and liabilities	Million KRW	Million KRW
Trade receivables	30,905	-5,306
Other receivables	-2,190	-573
Other current assets	-502	445
Other current financial assets	-1,707	-1,815
Inventories	90,089	-40,728
Trade payables	-3,835	-35,853
Other payables	-7,650	147
Other current financial liabilities	37	3,566
Other current liabilities	-363	1,711
Pension liabilities	-1,500	-18,751
Other long-term employee benefits	-1,073	-1,625
Total	102,211	-98,782

Changes in liabilities arising from financing activities for the years ended December 31, 2023 and 2022, are as follows:

	Current interest-bearing loans and borrowings Million KRW	Non-current interest-bearing loans and borrowings Million KRW	Other financial liabilities Million KRW
As of January 1, 2022	235,311	60,502	690
Cash flows	-21,309	–	94
Foreign exchange movement	-689	–	-229
Reclassifications	-5,243	5,243	–
As of December 31, 2022	208,070	65,745	555
Cash flows	-104,189	–	3,575
Foreign exchange movement	242	–	–
Net losses on valuation of financial liabilities	20	58	89
Reclassifications	60,553	-60,553	–
As of December 31, 2023	164,696	5,250	4,219

30. RELATED PARTY DISCLOSURES

The companies listed below have been identified as related parties:

Company name	Location	Relation with the Group	Remarks
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	China	Joint Venture	Jointly controlled by Songwon Group Holding AG
Songwon Moolsan Co., Ltd.	Korea	Other (refer to note 30.5)	A company that has significant influence on the Group
Kyungshin Industrial Co., Ltd.	Korea	Other (refer to note 30.5)	A subsidiary of Songwon Moolsan Co., Ltd.

The following table provides the total amount of transactions that have been entered into with related parties for the relevant financial years and balances as per year-end:

		2023	2022
Related party	**Description**	Million KRW	Million KRW
Songwon Moolsan Co., Ltd.	Selling and administration costs	-80	-80
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	Sales	523	64
	Cost of sales	-18,881	-28,826
Total	Sales	523	64
	Cost of sales	-18,881	-28,826
	Selling and administration costs	-80	-80

		2023	2022
		December 31	December 31
Related party	**Description**	Million KRW	Million KRW
Songwon Moolsan Co., Ltd.	Other non-current financial assets	33	33
	Trade and other payables	7	7
Songwon Baifu Chemicals (Tangshan) Co., Ltd.	Trade and other receivables	65	63
	Trade and other payables	1,062	1,361
Total	Other non-current financial assets	33	33
	Trade and other receivables	65	63
	Trade and other payables	1,069	1,368

30.1. THE ULTIMATE PARENT

Songwon Industrial Co., Ltd. is the ultimate parent based and listed in Korea.

30.2. TERMS AND CONDITIONS OF TRANSACTIONS WITH RELATED PARTIES

Outstanding balances of related parties at the year-end are unsecured, interest-free and settlement occurs in cash. There have been no guarantees provided or received for any related party receivables or payables. For the year ended December 31, 2023, the Group has not recorded any impairment of receivables relating to amounts owed by related parties (December 31, 2022: none). This assessment is undertaken periodically by examining the financial position of the related party and the market in which the related party operates.

30.3. TRANSACTIONS WITH KEY MANAGEMENT PERSONNEL

During the financial year 2023, no other transactions with key management personnel than those disclosed in note 30.4 took place.

30.4. COMPENSATION OF KEY MANAGEMENT PERSONNEL OF THE GROUP

	2023	2022
Description	Million KRW	Million KRW
Short-term employee benefits	11,059	13,930
Post-employment benefits	122	534
Other long-term benefits	812	1,218
Share-based payments	-18	-100
Total compensation paid to key management personnel	11,975	15,582

The amounts disclosed in the table are the amounts recognized as an expense during the reporting period related to key management personnel. Key management personnel are those persons with authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity. The compensation amount of key management personnel of the Group decreased in 2023, compared to the prior year due to the resignation of three key management persons in the second quarter of 2022 in the course of the internal restructuring procedures.

30.5. OTHER RELATED PARTIES

Other related parties are Songwon Moolsan Co., Ltd. (Korea) which has significant influence on the Group due to the interest held in the share capital of the parent company of 23.88%. Further, the subsidiary of Songwon Moolsan Co., Ltd., Kyungshin Industrial Co., Ltd., which holds interest in the share capital of the parent company of 9.15%, is identified as a related party of the Group.

31. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

The Group's principal financial liabilities comprise loans and borrowings, trade and other payables, and other financial liabilities. The main purpose of these financial liabilities is to finance the Group's operations. The Group has trade accounts and other accounts receivables, cash and cash equivalents and other financial assets that arrive directly from its operations. The Group also holds financial instruments at FVOCI and financial instruments at FVtPL and enters into derivative transactions and applies hedge accounting for cash flow hedges if applicable.

The Group is exposed to market, credit and liquidity risks. The Group's management oversees the management of these risks through appropriate risk assessment and monitoring activities to minimize their effects.

31.1. MARKET RISK

Market risk refers to the risk that a financial instrument's fair value of future cash flows will fluctuate because of changes in market prices. Market prices comprise two types of risk:

- interest rate risk; and,
- foreign currency risk.

Financial instruments affected by market risk include loans and borrowings, deposits, financial instruments at FVOCI, financial instruments at FVtPL and derivative financial instruments. The sensitivity analyses in the following sections relate to the position as of December 31, 2023 and 2022.

Interest rate risk

Interest rate risk refers to the risk that a financial instrument's fair value or future cash flows 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 interest-bearing loans and borrowings as well as bank deposits with floating interest rates.

The Group's exposure to the risk of changes in market interest rates relates substantially to the Group's interest-bearing loans and borrowings with floating interest rates, which exposes the Group to cash flow risk. In response, the Group is minimizing the risk partially through a currency and interest rate swap contract or choosing the most favorable financing instruments by switching to loans with more favorable conditions or improving the Group's credit rating.

Interest rate sensitivity

The following table demonstrates the sensitivity to a reasonably possible change in interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's interest-bearing loans and borrowings as well as bank deposits with floating interest rates. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings as follows:

	Increase / (decrease) in %	**Effect on profit before tax** Million KRW
December 31, 2023	1.00	-477
	-1.00	477
December 31, 2022	1.00	-1,067
	-1.00	1,067

Foreign currency risk

The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities. The risk of foreign exchange primarily relates to the US Dollar (USD), Euro (EUR), Japanese Yen (JPY), Swiss Franc (CHF), United Arab Emirates Dirham (AED) and to the Indian Rupee (INR).

Foreign exchange risks arise when commercial transactions, recognized assets or liabilities are denominated in a currency that is not the entity's functional currency.

The objective of the management of foreign currency risk is to maximize the value of the firm by minimizing the fluctuation of net profit and uncertainty arising from the fluctuation in foreign currency. To accomplish this, the Group uses a strategy to accord the collection terms of receivables and payment terms of payables denominated in USD considering the similar volume of exports and imports. In regard to EUR and JPY, the Group manages the risk through currency forward contracts.

Foreign currency sensitivity

The Group carries out a sensitivity analysis for the dominant foreign currencies: US Dollar (USD), Euro (EUR), Japanese Yen (JPY), Swiss Franc (CHF), United Arab Emirates Dirham (AED) and the Indian Rupee (INR). The assumed possible currency fluctuations are based on historical observations and future prognoses. The financial instruments are incorporated into calculations. The following table demonstrates the sensitivity of consolidated net profit before tax to a reasonably possible shift in exchange rates related to financial instruments held in the balance sheet. Assuming that all the other variables are constant and only the foreign exchange rate changes by 10%, the impacts on net profit for the years ended on December 31, 2023 and 2022, are as follows:

		2023 December 31		2022 December 31
Currency	**10% increase** Million KRW	**10% decrease** Million KRW	**10% increase** Million KRW	**10% decrease** Million KRW
USD	6,981	-6,981	6,566	-6,566
EUR	1,015	-1,015	1,007	-1,007
JPY	2,248	-2,248	4,451	-4,451
CHF	224	-224	278	-278
AED	-153	153	-202	202
INR	24	-24	131	-131
Total	10,339	-10,339	12,231	-12,231

The Group's exposure to foreign currency changes for all other currencies is not material.

31.2. CREDIT RISK

Credit risk is the risk that the counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily for trade and other receivables) and investing activities.

The Group maintains a policy to keep trade relationships only with customers with high credit rating assessed by credit assessment, considering their financial position, past instances of defaults and other indicators of default. If the credit rating of a customer worsens, the Group sets an individual credit limit on that customer and intensively manages its credit risk. In addition, the Group minimizes the credit risk by maintaining the exposure to the credit risk at an immaterial level through ongoing management including periodical reviews of all the customers. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in note 32.

The Group is also exposed to credit risk with regard to bank deposits, as well as cash and cash equivalents in which the maximum exposure to credit risk at the reporting date is the carrying value. The exposure to the related credit risk, however, is relatively restricted because the Group maintains relationships with the financial institutions with high credit ratings.

31.3. LIQUIDITY RISK

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities due to the unfavorable economy of the industry or financial markets.

The Group manages its liquidity risk through its strategy and plans which consider the maturity of financial instruments and expected operating cash flows. It also includes the policy to map out the maturity of financial assets and liabilities.

In addition, the Group maintains credit facilities with the banks including overdraft to respond to an unexpected shortage in liquidity. In response to the expansion of the business, the Group manages funding schedules and ongoing review procedures, considering the appropriate mix of long-term and short-term loans and borrowings, to maintain consistency and flexibility in obtaining liquidity and stable financing.

The details of the maturity profile of the Group's financial liabilities and lease liabilities, excluding financial derivative instruments, based on contractual undiscounted payments as of December 31, 2023 and 2022, are as follows:

2023 As of December 31	**Less than a month** Million KRW	**1 to 3 months** Million KRW	**3 to 12 months** Million KRW	**1 to 5 years** Million KRW	**> 5 years** Million KRW	**Total** Million KRW
Interest-bearing loans and borrowings	67,912	35,072	61,712	5,250	–	169,946
Trade and other payables	97,457	20,565	1,223	–	–	119,245
Lease liabilities	240	517	1,954	8,442	10,100	21,253
Other financial liabilities	184	1,339	28	2,579	–	4,130
Total	165,793	57,493	64,917	16,271	10,100	314,574

2022 As of December 31	**Less than a month** Million KRW	**1 to 3 months** Million KRW	**3 to 12 months** Million KRW	**1 to 5 years** Million KRW	**> 5 years** Million KRW	**Total** Million KRW
Interest-bearing loans and borrowings	19,327	124,209	64,534	65,745	–	273,815
Trade and other payables	109,868	22,072	7,335	–	–	139,275
Lease liabilities	278	563	2,022	7,655	9,311	19,829
Other financial liabilities	486	42	26	1	–	555
Total	129,959	146,886	73,917	73,401	9,311	433,474

31.3.1. CAPITAL MANAGEMENT

The capital managed by the Group is identical to the total amount of equity presented in the consolidated statements of financial position. The primary objective of the Group's capital management is to ensure its continued ability to provide consistency for its equity shareholders through a combination of capital growth and distribution. In order to achieve this objective, the Group monitors its gearing to balance risk and returns at an acceptable level, and also maintains a sufficient funding base to enable the Company to meet its working capital and strategic investment needs. To maintain or adjust the capital structure, the Company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares considering not only the short-term position, but also its long-term operational and strategic objectives. At the Group level the debt ratio is reviewed regularly. The debt-equity ratio as of December 31, 2023 and 2022, is 54% and 78%, respectively.

All subsidiaries must report key performance indicators, including capital management information on a monthly basis.

32. FAIR VALUES

Below is a comparison by class of the carrying amounts and fair value of the Group's financial instruments that are included in the financial statements.

	2023 As of December 31	**Carrying amount**		**Fair value**	
		Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Financial assets	Financial assets at amortized cost				
	Other financial assets	1,895	3,031	1,895	3,031
	Trade and other receivables	–	150,975	–	150,975
	Cash and cash equivalents	–	98,584	–	98,584
	Total financial assets at amortized cost	*1,895*	*252,590*	*1,895*	*252,590*
	Financial assets at FVtPL				
	Forward exchange contracts	–	96	–	96
	Currency and interest rate swaps	–	3,460	–	3,460
	Other financial assets	9,450	5,823	9,450	5,823
	Total financial assets at FVtPL	*9,450*	*9,379*	*9,450*	*9,379*
Total financial assets		11,345	261,969	11,345	261,969
Financial liabilities	Financial liabilities at amortized cost				
	Other financial liabilities	2,579	1,551	2,579	1,551
	Lease liabilities	16,087	2,357	16,087	2,357
	Trade and other payables	–	119,245	–	119,245
	Interest-bearing loans and borrowings	5,250	164,696	5,250	164,696
	Total financial liabilities at amortized cost	*23,916*	*287,849*	*23,916*	*287,849*
	Financial liabilities at FVtPL				
	Forward exchange contracts	–	89	–	89
	Total financial liabilities at FVtPL	*–*	*89*	*–*	*89*
Total financial liabilities		23,916	287,938	23,916	287,938

2022 As of December 31	Carrying amount		Fair value	
	Non-current Million KRW	Current Million KRW	Non-current Million KRW	Current Million KRW
Financial assets				
Financial assets at amortized cost				
Other financial assets	1,890	2,237	1,890	2,237
Trade and other receivables	–	177,174	–	177,174
Cash and cash equivalents	–	104,760	–	104,760
Total financial assets at amortized cost	*1,890*	*284,171*	*1,890*	*284,171*
Financial assets at FVtPL				
Forward exchange contracts	–	624	–	624
Currency and interest rate swaps	2,293	1,225	2,293	1,225
Other financial assets	11,847	2,591	11,847	2,591
Total financial assets at FVtPL	*14,140*	*4,440*	*14,140*	*4,440*
Total financial assets	16,030	288,611	16,030	288,611

Financial liabilities				
Financial liabilities at amortized cost				
Other financial liabilities	1	554	1	554
Lease liabilities	14,564	2,334	14,564	2,334
Trade and other payables	–	139,275	–	139,275
Interest-bearing loans and borrowings	65,745	208,070	65,745	208,070
Total financial liabilities at amortized cost	*80,310*	*350,233*	*80,310*	*350,233*
Total financial liabilities	80,310	350,233	80,310	350,233

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The following methods and assumptions were used to estimate the fair values:

- cash and cash equivalents, trade and other receivables, trade payables and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments;
- fair value of financial assets at FVOCI and financial assets at FVtPL are derived from quoted market prices in active markets, if available;
- fair value of unquoted financial assets at FVOCI and financial assets at FVtPL are estimated using appropriate valuation techniques (refer to note 32.1).

32.1. FAIR VALUE HIERARCHY

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Description	Valuation technique
Level 1	Quoted (unadjusted) prices in active markets for identical assets or liabilities
Level 2	Other techniques for which all inputs which have a material effect on the recorded fair value are observable either directly or indirectly
Level 3	Techniques which use inputs that have a material effect on the recorded fair value that are not based on observable market data

As of December 31, 2023 and 2022, the Group held the following financial instruments carried at fair value on the statements of financial position:

		2023 December 31	**Level 1**	**Level 2**	**Level 3**
		Million KRW	Million KRW	Million KRW	Million KRW
Financial assets	Derivatives				
	Forward exchange contracts	96	–	96	–
	Currency and interest rate swaps	3,460	–	3,460	–
	Total derivatives	*3,556*	–	*3,556*	–
	Debt instruments				
	Exchange-traded fund at FVtPL	15,273	–	15,273	–
	Total debt instruments	*15,273*	–	*15,273*	–
Total financial assets		18,829	–	18,829	–
Financial liabilities	Derivatives				
	Forward exchange contracts	89	–	89	–
	Total derivatives	*89*	–	*89*	–
Total financial liabilities		89	–	89	–

		2022 December 31	**Level 1**	**Level 2**	**Level 3**
		Million KRW	Million KRW	Million KRW	Million KRW
Financial assets	Derivatives				
	Forward exchange contracts	624	–	624	–
	Currency and interest rate swaps	3,518	–	3,518	–
	Total derivatives	*4,142*	–	*4,142*	–
	Debt instruments				
	Exchange-traded fund at FVtPL	14,438	–	14,438	–
	Total debt instruments	*14,438*	–	*14,438*	–
Total financial assets		18,580	–	18,580	–

During the reporting periods ended December 31, 2023 and 2022, there were no transfers between Level 1 and Level 2 fair value measurements. For the financial assets and financial liabilities for which the fair values are disclosed (refer to note 32) the carrying amounts are reasonable approximations of fair values and are measured using Level 3 measurement methods, except for cash and cash equivalents.

33. IMPACT OF GLOBAL ECONOMIC SITUATION ON CONSOLIDATED FINANCIAL STATEMENTS

The Group closely monitors the global situation and assesses the future impact of the Russian-Ukrainian war as well as conflicts in various other regions on the consolidated financial statements on a regular basis. For the financial year 2023, the following assessments were performed, amongst others:

Indication of impairment on property, plant and equipment and intangible assets

The Group assessed whether there were any internal and external indicators of impairment of property, plant and equipment and intangible assets. For the year ended December 31, 2023 no impairment of property, plant and equipment and intangible assets has been recognized (2022: no impairment) due to the Russian-Ukrainian war and other conflicts.

Expected credit loss (ECL) of trade receivables and financial assets

In order to determine the impact of the global economic situation on the ECL model in accordance with KIFRS 1109, the Group reassessed past events, current conditions and forecasts of future economic conditions. As of December 31, 2023, the Group identified the changes in risk indicators considering the nature of risk such as the geographical location of debtors which has been reflected in the ECL model for the recognition of allowance on expected credit risks. Such parameter adjustments resulted in an increase in the allowance on ECL by 226 Million KRW in the consolidated financial statements as of December 31, 2023.

Government grants received

For the year ended December 31, 2023, the Company did not receive any government grants for overcoming challenges arising from the current economic situation. Governmental grants disclosed in note 25.3 refer to sustainability projects related to greenhouse gas emission reduction as well as to subsidies received for R&D activities.

For the year ended December 31, 2022, the Company received government grants of 1,454 Million KRW to assist the entity in response to the COVID-19 pandemic, impacting the current economic situation.

34. EVENTS AFTER THE REPORTING PERIOD

The consolidated financial statements for the year ended December 31, 2023, were approved by the Board of Directors of the parent company on January 26, 2024.

There have been no material events between December 31, 2023 and the date of authorization for the issue of these financial statements that would require adjustments of the consolidated financial statements or disclosures.

35. EXPOSURE TO PILLAR TWO INCOME TAXES

The Organization for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) published the Pillar Two Model Rules designed to address the tax challenges arising from the digitalization of the global economy. As a result, there exist uncertainties arising from the Pillar Two Model Rules such as those related to additional temporary differences, remeasurement of deferred taxes and determination of tax rates to be used in the remeasurement.

The amendments to KIFRS 1012 Income tax have been introduced to address these uncertainties, requiring a temporary exception to KIFRS 1012 requirements under which an entity shall recognize and disclose deferred tax assets and liabilities arising from the jurisdictional implementation of the OECD/G20 BEPS Pillar Two Model Rules.

The Group has applied the temporary exception as of December 31, 2023.

Pillar Two Model Rules have been enacted or substantively enacted in certain jurisdictions in which the Group operates. Pillar Two Model Rules will be effective for the Group's financial year beginning on January 1, 2024. As the Group is in the scope of the enacted or substantively enacted Pillar Two Model Rules, the Group has performed an assessment of potential exposure to Pillar Two income taxes.

The assessment of the potential exposure to Pillar Two income taxes is based on the most recent tax filing, country-by-country reporting, and financial statements of the constituent entities in the Group. Since the Group's effective tax rate is above 15% in most of the jurisdictions in which it operates, it has determined that it is not subject to Pillar Two "top-up" taxes. However, there is a limited number of jurisdictions in which effective tax rates are below 15% and transitional safe harbor is not applied. After considering top-up taxes, the Group believes only a few jurisdictions are impacted by the Pillar Two income taxes and does not expect a material exposure to Pillar Two income taxes in those jurisdictions.

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For more information, please contact:

Songwon Management AG
Phone: **+41 52 635 00 00**
Fax: **+41 52 635 00 01**
E-mail: **marketing@songwon.com**

For further information, please go to:
www.songwon.com

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