TOSOH

FINANCIAL STATEMENTS

Tosoh Corporation and consolidated subsidiaries
Fiscal year ended March 31, 2023

TOSOH CORPORATION

TOSOH CORPORATION
CONSOLIDATED BALANCE SHEETS

ASSETS

	As of March 31, 2023 and 2022		
	2023	2022	2023
	Millions of Yen		Thousands of US Dollars (Note 1)
Current assets:			
Cash and cash equivalents (Notes 7 and 13)	¥ 119,422	¥ 160,813	$ 894,346
Notes receivable – trade (Notes 7 and 13)	16,378	16,413	122,654
Accounts receivable – trade (Note 13)	243,101	217,073	1,820,572
Contract assets (Note 15)	32,590	26,145	244,065
Lease investment assets (Note 13)	9,854	11,293	73,796
Inventories (Note 3)	257,133	191,665	1,925,657
Other current assets	29,847	19,535	223,523
Allowance for doubtful accounts	(699)	(659)	(5,235)
Total current assets	707,626	642,278	5,299,378
Investments:			
Investment securities (Notes 5 and 13)	38,689	40,983	289,740
Investments in unconsolidated subsidiaries and affiliates (Note 13)	24,839	22,572	186,018
Long-term loans receivable (Note 13)	346	388	2,591
Assets for retirement benefit (Note 8)	33,950	30,252	254,250
Other	13,252	10,377	99,244
Allowance for doubtful accounts	(479)	(778)	(3,587)
Total investments	110,597	103,794	828,256
Property, plant and equipment—net (Notes 6 and 7)	357,944	326,706	2,680,626
Other assets:			
Deferred tax assets (Note 14)	7,623	7,943	57,088
Intangibles	10,462	6,946	78,350
Total other assets	18,085	14,889	135,438
Total assets	¥ 1,194,252	¥ 1,087,667	$ 8,943,698

The accompanying notes are an integral part of these statements.

LIABILITIES AND NET ASSETS

	As of March 31, 2023 and 2022		
	2023	2022	2023
	Millions of Yen		Thousands of US Dollars (Note 1)
Current liabilities:			
Short-term bank loans (Notes 7 and 13)	¥ 140,004	¥ 54,216	$ 1,048,483
Current maturities of long-term debt (Notes 7 and 13)	9,337	9,446	69,924
Trade payables (Note 13)	122,904	113,441	920,422
Income taxes payable	8,443	34,585	63,229
Other current liabilities (Note 15)	55,625	58,190	416,574
Total current liabilities	336,313	269,878	2,518,632
Long-term liabilities:			
Long-term debt, less current maturities (Notes 7 and 13)	27,390	28,244	205,122
Liabilities for retirement benefit (Note 8)	20,411	20,787	152,857
Provision for retirement benefits for directors and corporate audit and supervisory board members	380	405	2,846
Deferred tax liabilities (Note 14)	4,945	1,631	37,033
Provision for losses on dissolution of business	21	19	157
Other long-term liabilities	10,593	6,979	79,331
Total long-term liabilities	63,740	58,065	477,346
Total liabilities	400,053	327,943	2,995,978
Contingent liabilities (Note 9)			
Shareholders' equity:			
Common stock: Authorized—900,000,000 shares; Issued—325,080,956 shares	55,173	55,173	413,188
Capital surplus	44,348	45,328	332,120
Retained earnings	622,996	601,344	4,665,588
Treasury stock, 6,791,155 shares in 2023 and 6,873,424 shares in 2022	(9,904)	(10,018)	(74,170)
Total shareholders' equity	712,613	691,827	5,336,726
Accumulated other comprehensive income:			
Net unrealized gains on securities	9,960	10,479	74,590
Deferred gains (losses) on hedges	4	(26)	30
Foreign currency translation adjustments	8,669	760	64,921
Accumulated adjustments for retirement benefit	7,558	5,876	56,602
Total accumulated other comprehensive income	26,191	17,089	196,143
Stock acquisition rights (Note 18)	90	179	674
Non-controlling interests	55,305	50,629	414,177
Total net assets	794,199	759,724	5,947,720
Total liabilities and net assets	¥ 1,194,252	¥ 1,087,667	$ 8,943,698

TOSOH CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

	Years ended March 31, 2023 and 2022		
	2023	2022	2023
	Millions of Yen		Thousands of US Dollars (Note 1)
Net sales (Note 15)	¥ 1,064,377	¥ 918,581	$ 7,971,070
Cost of sales	845,193	646,557	6,329,611
Gross profit	219,184	272,024	1,641,459
Selling, general and administrative expenses (Note 10)	144,578	127,979	1,082,738
Operating income (Note 15)	74,606	144,045	558,721
Other income (expenses):			
Interest and dividend income	2,602	2,092	19,486
Foreign exchange gains (losses), net	6,996	10,848	52,393
Interest expense	(1,428)	(1,065)	(10,694)
Equity in earnings of affiliates	2,480	2,343	18,573
Loss on disposal of property, plant and equipment	(2,016)	(1,884)	(15,098)
Impairment loss (Note 11)	(8,313)	(2,647)	(62,256)
Plant closure cost	—	(68)	—
Gain on sales of investment securities	1,313	2,774	9,833
Other, net	5,375	3,233	40,253
Subtotal	7,009	15,626	52,490
Income before income taxes	81,615	159,671	611,211
Income taxes (Note 14):			
Current	22,140	47,194	165,805
Deferred	3,151	(897)	23,598
Subtotal	25,291	46,297	189,403
Net income	56,324	113,374	421,808
Profit (loss) attributable to non-controlling interests	5,988	5,435	44,844
Profit attributable to owners of parent	¥ 50,336	¥ 107,939	$ 376,964
Net income per share (Note 2)	Yen		US Dollars (Note 1)
Net income—primary	¥ 158.14	¥ 339.23	$ 1.18
Net income—diluted	158.09	339.03	1.18
Cash dividends per share	¥ 80.00	¥ 80.00	$ 0.60

The accompanying notes are an integral part of these statements.

TOSOH CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Years ended March 31, 2023 and 2022		
	2023	2022	2023
	Millions of Yen		Thousands of US Dollars (Note 1)
Net income	¥ 56,324	¥ 113,374	$ 421,808
Other comprehensive income:			
Net unrealized gains on securities	(497)	(2,238)	(3,722)
Deferred gains (losses) on hedges	36	(32)	270
Foreign currency translation adjustments	8,364	7,525	62,637
Adjustments for retirement benefit	1,751	865	13,113
Share of other comprehensive income of affiliates applied for equity method	398	111	2,981
Total other comprehensive income (Note 4)	10,052	6,231	75,279
Comprehensive income	¥ 66,376	¥ 119,605	$ 497,087
Breakdown of comprehensive income:			
Comprehensive income attributable to shareholders of parent	¥ 59,438	¥ 112,962	$ 445,128
Comprehensive income attributable to non-controlling interests	6,938	6,643	51,959

TOSOH CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS

Millions of Yen

	Shareholders' equity					Accumulated other comprehensive income							
	Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Net unrealized gains on securities	Deferred gains (losses) on hedges	Foreign currency translation adjustments	Accumulated adjustments for retirement benefit	Total accumulated other comprehensive income	Stock acquisition rights	Non-controlling interests	Total net assets
As of March 31, 2021	¥ 55,173	¥ 45,097	¥ 513,339	¥ (10,104)	¥ 603,505	¥ 12,751	—	¥ (5,852)	¥ 5,167	¥ 12,066	¥ 214	¥ 45,895	¥ 661,680
Cumulative effects of changes in accounting policies			(241)		(241)							7	(234)
Restated balance	55,173	45,097	513,098	(10,104)	603,264	12,751	—	(5,852)	5,167	12,066	214	45,902	661,446
Change in treasury shares of parent arising from transactions with non-controlling shareholders		231			231								231
Cash dividends			(19,729)		(19,729)								(19,729)
Profit attributable to owners of parent			107,939		107,939								107,939
Purchase of treasury stock				(11)	(11)								(11)
Increase (decrease) of treasury stock due to changes in shareholding ratio				1	1								1
Disposal of treasury stock			(0)	96	96								96
Increase in retained earnings due to increase in consolidated subsidiaries			36		36								36
Other, net						(2,272)	(26)	6,612	709	5,023	(35)	4,727	9,715
As of March 31, 2022	¥ 55,173	¥ 45,328	¥ 601,344	¥ (10,018)	¥ 691,827	¥ 10,479	¥ (26)	¥ 760	¥ 5,876	¥ 17,089	¥ 179	¥ 50,629	¥ 759,724
Change in treasury shares of parent arising from transactions with non-controlling shareholders		(980)			(980)								(980)
Cash dividends			(28,647)		(28,647)								(28,647)
Profit attributable to owners of parent			50,336		50,336								50,336
Purchase of treasury stock				(7)	(7)								(7)
Increase (decrease) of treasury stock due to changes in shareholding ratio				0	0								0
Disposal of treasury stock			(37)	187	150								150
Increase of treasury shares by increasing of consolidated subsidiary				(66)	(66)								(66)
Other, net						(519)	30	7,909	1,682	9,102	(89)	4,676	13,689
As of March 31, 2023	¥ 55,173	¥ 44,348	¥ 622,996	¥ (9,904)	¥ 712,613	¥ 9,960	¥ 4	¥ 8,669	¥ 7,558	¥ 26,191	¥ 90	¥ 55,305	¥ 794,199

TOSOH CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS
(Continued)

Thousands of US Dollars (Note 1)

	Shareholders' equity					Accumulated other comprehensive income							
	Common stock	Capital surplus	Retained earnings	Treasury Stock	Total shareholders' equity	Net unrealized gains on securities	Deferred gains (losses) on hedges	Foreign currency translation adjustments	Accumulated adjustments for retirement benefit	Total accumulated other comprehensive income	Stock acquisition rights	Non-controlling interests	Total net assets
As of March 31, 2022	$ 413,188	$ 339,459	$ 4,503,437	$ (75,024)	$ 5,181,060	$ 78,477	$ (195)	$ 5,691	$ 44,005	$ 127,978	$ 1,341	$ 379,159	$ 5,689,539
Change in treasury shares of parent arising from transactions with non-controlling shareholders		(7,339)			(7,339)								(7,339)
Cash dividends			(214,536)		(214,536)								(214,536)
Profit attributable to owners of parent			376,964		376,964								376,964
Purchase of treasury stock				(52)	(52)								(52)
Increase (decrease) of treasury stock due to changes in shareholding ratio				0	0								0
Disposal of treasury stock			(277)	1,400	1,123								1,123
Increase of treasury shares by increasing of consolidated subsidiary				(494)	(494)								(494)
Other, net						(3,887)	225	59,230	12,597	68,165	(667)	35,018	102,516
As of March 31, 2023	$ 413,188	$ 332,120	$ 4,665,588	$ (74,170)	$ 5,336,726	$ 74,590	$ 30	$ 64,921	$ 56,602	$ 196,143	$ 674	$ 414,177	$ 5,947,720

The accompanying notes are an integral part of these statements.

TOSOH CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended March 31, 2023 and 2022		
	2023	2022	2023
	Millions of Yen		Thousands of US Dollars (Note 1)
Cash flows from operating activities:			
Income before income taxes	¥ 81,615	¥ 159,671	$ 611,211
Adjustments to reconcile income before income taxes to net cash provided by operating activities:			
Depreciation and amortization	43,062	40,663	322,489
Impairment loss	8,313	2,647	62,256
Change in assets and liabilities for retirement benefit	(1,664)	(1,454)	(12,462)
Interest and dividend income	(2,602)	(2,092)	(19,486)
Interest expense	1,428	1,065	10,694
Equity in earnings of affiliates	(2,480)	(2,343)	(18,573)
Loss on disposal of property, plant and equipment	2,016	1,884	15,098
Decrease (increase) in trade receivables and contract assets	(25,576)	(28,207)	(191,537)
Decrease (increase) in inventories	(61,623)	(34,288)	(461,492)
Increase (decrease) in trade payables	3,095	16,408	23,178
Other, net	(16,003)	(10,435)	(119,845)
Subtotal	29,581	143,519	221,531
Interest and dividends received	3,058	2,937	22,901
Interest paid	(1,438)	(1,075)	(10,770)
Income taxes paid	(47,441)	(36,765)	(355,283)
Net cash provided by operating activities	(16,240)	108,616	(121,621)
Cash flows from investing activities:			
Payments for purchases of property, plant and equipment	(79,622)	(44,483)	(596,285)
Purchases of investment securities	(568)	(480)	(4,254)
Proceeds from sales and redemption of investment securities	3,220	3,954	24,114
Purchase of shares of subsidiaries resulting in change in scope of consolidation	—	(1,403)	—
Payments for advances of long-term loans receivable	(1,761)	(1,653)	(13,188)
Proceeds from collections of long-term loans receivable	2,094	1,595	15,682
Other, net	(2,093)	(1,056)	(15,674)
Net cash used in investing activities	(78,730)	(43,526)	(589,605)
Cash flows from financing activities:			
Net increase (decrease) in short-term bank loans	84,574	(35,263)	633,371
Proceeds from long-term debt	8,691	10,779	65,086
Repayments of long-term debt	(10,323)	(11,536)	(77,308)
Purchase of treasury stock	—	(11)	—
Cash dividends paid	(30,043)	(20,606)	(224,991)
Other, net	(2,728)	(1,216)	(20,430)
Net cash used in financing activities	50,171	(57,853)	375,728
Effect of exchange rate changes on cash and cash equivalents	3,408	4,862	25,523
Net increase (decrease) in cash and cash equivalents	(41,391)	12,099	(309,975)
Cash and cash equivalents at beginning of year	160,813	148,398	1,204,321
Increase in cash and cash equivalents from newly consolidated subsidiary	—	316	—
Cash and cash equivalents at end of year	¥ 119,422	¥ 160,813	$ 894,346

The accompanying notes are an integral part of these statements.

TOSOH CORPORATION

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – BASIS OF PRESENTING CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements of Tosoh Corporation (the "Company") and its consolidated domestic subsidiaries have been prepared in accordance with the provisions set forth in the Financial Instruments and Exchange Law of Japan and its related accounting regulations and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards. The accounts of the Company's overseas subsidiaries and affiliates are prepared in accordance with either International Financial Reporting Standards or US generally accepted accounting principles or Japanese GAAP, with consolidation adjustments for the specified five items, which are described in "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements (PITF No.18)" and "Practical Solution on Unification of Accounting Policies Applied to Associates Accounted for Using the Equity Method(PITF No.24)", as applicable.

The accompanying consolidated financial statements have been restructured and translated into English from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate local finance bureau of the Ministry of Finance as required by the Financial Instruments and Exchange Law of Japan. Some supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

The translations of the Japanese yen amounts into US dollars are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2023, which was ¥133.53 to US$1.00. The translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be, converted into US dollars at this or any other rate of exchange.

NOTE 2 — SUMMARY OF ACCOUNTING POLICIES

Consolidation and investments

The consolidated financial statements include the accounts of the Company and its significant subsidiaries. All significant intercompany transactions and accounts have been eliminated in the consolidation.

Investments in affiliates are, with minor exceptions, accounted for by the equity method. Equity in earnings of affiliates has been calculated by excluding unrealized intercompany profits.

In the elimination of investments in subsidiaries, the assets and liabilities of the subsidiaries, including the portion attributable to minority shareholders, are evaluated using the fair value at the time the Company acquired control of the respective subsidiary.

Translation of foreign currencies

Receivables and payables denominated in foreign currencies are translated into Japanese yen at the year-end rates, and the resulting translation adjustments are credited or charged to income.

Financial statements of consolidated overseas subsidiaries are translated into Japanese yen at the year-end rate for assets and liabilities, at historical rates for the other balance sheet accounts exclusive of the current year's net income, and at the average annual rate for revenue and expense accounts and net income.

Cash and cash equivalents

Cash on hand, readily available deposits and short-term highly liquid investments with maturities not exceeding three months at the time of purchase are considered to be cash and cash equivalents.

Securities

Securities are classified into one of the following categories based on the intent of holding, resulting in the different measurement and accounting for the changes in fair value. Investments in equity securities without market prices, issued by subsidiaries and affiliates are stated at cost as determined by the moving-average method. Investments in securities other than equity securities without market prices are measured at fair value. Unrealized gains and losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Other available-for-sale securities with no available fair values are stated at moving-average cost.

Significant declines in fair value or the net asset value of equity securities, not on the equity method, issued by unconsolidated subsidiaries and affiliates, and available-for-sale securities judged to be other than temporary are charged to expense.

Allowance for doubtful accounts

The Company and its consolidated subsidiaries (the "Companies") provide the allowance for doubtful trade receivables by individually estimating uncollectible amounts and for other receivables based on the Companies' historical experience of write-offs of such receivables.

Inventories

Inventories are principally valued at cost as determined by the average cost method. If the profitability of the inventories decreases, the book value is reduced accordingly.

Property, plant and equipment, and depreciation

Property, plant and equipment are stated at cost. Cumulative amounts of impairment losses recognized have been deducted from acquisition costs. Depreciation is principally calculated using the straight-line method over the estimated useful lives of the assets. Repairs, maintenance and minor renewals are charged to expenses as incurred.

Lease transactions

Assets acquired by lessees in finance lease transactions are recorded in the corresponding asset accounts.

Amortization method and period of goodwill

Goodwill is amortized on the straight-line basis over a reasonable period of up to 20 years.

Retirement and severance benefits

The estimated amount of all retirement benefits to be paid at the future retirement dates is allocated equally to each service year using the benefit formula basis.

Prior service cost (credit) is principally recognized as expense (income) as incurred.

Actuarial difference is principally recognized as expense (income) using the straight-line method over 10 years commencing in the following period.

Income taxes

The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Shareholders' equity

The Corporate Law of Japan (the "Law") requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus), depending on the equity account charged upon payment of such dividends, until the aggregate amount of legal reserve and additional paid-in capital equals 25% of common stock. Under the Law, the aggregate amount of additional paid-in capital and legal reserve that exceeds 25% of common stock may be made available for dividends by resolution of the shareholders. Under the Law, the total amount of additional paid-in capital and legal reserve may be reversed without limitation of such threshold. The Law also provides that common stock, legal reserve, additional paid-in capital, other capital surplus and retained earnings can be transferred among the accounts under certain conditions upon resolution of the shareholders.

The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Law.

Stock options

The Company has adopted an accounting standard for stock options. The standard requires companies to account for stock options granted to directors and vice presidents based on the fair value of the stock option. In the balance sheets, the stock option is presented as stock acquisition rights as a separate component of net assets until exercised.

Per share information

Net income per share is computed based upon the weighted average number of shares of common stock outstanding during the period.
Diluted net income per share reflects the potential dilution that could occur if stock options were fully exercised.
Cash dividends per share presented in the accompanying consolidated statement of income are dividends applicable to the respective years, including dividends to be paid after the end of the year.
Cash dividends per share applicable to the period for the year ended March 31, 2023, comprise interim dividends of ¥40.00 and year-end dividends of ¥40.00.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current year presentation.

Accounting policy for recognition of significant revenues and expenses

In relation to recognition of revenue from contracts with customers, the nature of principal performance obligations for major businesses of the Company and its subsidiaries and typical timing of the satisfaction of those performance obligations (i.e., typical timing of revenue recognition) are as follows:

The Petrochemical business, the Chlor-alkali business and the Specialty business sell goods, and manufacture and sell products. For sales of these goods and products, the Company and its consolidated subsidiaries recognize revenue principally at amounts expected to be received in exchange for the goods or products as the controls of such goods or products are transferred to customers. For domestic sales, however, they recognize revenue at the time of shipment.
With respect to transactions which the Company and its consolidated subsidiaries determined to be agency transactions, the Company and its consolidated subsidiaries recognize revenue at the net amount of consideration which the Company and its consolidated subsidiaries retained after paying the vendors the consideration received from the customers.
With respect to product sales transactions with repurchase obligations, the Company and its consolidated subsidiaries don't recognize revenue for products which they expected to repurchase from customers but recognize revenue at the amount of consideration which they expected to obtain.
The Engineering business mainly has construction contracts, and it is determined that the performance obligations in such contracts are satisfied over time. The consolidated subsidiaries recognize revenue on basis of the progress towards complete satisfaction of the performance obligation. The progress of the construction contracts is measured on the basis of construction costs incurred by the end of each reporting period relative to the total expected construction costs. In addition, the consolidated subsidiaries recognize revenue by the cost recovery method when it is not possible to reasonably estimate the progress towards complete satisfaction of a performance obligation, but it is expected that the incurred costs will be recovered.

Significant accounting estimates

Consolidated fiscal year ended March 31, 2022 (from April 1, 2021 to March 31, 2022)
1. Revenue recognition of transactions related to construction contracts in the engineering segment that were recognized for performance obligations satisfied over time
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2022
The consolidated subsidiaries recognized revenue of ¥81,804 million (US$668,388 thousand) related to construction contracts for performance obligations satisfied over time in the engineering segment. This includes various water treatment service contracts such as maintenance and operation management, and construction contracts based on the cost recovery method, and the revenue excluding these contracts is ¥53,292 million (US$435,428 thousand).

(2) Information on the nature of significant accounting estimates for identified items
For construction contracts in the Engineering segment, when controls of the goods or services were transferred to customers over time, the consolidated subsidiaries recognized revenue over time as they satisfied performance obligations to transfer the goods or services to the customers. The consolidated subsidiaries recognize revenue based on a reasonable estimate of total construction revenues, total construction costs, and the progress of construction at the end of fiscal year.
Total construction costs are comprised the estimated cost for each contract and the basis for the recognition of construction revenue. Any increases in work hours and changes in circumstances at the construction sites due to matters that occurred subsequent to the start of construction could result in changes in the work activities. Especially, because a large-scale construction related to the water treatment engineering business takes a long period of time to complete, there is a high degree of uncertainty in estimating the work activities and work hours toward completion.
Specifically, the identification of the work necessary to complete the construction contract, the estimation of the cost relevant to the work, and the timely and appropriate reflection in the estimated cost of any changes in circumstances impacting the level of work required that occurred subsequent to the start of construction had a significant effect on the estimate of the total construction costs at the end of the fiscal year.

2. The valuation of inventories
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2022
The Company recognized reported inventories of ¥191,665 million (US$1,566,018 thousand) on the consolidated balance sheets and ¥104,342 million (US$852,537 thousand) of those inventories were held by the Company.

(2) Information on the nature of significant accounting estimates for identified items
Inventories are measured at the lower of either the acquisition cost or the net selling price at the end of fiscal year. In addition, for slow-moving inventories that are outside of the normal operating cycle, a valuation method that reduces the carrying amount is applied in order to reflect their reduced profitability.
The Company identifies slow-moving inventories that are outside of the normal operating cycle from inventories whose turnover period exceeds a certain threshold considering the sales plan based on forecasted demand as inventories that should be subject to write-down.
This forecasted demand could significantly change due to factors beyond the control of management. Especially, as the Company has many product types and grades, the identification of slow-moving inventories that are outside of the normal operating cycle could change depending on how the Company forecasts each demand, resulting in a significant effect on the valuation.

3. The judgment as to whether an impairment loss should be recognized on property, plant and equipment used in the High Silica Zeolite business of the Company
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2022
The Company recognized reported property, plant and equipment of ¥326,706 million (US$2,669,385 thousand) on the consolidated balance sheets and ¥11,830 million (US$96,658 thousand) for the Company's High Silica Zeolite business.

(2) Information on the nature of significant accounting estimates for identified items
The Company and its subsidiaries group assets based on management accounting categories. The assets or assets groups need to be tested for impairment whenever there is an impairment indicator. The impairment test is performed by comparing the undiscounted future cash flows that are expected to be generated from the related asset groups with their carrying amounts.
In the Company's High Silica Zeolite business, the Company made capital investments in Nanyo Complex to meet future demand growth. As a result, the High Silica Zeolite business has recognized recurring operating losses for some consecutive years due to increasing depreciation expense, indicating impairment. Accordingly, the Company performed an impairment test during the year ended March 31, 2022; however, it determined that the recognition of an impairment loss was not necessary as the estimated undiscounted future cash flows from the business exceeded the carrying amount.
The undiscounted future cash flows were estimated based on next year's budget and the mid-term management plan of the High Silica Zeolite business, which reflected assumptions including significant judgments by management about an increase in sales volume including obtaining prospective new orders. Therefore, if these assumptions change due to changes in market conditions or other factors, the Company could result in recognizing impairment losses on the assets.

4. The judgment as to whether an impairment loss should be recognized on property, plant and equipment used in the Chlor-alkali business of the Tohoku Tosoh Chemical Co., Ltd.
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2022
The Company recognized reported property, plant and equipment of ¥326,706 million (US$2,669,385 thousand) on the consolidated balance sheets and ¥8,732 million (US$71,346 thousand) for the Chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd. a consolidated subsidiary of the Company (hereinafter referred to as "Tohoku Tosoh Chemical").

(2) Information on the nature of significant accounting estimates for identified items
The Company and its subsidiaries group assets based on management accounting categories. The assets or assets groups need to be tested for impairment whenever there is an impairment indicator. The impairment test is performed by comparing the undiscounted future cash flows that are expected to be generated from the related asset groups with their carrying amounts.
The Chlor-alkali business of Tohoku Tosoh Chemical made capital investments to replace deteriorated production facilities. As a result, Tohoku Tosoh Chemical's Chlor-alkali business has projected to recognize recurring operating losses for some consecutive years due to increasing depreciation expense, indicating impairment. Accordingly, Tohoku Tosoh Chemical performed an impairment test during the year ended March 31, 2022; however, it determined that the recognition of an impairment loss was not necessary as the estimated undiscounted future cash flows from the business exceeded the carrying amount.
The undiscounted future cash flows were estimated based on the next year's budget and the mid-term management plan of the Chlor-alkali business of Tohoku Tosoh Chemical, which reflected assumptions including significant judgments by management particularly about trends in raw material and fuel prices, market conditions and sales forecasts for chemical products. Therefore, if these assumptions change due to changes in market conditions or other factors, Tohoku Tosoh Chemical could result in recognizing impairment losses on the assets.

Consolidated fiscal year ended March 31, 2023 (from April 1, 2022 to March 31, 2023)
1. Revenue recognition of transactions related to construction contracts in the engineering segment that were recognized for performance obligations satisfied over time
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2023
The consolidated subsidiaries recognized revenue of ¥ 99,929 million (US$ 748,364 thousand) related to construction contracts for performance obligations satisfied over time in the engineering segment. This includes various water treatment service contracts such as maintenance and operation management, and construction contracts based on the cost recovery method, and the revenue excluding these contracts is ¥ 70,204 million (US$ 525,755 thousand).

(2) Information on the nature of significant accounting estimates for identified items
For construction contracts in the Engineering segment, when controls of the goods or services were transferred to customers over time, the consolidated subsidiaries recognized revenue over time as they satisfied performance obligations to transfer the goods or services to the customers. The consolidated subsidiaries recognize revenue based on a reasonable estimate of total construction revenues, total construction costs, and the progress of construction at the end of fiscal year.
Total construction costs are comprised the estimated cost for each contract and the basis for the recognition of construction revenue. Any increases in work hours and changes in circumstances at the construction sites due to matters that occurred subsequent to the start of construction could result in changes in the work activities. Especially, because a large-scale construction related to the water treatment engineering business takes a long period of time to complete, there is a high degree of uncertainty in estimating the work activities and work hours toward completion.
Specifically, the identification of the work necessary to complete the construction contract, the estimation of the cost relevant to the work, and the timely and appropriate reflection in the estimated cost of any changes in circumstances impacting the level of work required that occurred subsequent to the start of construction had a significant effect on the estimate of the total construction costs at the end of the fiscal year.

2. The valuation of inventories
(1) The amount recorded in the consolidated financial statements for the year ended March 31, 2023
The Company recognized reported inventories of ¥257,133 million (US$1,925,657 thousand) on the consolidated balance sheets and ¥132,724 million (US$993,964 thousand) of those inventories were held by the Company.

(2) Information on the nature of significant accounting estimates for identified items
Inventories are measured at the lower of either the acquisition cost or the net selling price at the end of fiscal year. In addition, for slow-moving inventories that are outside of the normal operating cycle, a valuation method that reduces the carrying amount is applied in order to reflect their reduced profitability.
The Company identifies slow-moving inventories that are outside of the normal operating cycle from inventories whose turnover period exceeds a certain threshold considering the sales plan based on forecasted demand as inventories that should be subject to write-down.
This forecasted demand could significantly change due to factors beyond the control of management. Especially, as the Company has many product types and grades, the identification of slow-moving inventories that are outside of the normal operating cycle could change depending on how the Company forecasts each demand, resulting in a significant effect on the valuation.

NOTE 3 — INVENTORIES

Inventories as of March 31, 2023 and 2022 consisted of the following:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Merchandise and finished products	¥ 154,144	¥ 119,146	$ 1,154,377
Raw materials and supplies	70,545	56,983	528,308
Work in process	32,444	15,536	242,972
Total	¥ 257,133	¥ 191,665	$ 1,925,657

NOTE 4 — COMPREHENSIVE INCOME

Amounts reclassified to net income (loss) in the current period that were recognized in other comprehensive income in the current or previous periods and tax effects for each component of other comprehensive income were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Net unrealized gains on securities			
Increase (decrease) during the year	¥ 510	¥ (564)	$ 3,819
Reclassification adjustments	(1,113)	(2,664)	(8,335)
Subtotal, before tax	(603)	(3,228)	(4,516)
Tax effect	106	990	794
Subtotal, net of tax	¥ (497)	¥ (2,238)	$ (3,722)
Deferred gains (losses) on hedges			
Increase (decrease) during the year	¥ 35	¥ (32)	$ 262
Subtotal, before tax	35	(32)	262
Tax effect	1	(0)	8
Subtotal, net of tax	¥ 36	¥ (32)	$ 270
Foreign currency translation adjustments			
Increase (decrease) during the year	¥ 8,364	¥ 7,525	$ 62,637
Subtotal, net of tax	¥ 8,364	¥ 7,525	$ 62,637
Adjustments for retirement benefit			
Increase (decrease) during the year	¥ 3,720	¥ 2,121	$ 27,859
Reclassification adjustments	(1,210)	(967)	(9,062)
Subtotal, before tax	2,510	1,154	18,797
Tax effect	(759)	(289)	(5,684)
Subtotal, net of tax	¥ 1,751	¥ 865	$ 13,113
Share of other comprehensive income of affiliates applied for equity method			
Increase (decrease) during the year	¥ 402	¥ 109	$ 3,011
Reclassification adjustments	(4)	2	(30)
Subtotal, net of tax	¥ 398	¥ 111	$ 2,981
Total other comprehensive income	¥ 10,052	¥ 6,231	$ 75,279

NOTE 5 — FAIR VALUE INFORMATION OF SECURITIES

The following tables summarize acquisition costs, book values and fair values of securities with available fair values as of March 31, 2023 and 2022.

Available-for-sale securities:

	Millions of Yen					
	2023			2022		
	Acquisition cost	Book value	Difference	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs	¥ 14,523	¥ 28,425	¥ 13,902	¥ 18,285	¥ 32,821	¥ 14,536
Securities with book values not exceeding acquisition costs	5,470	5,123	(347)	3,667	3,354	(313)
Total	¥ 19,993	¥ 33,548	¥ 13,555	¥ 21,952	¥ 36,175	¥ 14,223

	Thousands of US Dollars (Note 1)		
	2023		
	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs	$ 108,762	$ 212,873	$ 104,111
Securities with book values not exceeding acquisition costs	40,965	38,366	(2,599)
Total	$ 149,727	$ 251,239	$ 101,512

NOTE 6 – PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment as of March 31, 2023 and 2022 consisted of the following:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Land	¥ 68,492	¥ 68,830	$ 512,933
Buildings and structures	288,508	279,368	2,160,624
Machinery and equipment	965,623	932,026	7,231,506
Lease assets	8,183	5,662	61,282
Construction in progress	47,547	29,540	356,077
	1,378,353	1,315,426	10,322,422
Less accumulated depreciation	(1,020,409)	(988,720)	(7,641,796)
Net property, plant and equipment	¥ 357,944	¥ 326,706	$ 2,680,626

NOTE 7 — SHORT-TERM BANK LOANS AND LONG-TERM DEBT

Short-term bank loans (partially secured) bore interest at weighted average annual rates of 1.02% and 0.73% as of March 31, 2023 and 2022, respectively. Such loans are generally renewable at maturity.

Long-term debt as of March 31, 2023 and 2022 consisted of the following:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Loans from banks and other financial institutions, 1.43%, maturing serially through 2035			
Secured	¥ 214	¥ 140	$ 1,603
Unsecured	36,513	37,550	273,443
	36,727	37,690	275,046
Less amounts due within 1 year	(9,337)	(9,446)	(69,924)
Total	¥ 27,390	¥ 28,244	$ 205,122

Assets pledged as collateral to secure primarily short-term bank loans and long-term debt as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Property, plant and equipment	¥ 3,595	¥ 3,637	$ 26,922
Cash and cash equivalents	359	302	2,689
Notes receivable - trade	211	261	1,580
Total	¥ 4,165	¥ 4,200	$ 31,191

The annual maturities of long-term debt as of March 31, 2023 and 2022 were as follows:

As of March 31, 2023	Millions of Yen	Thousands of US Dollars (Note 1)
2024	¥ 9,337	$ 69,924
2025	9,903	74,163
2026	5,620	42,088
2027	3,938	29,492
2028	2,653	19,868
2029 and thereafter	5,276	39,511
Total	¥ 36,727	$ 275,046

As of March 31, 2022	Millions of Yen
2023	¥ 9,446
2024	7,361
2025	5,660
2026	5,108
2027	3,236
2028 and thereafter	6,879
Total	¥ 37,690

NOTE 8 — RETIREMENT AND SEVERANCE BENEFITS

The Company and its consolidated subsidiaries have defined benefit corporate pension plans and lump-sum payment plans, but certain of its consolidated subsidiaries have defined contribution pension plans.

The Company has instituted retirement benefit trusts. In some cases when employees retire, the Company and its consolidated subsidiaries provide for additional retirement benefits that are not related to the retirement benefit liabilities computed according to actuarial method in accordance with retirement benefit accounting.

Certain consolidated subsidiaries use the simplified method for the calculation of projected benefits obligation.

The amount in multiemployer pension plans is included in defined benefit plans.

(1) Defined benefit plans

Changes in the present value of the defined benefit obligation in the Company and its consolidated subsidiaries which have not adopted the simplified method were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Beginning of year	¥ 59,918	¥ 61,947	$ 448,723
Service cost	2,997	2,996	22,444
Interest cost	273	211	2,044
Actuarial differences	(2,558)	(625)	(19,157)
Benefits paid	(4,949)	(4,597)	(37,063)
Prior service cost	—	(14)	—
Other	84	0	631
End of year	¥ 55,765	¥ 59,918	$ 417,622

Changes in the fair value of retirement plan assets in the Company and its consolidated subsidiaries which have not adopted the simplified method were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Beginning of year	¥ 74,376	¥ 73,362	$ 556,998
Expected return on plan assets	1,490	1,487	11,159
Actuarial differences	1,187	1,525	8,889
Contributions	1,616	1,738	12,102
Benefits paid	(4,035)	(3,751)	(30,217)
Other	86	15	644
End of year	¥ 74,720	¥ 74,376	$ 559,575

Changes in the present value of the liabilities for retirement benefit in the consolidated subsidiaries which have adopted the simplified method were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Beginning of year	¥ 4,994	¥ 4,610	$ 37,400
Retirement benefit cost	729	699	5,459
Benefits paid	(154)	(122)	(1,153)
Contributions	(218)	(219)	(1,633)
Increase from change of scope of consolidation	41	—	307
Other	25	26	188
End of year	¥ 5,417	¥ 4,994	$ 40,568

Reconciliations from ending balances of defined benefit obligation and retirement plan assets to assets and liabilities for retirement benefit on the balance sheet as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Defined benefit obligation in the Company and its consolidated subsidiaries which have funded retirement plans	¥ 45,963	¥ 49,629	$ 344,215
Retirement plan assets	(77,725)	(77,409)	(582,079)
	(31,762)	(27,780)	(237,864)
Defined benefit obligation in the consolidated subsidiaries which don't have funded retirement plans	18,223	18,315	136,471
Net amount of liabilities and assets for retirement benefit on the balance sheet	¥ (13,539)	¥ (9,465)	$ (101,393)
Liabilities for retirement benefit	20,411	20,787	152,857
Assets for retirement benefit	(33,950)	(30,252)	(254,250)
Net amount of liabilities and assets for retirement benefit on the balance sheet	¥ (13,539)	¥ (9,465)	$ (101,393)

Components of retirement benefit cost for the year ended March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Service cost	¥ 2,997	¥ 2,996	$ 22,444
Interest cost	273	211	2,044
Expected return on plan assets	(1,490)	(1,487)	(11,159)
Amortization of actuarial differences	(1,222)	(980)	(9,152)
Prior service cost recorded as expenses	12	(2)	90
Retirement benefit cost in the simplified method	729	699	5,459
Other	81	124	609
Total retirement benefit cost	¥ 1,380	¥ 1,561	$ 10,335

Adjustments for retirement benefit before tax effect as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Actuarial differences	¥ 2,498	¥ 1,142	$ 18,707
Prior service cost	12	12	90
Total adjustments for retirement benefit before tax effect	¥ 2,510	¥ 1,154	$ 18,797

Accumulated adjustments for retirement benefit before tax effect as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Unrecognized actuarial differences	¥ (11,036)	¥ (8,538)	$ (82,648)
Unrecognized prior service cost	12	24	90
Total accumulated adjustments for retirement benefit before tax effect	¥ (11,024)	¥ (8,514)	$ (82,558)

The major categories of plan assets as a percentage of total assets as of March 31, 2023 and 2022 were as follows:

	2023	2022
Bonds	33.6%	35.2%
Shares of stock	40.0%	38.3%
Life insurance company general accounts	20.3%	21.2%
Other	6.1%	5.3%
Total	100%	100%

The assumptions and basis used in the actuarial calculation were mainly as follows:

	2023	2022
Discount rate	Mainly 0.9%	Mainly 0.3%
Long-term expected rate of return on plan assets	Mainly 2.5%	Mainly 2.5%

Note: In determining the long-term expected rate of return on plan assets, the Company and its consolidated subsidiaries consider the current and projected asset allocations, and the current and expected long-term rates of return of a wide variety of the plan assets.

(2) Defined contribution plans

The amounts contributed to defined contribution plan by certain consolidated subsidiaries were ¥302 million (US$2,262 thousand) and ¥288 million for the years ended March 31, 2023 and 2022, respectively.

NOTE 9 — CONTINGENT LIABILITIES

Contingent liabilities primarily for loans from banks to affiliates, which are guaranteed by the Companies as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Loans guaranteed	¥ 1,959	¥ 713	$ 14,671

NOTE 10 — RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses for the years ended March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Research and development expenses	¥ 21,426	¥ 19,897	$ 160,458

NOTE 11 — IMPAIRMENT LOSS

The Companies group business assets based on business divisions or relevance of the production process. Major assets for which impairment losses were recognized as of March 31, 2023 and 2022 were as follows:

			Millions of Yen	Thousands of US Dollars (Note 1)
			2023	2023
Location	Use	Assets category		
Yamagata, Japan	Production facilities ,etc	Buildings and structures, Machinery and equipment, Construction in progress, others	¥ 7,701	$ 57,672

Regarding production facilities related to the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., a consolidated subsidiary, the carrying amount is reduced to the recoverable amount, and the resulting decrease in the carrying amount is recorded as an “Impairment loss” under “Other income (expenses)” as its business has expected recurring operating losses for some consecutive years. This was because the investment amount increased from the initial plan due to the installation of equipment to improve efficiency in addition to the renewal of aging production equipment, and also there was a gap between the initial plan and the production results after the capital investment. The amount of the impairment loss comprised ¥1,742 million (US$13,046 thousand) for buildings and structures, ¥4,975 million (US$37,258 thousand) for machinery, equipment and vehicles, ¥974 (US$7,294 thousand) million for construction in progress, ¥10 (US$74 thousand) million for other assets.

The recoverable amount is measured based on the value in use. As the value in use based on the future cash flows are negative as a result of the calculation by discounting the future cash flows by 8%, the carrying amount of the assets is reduced to the memorandum value. The business plan, which serves as the basis for the calculation of future cash flows, is estimated based on the next fiscal year's budget and medium-term business plan, and is estimated on the assumptions that sales increase from existing customers, the forecast of gross profit margin of caustic soda, which is a main product, and the production plan of the new plant for calcium hypochlorite will be achieved.

			Millions of Yen
			2022
Location	Use	Assets category	
Yamagata, Japan	Production facilities ,etc	Buildings and structures, Machinery and equipment, Land, others	¥ 2,165

Regarding production facilities, these were written down to the recoverable amount, its reduction is recorded as an "Impairment loss" under "Other income (expenses)" due to the suspension of operation. The amount of the impairment loss comprised ¥2 million for buildings and structures, ¥22 million for machinery and equipment, ¥2,139 million for land and ¥2 million for other assets.

NOTE 12 — DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING TRANSACTIONS

Derivative transactions to which hedging accounting is not applied as of March 31, 2023 and 2022 were as follows:

	Millions of Yen			
	2023		2022	
	Contract amount	Fair value	Contract amount	Fair value
Foreign currency forward exchange contracts				
Buying Indonesian Rupiahs	¥ 410	¥ (3)	¥ 2,036	¥ (11)
Buying US Dollars	—	—	¥ 745	¥ 2
Buying Japanese Yen	—	—	¥ 216	¥ (5)
Selling Taiwan Dollars	—	—	¥ 2,069	¥ (87)
Total	¥ 410	¥ (3)	¥ 5,066	¥ (101)

	Thousands of US Dollars (Note 1)	
	2023	
	Contract amount	Fair value
Foreign currency forward exchange contracts		
Buying Indonesian Rupiahs	$ 3,070	$ (22)
Total	$ 3,070	$ (22)

Derivative transactions to which hedging accounting is applied as of March 31, 2023 and 2022 were as follows:

	Millions of Yen			
	2023		2022	
	Contract amount	Fair value	Contract amount	Fair value
Foreign currency forward exchange contracts				
Principle method				
Buying US Dollars	¥ 104	¥ (3)	¥ 0	¥ (0)
Total	¥ 104	¥ (3)	¥ 0	¥ (0)
Interest rate swaps				
Principle method				
Payment fixation and receipt change	¥ 3,240	¥ (136)	¥ 3,051	¥ (165)
Special method				
Payment fixation and receipt change	625	—	1,045	—
Total	¥ 3,865	¥ (136)	¥ 4,096	¥ (165)

	Thousands of US Dollars (Note 1)	
	2023	
	Contract amount	Fair value
Foreign currency forward exchange contracts		
Principle method		
Buying US Dollars	$ 779	$ (22)
Total	$ 779	$ (22)
Interest rate swaps		
Principle method		
Payment fixation and receipt change	$ 24,264	$ (1,018)
Special method		
Payment fixation and receipt change	4,681	—
Total	$ 28,945	$ (1,018)

Fair values are based on the quotes provided by financial institutions.

NOTE 13 — FINANCIAL INSTRUMENTS

Matters relating to the conditions of financial instruments:

Policy on financial instruments

The Tosoh Group raises capital according to loans from banks to invest in core and growing businesses based on capital investment plans. Derivatives are used to mitigate risk, and speculative transactions are not undertaken.

Contents, risk, and risk management of financial instruments

Trade receivables are exposed to credit risks of customers. The Companies monitor the due dates and the balances of customers individually in accordance with credit control rules and strive to find doubtful debt at an early stage and to reduce the risks. Securities, which are mainly shares, are exposed to market risks. Regarding listed shares, the Companies check the market prices every quarter and revise their positions consistently, taking account of relations with companies who issue the shares.

Parts of trade payables are denominated in foreign currency and exposed to foreign currency risks. However, almost all those balances may be offset at any time by accounts receivables, which are also denominated in foreign currency. Loans payable are used as short-term working capital or long-term capital investment, part of which is exposed to interest rate risk. These risks are removed by entering into interest rate swaps.

Some consolidated subsidiaries use foreign currency forward exchange contracts to hedge against foreign currency risks associated with receivables and payables denominated in foreign currencies.

The Companies execute and control derivative transactions in accordance with internal control rules that provide authority and transaction limits and have transactions only with the highest-rated banks to reduce the credit risks.

Book values and fair values of financial instruments for which it is practical to estimate values as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		
	March 31,2023		
	Book value	Fair value	Difference
Lease investment assets	¥ 9,854	¥ 10,548	¥ 694
Securities			
Available-for-sale securities	33,548	33,548	—
Investments in affiliates	10,589	5,948	(4,641)
Long-term debt	(36,727)	(35,763)	964
Derivative transactions	(142)	(142)	—

	Millions of Yen		
	March 31,2022		
	Book value	Fair value	Difference
Lease investment assets	¥ 11,293	¥ 11,699	¥ 406
Securities			
Available-for-sale securities	36,175	36,175	—
Investments in affiliates	10,365	5,398	(4,967)
Long-term debt	(37,690)	(37,779)	(89)
Derivative transactions	(266)	(266)	—

	Thousands of US Dollars (Note 1)		
	March 31,2023		
	Book value	Fair value	Difference
Lease investment assets	$ 73,796	$ 78,993	$ 5,197
Securities			
Available-for-sale securities	251,239	251,239	—
Investments in affiliates	79,301	44,544	(34,757)
Long-term debt	(275,046)	(267,827)	7,219
Derivative transactions	(1,063)	(1,063)	—

Note: Cash is omitted from the note. Also, cash equivalents, notes receivable - trade, accounts receivable - trade, trade payables and short-term bank loans are omitted because their fair values approximate their book values as they are settled within a short period of time.

Investments in equity securities without market prices, not included in "Securities" in the fair value information of the financial instruments as of March 31, 2023 and 2022 were as follows:

	Book value		
	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Equity securities issued by unconsolidated subsidiaries and affiliates	¥ 8,459	¥ 7,976	$ 63,349
Non-listed equity securities	3,519	4,808	26,354
Investments in capital	5,698	3,894	42,672

Redemption schedules of monetary claims and available-for-sale securities with maturity as of March 31, 2023 and 2022 were as follows:

	Millions of Yen			
	2023			
	Within 1 year	Over 1 year, within 5 years	Over 5 years, within 10 years	Over 10 years
Cash and cash equivalents	¥ 119,422	¥ —	¥ —	¥ —
Notes receivable - trade	16,378	—	—	—
Accounts receivable - trade	243,101	—	—	—
Long-term loans receivable	72	396	71	3
Total	¥ 378,973	¥ 396	¥ 71	¥ 3

	Millions of Yen			
	2022			
	Within 1 year	Over 1 year, within 5 years	Over 5 years, within 10 years	Over 10 years
Cash and cash equivalents	¥ 160,813	¥ —	¥ —	¥ —
Notes receivable - trade	16,413	—	—	—
Accounts receivable - trade	217,073	—	—	—
Long-term loans receivable	54	670	84	3
Total	¥ 394,353	¥ 670	¥ 84	¥ 3

	Thousands of US Dollars (Note 1)			
	2023			
	Within 1 year	Over 1 year, within 5 years	Over 5 years, within 10 years	Over 10 years
Cash and cash equivalents	$ 894,346	$ —	$ —	$ —
Notes receivable - trade	122,654	—	—	—
Accounts receivable - trade	1,820,572	—	—	—
Long-term loans receivable	539	2,966	532	22
Total	$ 2,838,111	$ 2,966	$ 532	$ 22

Refer to Note 7 for schedule of Long-term debt.

Fair value information of financial instruments by level of inputs
Based on the observability and the significance of the inputs used to determine fair values, fair value information of financial instruments is presented by categorizing measurements into the following three levels:
Level 1 fair value: the fair value measured by quoted prices of identical assets or liabilities in active markets.
Level 2 fair value: the fair value measured using observable inputs other than Level 1.
Level 3 fair value: fair values measured using unobservable inputs.
When multiple inputs of different categories are used in measuring fair value, the Company and its subsidiaries classified fair values into a category to which the lowest priority is assigned.

(1) Financial instruments measured at fair values in the consolidated balance sheet as of March 31, 2023 and 2022 were as follows:

	Fair value			
	Millions of Yen			
	2023			
	Level 1	Level 2	Level 3	Total
Investments in securities presented as current or non-current				
Other investments in securities	¥ 33,548	¥ —	¥ —	¥ 33,548
Total assets	¥ 33,548	¥ —	¥ —	¥ 33,548
Derivative transactions				
Currency related	¥ —	¥ (6)	¥ —	¥ (6)
Interest related	—	(136)	—	(136)
Total liabilities	¥ —	¥ (142)	¥ —	¥ (142)

	Fair value			
	Millions of Yen			
	2022			
	Level 1	Level 2	Level 3	Total
Investments in securities presented as current or non-current				
Other investments in securities	¥ 36,175	¥ —	¥ —	¥ 36,175
Total assets	¥ 36,175	¥ —	¥ —	¥ 36,175
Derivative transactions				
Currency related	¥ —	¥ (101)	¥ —	¥ (101)
Interest related	—	(165)	—	(165)
Total liabilities	¥ —	¥ (266)	¥ —	¥ (266)

	Fair value			
	Thousands of US Dollars (Note 1)			
	2023			
	Level 1	Level 2	Level 3	Total
Investments in securities presented as current or non-current				
Other investments in securities	$ 251,239	$ —	$ —	$ 251,239
Total assets	$ 251,239	$ —	$ —	$ 251,239
Derivative transactions				
Currency related	$ —	$ (45)	$ —	$ (45)
Interest related	—	(1,018)	—	(1,018)
Total liabilities	$ —	$ (1,063)	$ —	$ (1,063)

(2) Financial instruments other than those measured at fair values in the consolidated balance sheet as of March 31, 2023 and 2022 were as follows:

	Fair value			
	Millions of Yen			
	2023			
	Level 1	Level 2	Level 3	Total
Lease investment assets	¥ —	¥ 10,548	¥ —	¥ 10,548
Investments in securities presented as current or non-current				
Securities issued by affiliates	5,948	—	—	5,948
Total assets	¥ 5,948	¥ 10,548	¥ —	¥ 16,496
Long-term debt	¥ —	¥ (35,763)	¥ —	¥ (35,763)
Total liabilities	¥ —	¥ (35,763)	¥ —	¥ (35,763)

	Fair value			
	Millions of Yen			
	2022			
	Level 1	Level 2	Level 3	Total
Lease investment assets	¥ —	¥ 11,699	¥ —	¥ 11,699
Investments in securities presented as current or non-current				
Securities issued by affiliates	5,398	—	—	5,398
Total assets	¥ 5,398	¥ 11,699	¥ —	¥ 17,097
Long-term debt	¥ —	¥ (37,779)	¥ —	¥ (37,779)
Total liabilities	¥ —	¥ (37,779)	¥ —	¥ (37,779)

	Fair value			
	Thousands of US Dollars (Note 1)			
	2023			
	Level 1	Level 2	Level 3	Total
Lease investment assets	$ —	$ 78,993	$ —	$ 78,993
Investments in securities presented as current or non-current				
Securities issued by affiliates	44,544	—	—	44,544
Total assets	$ 44,544	$ 78,993	$ —	$ 123,537
Long-term debt	$ —	$ (267,827)	$ —	$ (267,827)
Total liabilities	$ —	$ (267,827)	$ —	$ (267,827)

Note: Valuation techniques and inputs used in measuring fair values

Investments in securities presented as current or non-current
Listed equity securities are measured using quoted prices. Fair values of listed equity securities are classified as level 1, because they are exchanged in active markets.

Derivative transactions
Interest rate swaps and currency forward contracts are classified as level 2, because their fair values are measured using prices quoted by financial institutions using inputs such as interest rates and foreign exchange rates. Interest rate swaps that qualify for special method are accounted for as an integral part of long-term debt that are hedged. Therefore, the fair value is included in the fair value of the relevant long-term debt (See "Long-term debt" below).

Lease investment assets
Lease investment assets are classified as level 2, because their fair values are measured using the present value of the total principal and interest discounted at an interest rate assumed to be applied to similar new lease transactions.

Long-term debt
Long-term debt is classified as level 2, because their fair values are measured using the total amount of principal and interest discounted at an interest rate assumed to be applicable to a similar new debt. Long-term debt with floating interest rates is subject to special method as interest rate swaps (see "Derivative transactions" above), and the total amount of principal and interest accounted for as an integral part of such interest rate swaps is used for calculation.

NOTE 14—INCOME TAXES

The Company and its consolidated domestic subsidiaries are subject to a number of income taxes, which, in the aggregate, indicated a statutory income tax rate in Japan of approximately 30.5% and 30.5% for the year ended March 31, 2023 and 2022, respectively.

The note is omitted for the year ended March 31, 2023 and 2022, because the difference between the statutory income tax rate and the Companies' actual income tax rate after adoption of tax-effect accounting is less than 5%.

Significant components of deferred tax assets and deferred tax liabilities as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Deferred tax assets:			
Liabilities for retirement benefit	¥ 7,891	¥ 7,844	$ 59,095
Unrealized gains on intercompany transactions	7,881	8,533	59,020
Operating loss carryforwards	4,477	3,505	33,528
Impairment loss on fixed assets	3,420	1,553	25,612
Other	16,208	17,143	121,382
Total gross deferred tax assets	39,877	38,578	298,637
Valuation allowance	(11,246)	(8,791)	(84,221)
Total deferred tax assets	28,631	29,787	214,416
Deferred tax liabilities:			
Assets for retirement benefit	(10,402)	(9,181)	(77,900)
Retained earnings of subsidiaries	(4,236)	(3,550)	(31,723)
Net unrealized gains on securities	(3,917)	(3,975)	(29,334)
Reserve for replacement of property, plant and equipment	(2,119)	(1,516)	(15,869)
Other	(5,279)	(5,253)	(39,535)
Total deferred tax liabilities	(25,953)	(23,475)	(194,361)
Net deferred tax assets	¥ 2,678	¥ 6,312	$ 20,055

Changes in presentation

“Retained earnings of subsidiaries”, which was included in “Other, net” under “Deferred tax liabilities” in the previous fiscal year, is presented separately from the current fiscal year because the amount of the item has increased in importance.

To reflect this change in reporting method, the reclassification of accounts has been made for the income taxes note for the previous fiscal year.

As a result, ¥8,803 million in “Other, net” under “Deferred tax liabilities” in the previous significant components of deferred tax assets and deferred tax liabilities has been reclassified into ¥3,550 million in “Retained earnings of subsidiaries” and ¥5,253 million in "Other net" under “Deferred tax liabilities”.

NOTE 15—REVENUE RECOGNITION

1. Disaggregation of revenue from contracts with customers as of March 31, 2023 and 2022 were as follows:

	Millions of Yen					
	Year ended March 31, 2023					
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total
Olefin	¥ 122,072	¥ —	¥ —	¥ —	¥ —	¥ 122,072
Polymer	84,029	—	—	—	—	84,029
Chlor-alkali	—	249,847	—	—	—	249,847
Urethane	—	146,271	—	—	—	146,271
Cement	—	10,271	—	—	—	10,271
Bioscience	—	—	58,432	—	—	58,432
Organic Chemicals	—	—	78,633	—	—	78,633
Advanced Materials	—	—	133,730	—	—	133,730
Engineering	—	—	—	134,677	—	134,677
Other	—	—	—	—	42,978	42,978
Revenue from contracts with customers	¥ 206,101	¥ 406,389	¥ 270,795	¥ 134,677	¥ 42,978	¥ 1,060,940
Other revenue	—	—	—	¥ 3,437	—	¥ 3,437
External revenue as reported	¥ 206,101	¥ 406,389	¥ 270,795	¥ 138,114	¥ 42,978	¥ 1,064,377

	Millions of Yen					
	Year ended March 31, 2022					
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total
Olefin	¥ 108,606	¥ —	¥ —	¥ —	¥ —	¥ 108,606
Polymer	68,579	—	—	—	—	68,579
Chlor-alkali	—	218,213	—	—	—	218,213
Urethane	—	134,238	—	—	—	134,238
Cement	—	9,173	—	—	—	9,173
Bioscience	—	—	53,531	—	—	53,531
Organic Chemicals	—	—	55,270	—	—	55,270
Advanced Materials	—	—	117,418	—	—	117,418
Engineering	—	—	—	112,842	—	112,842
Other	—	—	—	—	37,258	37,258
Revenue from contracts with customers	¥ 177,185	¥ 361,624	¥ 226,219	¥ 112,842	¥ 37,258	¥ 915,128
Other revenue	—	—	—	¥ 3,453	—	¥ 3,453
External revenue as reported	¥ 177,185	¥ 361,624	¥ 226,219	¥ 116,295	¥ 37,258	¥ 918,581

	Thousands of US Dollars (Note 1)					
	Year ended March 31, 2023					
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total
Olefin	$ 914,192	$ —	$ —	$ —	$ —	$ 914,192
Polymer	629,289	—	—	—	—	629,289
Chlor-alkali	—	1,871,093	—	—	—	1,871,093
Urethane	—	1,095,417	—	—	—	1,095,417
Cement	—	76,918	—	—	—	76,918
Bioscience	—	—	437,595	—	—	437,595
Organic Chemicals	—	—	588,879	—	—	588,879
Advanced Materials	—	—	1,001,497	—	—	1,001,497
Engineering	—	—	—	1,008,590	—	1,008,590
Other	—	—	—	—	321,860	321,860
Revenue from contracts with customers	$ 1,543,481	$ 3,043,428	$ 2,027,971	$ 1,008,590	$ 321,860	$ 7,945,330
Other revenue	—	—	—	$ 25,740	—	$ 25,740
External revenue as reported	$ 1,543,481	$ 3,043,428	$ 2,027,971	$ 1,034,330	$ 321,860	$ 7,971,070

Note: “Other” is an additional category for service-related businesses, such as transportation and warehousing, inspection and analysis, and information processing.

2. Information that provides a basis for understanding revenue from contracts with customers
Petrochemical Business
In the Petrochemical business, the Company and its consolidated subsidiaries sell goods and products related to olefins (ethylene, propylene, and other olefin products, etc.) and polymers (low-density polyethylene, high-density polyethylene, processed resin products, functional polymers, etc.) to domestic and overseas customers.
For sales of the goods and products, the Company and its consolidated subsidiaries recognize revenue at amounts expected to be received in exchange for such goods and products as the controls of such goods and products are transferred to customers. This is because it can be determined that, legal title and physical possession of the goods and products, as well as significant risks and economic values associated with ownership of the goods and products, have been transferred to the customers and the Company and its consolidated subsidiaries have the right to receive payment for the transactions from the customers at the time. For domestic sales, however, the Company and its consolidated subsidiaries recognize revenue at the time of shipment.
When the consideration of transactions includes variable consideration, it is included in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Moreover, the Company and its consolidated subsidiaries receive consideration generally within almost one year at the time that the performance obligations are satisfied, and it doesn’t include the significant financial elements.
In addition, for sales of goods which the Company and its consolidated subsidiaries determined to be agency transactions, they recognize revenue at the net amount of consideration which they retained after paying the vendors the consideration received from the customers.
With respect to product sales transactions with repurchase obligations, the Company and its consolidated subsidiaries don’t recognize revenue for products which they expected to repurchase from customers but recognize revenue at the amount of consideration which they expected to obtain.

Chlor-alkali Business

In the Chlor-alkali business, the Company and its consolidated subsidiaries sell goods and products related to chemical products (caustic soda, vinyl chloride monomer, vinyl chloride resin, inorganic and organic chemicals, etc.), urethane (urethane raw materials, etc.), and cement to domestic and overseas customers.

Information that provides a basis for understanding revenue from contracts with customers related to the sale of products and goods in the Chlor-alkali business is the same as that in the Petrochemicals business.

Specialty Business

In the Specialty business, the Company and its consolidated subsidiaries sell goods and products related to bioscience (chromatographic instruments, columns and separation media, and diagnostic systems, etc.), organic chemicals (inorganic and organic fine products, etc.), and advanced materials (electronic materials and functional materials, etc.) to domestic and overseas customers.

Information that provides a basis for understanding revenue from contracts with customers related to the sale of products and goods in the Specialty business is the same as that in the Petrochemicals business.

Engineering Business

In the Engineering business, mainly, the consolidated subsidiaries provide various water treatment services, including construction work of water treatment plants, remodeling work, maintenance and operation management of existing facilities and other services to domestic and overseas customers. The amount of variable consideration for these transactions is not significant.

The consolidated subsidiaries determined that the performance obligations are satisfied over time. This is because many transactions of construction contracts are related to the constructions for equipment on customer's sites based on the customer's specifications, and any of the following applies.

(1) As the consolidated subsidiaries perform the obligations, new assets or value of the assets increase and the customers control them.

(2) Assets that cannot be converted to another use are created by performance of the obligations and the consolidated subsidiaries have enforceable rights to receive consideration for the portions that they have completed performance of the obligations.

In addition, with respect to the services providing such as maintenance, the Company and its consolidated subsidiaries have determined that the performance obligations are satisfied over time because the customers receive benefits as the consolidated subsidiaries performed their obligations.

The progress of the construction contracts is measured on the basis of construction costs incurred by the end of each reporting period relative to the total expected construction costs because the constructions are expected to progress in accordance with the incurred degree of the construction costs. Moreover, the progress of water treatment service transactions contracted over one year or multi-year period is measured based on the passed period and the evaluation of the outcomes achieved, since the consideration and service items for each period are clearly predetermined in the contracts and the customers inspect them for each period. In addition, the consolidated subsidiaries recognize revenue by the cost recovery method when it is not possible to reasonably estimate the progress towards complete satisfaction of a performance obligation, but it is expected that the incurred costs will be recovered.

The consolidated subsidiaries receive consideration generally in phases as the progress of performance obligations in accordance with the terms of the contracts and the remaining amounts are received within almost one year after they satisfied all performance obligations. It does not include the significant financial elements.

3. Information about the relationship between the satisfaction of performance obligations under contracts with customers and cash flows from such performance obligations, and the amount and timing of revenue expected to be recognized from contracts with customers existing at the end of the current consolidated fiscal year through the following fiscal year

(1) Balance of contract assets and contract liabilities, etc. as of March 31, 2023 and 2022 were as follows:

	Millions of Yen		Thousands of US Dollars (Note 1)
	2023	2022	2023
Receivables from contracts with customers (beginning balance)	¥ 232,117	¥ 223,934	$ 1,738,313
Receivables from contracts with customers (ending balance)	258,188	232,117	1,933,558
Contract assets (beginning balance)	26,145	23,428	195,799
Contract assets (ending balance)	32,590	26,145	244,065
Contract liabilities (beginning balance)	3,000	1,659	22,467
Contract liabilities (ending balance)	3,827	3,001	28,660

Contract assets is mainly rights to consideration received in exchange for the satisfaction of performance obligations that is measured on basis of the progress at the end of the consolidated fiscal year, for construction work of water treatment plants, remodeling work and maintenance, etc. of existing facilities excluding receivables. Contract assets is reclassified to receivables from contracts with customers when the rights of the Company and its consolidated subsidiaries to the consideration become unconditional.

Contract liabilities mainly relates to advances received from customers. Contract liabilities are reversed due to recognition of revenue.

The amounts of revenue recognized in the year ended March 31, 2023 and 2022 that were included in the contract liabilities balance at the beginning of the current fiscal year were ¥2,494 million (US$18,677 thousand) and ¥1,386 million.

The amount of revenue recognized in the year ended March 31, 2023 from performance obligations satisfied (or partially satisfied) in the past is not significant.

(2) Transaction price allocated to remaining performance obligations

The Company and its consolidated subsidiaries applied a practical expedient to the notes of the transaction price allocated to the remaining performance obligations. For that reason, the Company and its consolidated subsidiaries don't include in the notes of performance obligations for contracts with an original expected duration within one year and water treatment service contracts for one year or multi-year which fixed amount is charged on the basis of the performance of the service items predetermined in the contract. The amount of unsatisfied (or partially unsatisfied) performance obligations were ¥92,689 million (US$694,144 thousand) and ¥47,709 million on March 31, 2023 and 2022. That performance obligations relate to contract work, existing facilities remodeling work and maintenance, etc. in the Engineering business. The Company and its consolidated subsidiaries expect that approximately 65% of such performance obligations will be recognized as revenue within one year after the end of the fiscal year, of the remaining 35% will be recognized as revenue within two years.

There are no significant amounts of consideration arising from contracts with customers that are not included in the transaction price.

NOTE 16—SEGMENT INFORMATION

The operations of the Companies are classified into four business segments – Petrochemical, Chlor-alkali, Specialty, Engineering.

Operations of the Petrochemical segment include the manufacture and sale of olefins and polymers.

Operations of the Chlor-alkali segment include the manufacture and sale of caustic soda, vinyl chloride monomer, polyvinyl chloride, high-performance polyurethane and cement.

Operations of the Specialty segment include the manufacture and sale of fine chemicals, scientific and diagnostic instruments and systems, quartz, specialty materials and metals.

Operations of the Engineering segment include water treatment equipment and construction.

The accounting methods for each reported segment are mostly described in Note 2.

Inter-segment sales and transfers are mainly based on market prices and manufacturing costs.

Business segment information for the years ended March 31, 2023 and 2022 was as follows:

	Millions of Yen							
	Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Net sales:								
External customers	¥ 206,101	¥ 406,389	¥ 270,795	¥ 138,114	¥ 42,978	¥ 1,064,377	¥ —	¥ 1,064,377
Inter-segment	149,177	55,711	23,650	27,539	63,280	319,357	(319,357)	—
Total	¥ 355,278	¥ 462,100	¥ 294,445	¥ 165,653	¥ 106,258	¥ 1,383,734	¥ (319,357)	¥ 1,064,377
Segment income (loss)	¥ 12,115	¥ (10,662)	¥ 52,316	¥ 17,963	¥ 2,874	¥ 74,606	¥ —	¥ 74,606
Segment assets	¥ 170,866	¥ 329,744	¥ 345,945	¥ 179,715	¥ 55,895	¥ 1,082,165	¥ 112,087	¥ 1,194,252
Depreciation and amortization	6,098	12,272	16,096	1,951	3,130	39,547	1,037	40,584
Amortization on goodwill	—	—	124	—	—	124	—	124
Capital expenditures	6,334	24,161	41,974	1,547	3,749	77,765	1,475	79,240
Investment for affiliates	1,076	11,090	7,859	2,807	1,733	24,565	—	24,565

	Millions of Yen							
	Year ended March 31, 2022							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Net sales:								
External customers	¥ 177,185	¥ 361,624	¥ 226,219	¥ 116,295	¥ 37,258	¥ 918,581	¥ —	¥ 918,581
Inter-segment	115,856	39,775	17,034	14,664	59,121	246,450	(246,450)	—
Total	¥ 293,041	¥ 401,399	¥ 243,253	¥ 130,959	¥ 96,379	¥ 1,165,031	¥ (246,450)	¥ 918,581
Segment income	¥ 15,655	¥ 69,522	¥ 43,536	¥ 12,280	¥ 3,052	¥ 144,045	¥ —	¥ 144,045
Segment assets	¥ 146,296	¥ 321,957	¥ 283,954	¥ 153,503	¥ 51,716	¥ 957,426	¥ 130,241	¥ 1,087,667
Depreciation and amortization	5,613	11,728	14,978	1,371	2,819	36,509	1,071	37,580
Amortization on goodwill	—	—	25	—	—	25	—	25
Capital expenditures	7,495	13,989	17,403	3,498	4,127	46,512	1,523	48,035
Investment for affiliates	1,040	10,668	5,959	2,768	1,664	22,099	—	22,099

	Thousands of US Dollars (Note1)							
	Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Net sales:								
External customers	$ 1,543,481	$ 3,043,428	$ 2,027,971	$ 1,034,330	$ 321,860	$ 7,971,070	$ —	$ 7,971,070
Inter-segment	1,117,180	417,218	177,114	206,238	473,900	2,391,650	(2,391,650)	—
Total	$ 2,660,661	$ 3,460,646	$ 2,205,085	$ 1,240,568	$ 795,760	$ 10,362,720	$ (2,391,650)	$ 7,971,070
Segment income (loss)	$ 90,729	$ (79,847)	$ 391,792	$ 134,524	$ 21,523	$ 558,721	$ —	$ 558,721
Segment assets	$ 1,279,608	$ 2,469,438	$ 2,590,766	$ 1,345,877	$ 418,595	$ 8,104,284	$ 839,414	$ 8,943,698
Depreciation and amortization	45,668	91,904	120,542	14,611	23,441	296,166	7,766	303,932
Amortization on goodwill	—	—	929	—	—	929	—	929
Capital expenditures	47,435	180,941	314,341	11,585	28,076	582,378	11,047	593,425
Investment for affiliates	8,058	83,052	58,856	21,021	12,979	183,966	—	183,966

Notes: 1. “Other” is an additional category for service-related businesses, such as transportation and warehousing, inspection and analysis, and information processing.
2. Segment income is equal to operating income of consolidated statements of income.
3. Adjustments amount of ¥112,087 million (US$839,414 thousand) and ¥130,241 million for segment assets as of March 31, 2023 and 2022 included ¥37,791 million (US$ 283,015 thousand) and ¥36,443 million of eliminations of inter-segment receivables and assets and ¥149,878 million (US$1,122,429 thousand) and ¥166,684 million of corporate assets unallocated to each reported segment as of March 31, 2023 and 2022, respectively.
4. Adjustments amount of ¥1,037 million (US$7,766 thousand) and ¥1,071 million for depreciation and amortization for the years ended March 31, 2023 and 2022 were mainly corporate costs unallocated to each reported segment.
5. Adjustments amount of ¥1,475 million (US$11,047 thousand) and ¥1,523 million for capital expenditures for the years ended March 31, 2023 and 2022 were mainly made to corporate assets unallocated to each reported segment.

Related information

Geographic information

(1) Net sales

	Millions of Yen				
	Year ended March 31, 2023				
	Japan	China	Other Asian countries	Other	Total
Net sales	¥ 521,261	¥ 160,556	¥ 226,927	¥ 155,633	¥ 1,064,377

	Millions of Yen				
	Year ended March 31, 2022				
	Japan	China	Other Asian countries	Other	Total
Net sales	¥ 447,699	¥ 145,663	¥ 204,578	¥ 120,641	¥ 918,581

	Thousands of US Dollars (Note1)				
	Year ended March 31, 2023				
	Japan	China	Other Asian countries	Other	Total
Net sales	$ 3,903,700	$ 1,202,396	$ 1,699,446	$ 1,165,528	$ 7,971,070

Note: Net sales are classified by country or region based on the locations of customers.

(2) Property, plant and equipment

	Millions of Yen		
	Year ended March 31, 2023		
	Japan	Other	Total
Property, plant and equipment	¥ 306,359	¥ 51,585	¥ 357,944

	Millions of Yen		
	Year ended March 31, 2022		
	Japan	Other	Total
Property, plant and equipment	¥ 287,967	¥ 38,739	¥ 326,706

	Thousands of US Dollars (Note1)		
	Year ended March 31, 2023		
	Japan	Other	Total
Property, plant and equipment	$ 2,294,308	$ 386,318	$ 2,680,626

Information about impairment loss of fixed assets by reported segments

	Millions of Yen Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Impairment loss	¥ 36	¥ 8,039	¥ 378	¥ —	¥ —	¥ 8,453	¥ (140)	¥ 8,313

	Millions of Yen Year ended March 31, 2022							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Impairment loss	¥ 34	¥ 2,229	¥ 384	¥ —	¥ —	¥ 2,647	¥ —	¥ 2,647

	Thousands of US Dollars (Note1) Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Impairment loss	$ 270	$ 60,203	$ 2,831	$ —	$ —	$ 63,304	$ (1,048)	$ 62,256

Information about unamortized balance of goodwill by reported segments

	Millions of Yen							
	Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Unamortized balance of goodwill	¥ —	¥ —	¥ 1,090	¥ —	¥ —	¥ 1,090	¥ —	¥ 1,090

	Millions of Yen							
	Year ended March 31, 2022							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Unamortized balance of goodwill	¥ —	¥ —	¥ 1,053	¥ —	¥ —	¥ 1,053	¥ —	¥ 1,053

	Thousands of US Dollars (Note1)							
	Year ended March 31, 2023							
	Petrochemical	Chlor-alkali	Specialty	Engineering	Other	Total	Adjustments	Consolidated
Unamortized balance of goodwill	$ —	$ —	$ 8,163	$ —	$ —	$ 8,163	$ —	$ 8,163

NOTE 17—RELATED PARTY TRANSACTIONS

There were no balances or transactions to be disclosed as of and for the year ended March 31, 2023 and 2022.

NOTE 18—STOCK OPTION PLANS

At March 31, 2023, the Company had the following stock option plans:

	2019 plan	2018 plan	2017 plan	2016 plan	2015 plan
Date of grant	July 13, 2019	July 14, 2018	July 15, 2017	July 16, 2016	July 18, 2015
Grantees	28 (including 5 directors)	30 (including 7 directors)	31 (including 8 directors)	30 (including 6 directors)	29 (including 9 directors)
Type of stock	Common stock	Common stock	Common stock	Common stock	Common stock
Number of shares granted	53,820	49,519	30,986	81,764	55,611
Exercise price (Yen)	¥ 1	¥ 1	¥ 1	¥ 1	¥ 1
Exercise price (US Dollars) (Note 1)	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01
Exercisable period	July 14, 2019– July 13, 2044	July 15, 2018– July 14, 2043	July 16, 2017– July 15, 2042	July 17, 2016– July 16, 2041	July 19, 2015– July 18, 2040
Issue price upon exercise of the subscription rights to shares (Yen)	¥ 1,192	¥ 1,374	¥ 2,277	¥ 863	¥ 1,199
Issue price upon exercise of the subscription rights to shares (US Dollars) (Note 1)	$ 8.93	$ 10.29	$ 17.05	$ 6.46	$ 8.98

	2014 plan	2013 plan	2012 plan	2011 plan	2010 plan
Date of grant	July 12, 2014	July 13, 2013	July 14, 2012	July 16, 2011	July 17, 2010
Grantees	32 (including 12 directors)	33 (including 13 directors)	30 (including 11 directors)	31 (including 13 directors)	29 (including 14 directors)
Type of stock	Common stock	Common stock	Common stock	Common stock	Common stock
Number of shares granted	85,265	110,094	227,185	128,901	209,856
Exercise price (Yen)	¥ 1	¥ 1	¥ 1	¥ 1	¥ 1
Exercise price (US Dollars) (Note 1)	$ 0.01	$ 0.01	$ 0.01	$ 0.01	$ 0.01
Exercisable period	July 13, 2014– July 12, 2039	July 14, 2013– July 13, 2038	July 15, 2012– July 14, 2037	July 17, 2011– July 16, 2036	July 18, 2010– July 17, 2035
Issue price upon exercise of the subscription rights to shares (Yen)	¥ 851	¥ 677	¥ 329	¥ 627	¥ 393
Issue price upon exercise of the subscription rights to shares (US Dollars) (Note 1)	$ 6.37	$ 5.07	$ 2.46	$ 4.70	$ 2.94

	2009 plan
Date of grant	July 18, 2009
Grantees	28(including 16 directors)
Type of stock	Common stock
Number of shares granted	180,594
Exercise price (Yen)	¥ 1
Exercise price (US Dollars) (Note 1)	$ 0.01
Exercisable period	July 19, 2009– July 18, 2034
Issue price upon exercise of the subscription rights to shares (Yen)	¥ 451
Issue price upon exercise of the subscription rights to shares (US Dollars) (Note 1)	$ 3.38

Note: "Number of shares granted" means total shares to be issued upon exercise of subscription rights to shares and is adjusted for the reverse stock split (two-to-one share) executed on October 1, 2017.

NOTE 19 — SUBSEQUENT EVENTS

At the meetings of the Company's board of directors held on May 12, 2023 and May 12, 2022 retained earnings of the Company as of March 31, 2023 and 2022, were appropriated as follows:

	March 31, 2023	
	Millions of Yen	Thousands of US Dollars (Note 1)
Year-end cash dividends (¥40.00 per share)	¥ 12,734	$ 95,364

	March 31, 2022
	Millions of Yen
Year-end cash dividends (¥50.00 per share)	¥ 15,912

Independent Auditor's Report

To the Board of Directors of Tosoh Corporation:

Opinion

We have audited the accompanying consolidated financial statements of Tosoh Corpoartion ("the Company") and its consolidated subsidiaries (collectively referred to as "the Group"), which comprise the consolidated balance sheets as at March 31, 2023 and 2022, the consolidated statements of income and comprehensive income, changes in net assets and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2023 and 2022, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. 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 Japan, 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.

Reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business where revenue is recognized for performance obligations satisfied over time	
The key audit matter	**How the matter was addressed in our audit**
As described in Note 2, "SUMMARY OF ACCOUNTING POLICIES, Significant accounting estimates, 1. Revenue recognition of transactions related to construction contracts in the engineering segment that were recognized for performance obligations satisfied over time" to the consolidated financial statements, the revenues related to construction contracts in the engineering segment, which were recognized for performance obligations satisfied over time, excluding the revenues related to the cost recovery method, amounted to ¥70,204 million (US$525,755 thousand), representing approximately 6.6% of total revenue in the consolidated financial statements. The consolidated subsidiaries recognize revenue over time for construction contracts as they are satisfied based on the progress towards complete	In order to assess the primary procedures we performed to assess the reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business of the consolidated subsidiary Organo Corporation where revenue is recognized for performance obligations satisfied over time, we requested the component auditor of Organo Corporation to perform an audit. Then we evaluated the report of the component auditor as to whether sufficient and appropriate audit evidence was obtained from the following procedures among others: (1) Internal control testing Test of the design and operating effectiveness of certain of Organo Corporation's internal controls relevant to the process of preparing the estimated

satisfaction of a performance obligation. The estimated progress is calculated as a percentage of accumulated costs incurred to date against the total construction costs. Total construction costs are comprised of the estimated cost for each contract and are the basis for the recognition of construction revenue. Any increases in work hours and changes in circumstances at the construction sites due to matters that occurred subsequent to the start of construction could result in changes in the work activities. Especially, because a large-scale construction related to the water treatment engineering business of the consolidated subsidiary, Organo Corporation, takes a long period of time to complete, there is a high degree of uncertainty in estimating the work activities and work hours toward completion. Therefore, management's determination of the following aspects of construction had a significant effect on the estimated total construction costs at the end of the fiscal year. ● whether all the work necessary to complete the construction contract was identified and the estimation of the cost relevant to the work was included in the estimated cost; and ● whether any changes in circumstances impacting the level of work required that occurred subsequent to the start of construction, were reflected within the estimated cost in a timely and appropriate manner. We, therefore, determined that our assessment of the reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business of the consolidated subsidiary Organo Corporation where revenue is recognized for performance obligations satisfied over time was one of the most significant matters in our audit of the consolidated financial statements for the current fiscal year, and accordingly, a key audit matter.	cost and managing the cost for construction contracts focusing on the following controls: ● controls to prepare the appropriate estimated cost; and ● controls to reflect any changes in circumstances that occur after the start of construction within the project budget in a timely and appropriate manner. (2) Assessment of the reasonableness of the estimated total construction cost To evaluate the accuracy of estimated cost, by comparing the estimated cost of completed projects in the current fiscal year with the total actual cost. To examine large-scale construction projects with relatively high uncertainty in the estimation of the estimated cost, by performing: ● assessment whether all the work agreed upon with the customer was included in the project budget by comparing the project budget with the construction contract and the specification sheet; ● evaluation of the accuracy of the estimated cost by comparing the estimated cost as of the end of the fiscal year with their initial estimated cost and inquiry about the cause of significant variances between the two, and ensuring of the effect of events that were the causes of those variances were reflected in the latest estimated cost as of the end of the fiscal year, as necessary; and ● inspection of the materials for monthly construction status meetings and inquiry of the head of project management and other relevant personnel about any changes in circumstances that occurred after the start of construction and their judgment on whether to update the estimated cost, and assessment of the consistency of their responses with each other's.

Appropriateness of the amount of impairment loss on fixed assets related to the chlor-alkali business owned by Tohoku Tosoh Chemical Co., Ltd.

The key audit matter	How the matter was addressed in our audit
As described in Note 11, "IMPAIRMENT LOSS" to the consolidated financial statements, an impairment loss of ¥7,701 million (US$57,672 thousand) was recorded in the consolidated statement of income of Tosoh Corporation for the	The primary procedures we performed to assess the amount of impairment losses on fixed assets in the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., which is a consolidated subsidiary of the Company, included the

current consolidated fiscal year for fixed assets related to the chlor-alkali business held by Tohoku Tosoh Chemical Co., Ltd., which is a consolidated subsidiary. While these long-lived assets are depreciated/amortized in a systematic manner, they need to be tested for impairment whenever there is an impairment indicator. The impairment test is performed by comparing the undiscounted future cash flows that are expected to be generated from the related asset groups with their carrying amounts. If the recognition of an impairment loss is deemed necessary, the carrying amount is reduced to the recoverable amount, and the resulting decrease in the carrying amount is recognized as an impairment loss. The recoverable amount is the higher of either the value in use or the net selling price. In the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., a consolidated subsidiary, has expected recurring operating losses for some consecutive years, and identified an impairment indicator. Accordingly, the Company performed an impairment test during the current fiscal year, it was determined that the recognition of an impairment loss was necessary. In measuring the impairment loss, the value in use is used as the recoverable amount. The future cash flows used for measuring the value in use were estimated based on the next fiscal year's budget and medium-term business plan prepared by the management of Tohoku Tosoh Chemical Co., Ltd.,. These estimates are based on the assumption that sales increase due to the increasing of orders from existing customers, the forecast of gross profit margin of caustic soda, which is a main product, and the production plan of the new plant for calcium hypochlorite will be achieved. Accordingly, management's judgment thereon had a significant effect on the estimated future cash flows. In addition, selecting appropriate models and input data for estimating the discount rate, used to calculate the value in use requires a high degree of expertise in valuation. We, therefore, determined that our assessment of the appropriateness of the Company's judgment as to the amount of impairment loss on fixed assets related to the chlor-alkali business owned by Tohoku Tosoh Chemical Co., Ltd. was one of the most significant matters in our audit of the consolidated financial statements for the current	following: (1) Internal control testing We tested the design and operating effectiveness of certain of the Company's internal controls relevant the appropriateness of the amount of impairment loss on fixed assets was evaluated. In this assessment, we focused our testing on controls designed to assess the reasonableness of future cash flow estimates prepared under the next fiscal year's budget and medium-term business plan. (2) Assessment of the appropriateness of the amount of impairment loss In order to assess the appropriateness of the key assumptions contained in the next fiscal year's budget and medium-term business plan for the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., a consolidated subsidiary,. the following procedures were taken. We: ● assessed the consistency of the assumptons regarding the increasing of orders from existing customers with external information obtained by us and the materials of the Management Committee, including the results of interviews with existing customers. ● regarding the forecast of gross profit margin of caustic soda, assesed the consistency of the assumptions with the basic data on sales unit prices agreed with existing customers and electricity rates agreed with electric power companies, which are the main components of gross profit margin, and performed comparative analysis with past results and trend analysis. ● in order to evaluate the feasibility of the production plan of the new plant of calcium hypochlorite, visited the site and inquired of the production manager about the feasibility of measures to secure the production quantity. Furthermore, we performed the following procedures by involving a valuation specialist within our domestic network firms who assisted in our evaluation of the discount rate: ● assessment of the calculation method of discount rate, its main preconditions and appropriateness of the calculation process. ● assessment of the reasonableness of the input data through comparison with market data published by external organizations.

fiscal year, and accordingly, a key audit matter.	

Adequacy of the valuation of slow-moving inventories held by Tosoh Corporation	
The key audit matter	**How the matter was addressed in our audit**
Tosoh Corporation and its consolidated subsidiaries (hereinafter collectively referred to as the “Group”) reported inventories of ¥257,133 million (US$1,925,657 thousand) on the consolidated balance sheets. As described in Note 2, “SUMMARY OF ACCOUNTING POLICIES, Significant accounting estimates, 2. The valuation of inventories” to the consolidated financial statements, ¥132,724 million (US$993,964 thousand) of those inventories were held by Tosoh Corporation representing approximately 11.1% of total assets in the consolidated financial statements. Inventories are measured at the lower of either the acquisition cost or the net selling price at the end of the fiscal year. In addition, for slow-moving inventories that are outside of the normal operating cycle, a valuation method that reduces the carrying amount is applied in order to reflect their reduced profitability. The Group identifies slow-moving inventories that are outside of the normal operating cycle from inventories whose turnover period exceeds a certain threshold considering the sales plan based on forecasted demand. This forecasted demand could significantly change due to factors beyond the control of management. Especially, as Tosoh Corporation has many product types and grades, the identification of slow-moving inventories that are outside of the normal operating cycle could change depending on how the company forecasts each demand, resulting in a significant effect on the valuation. We, therefore, determined that our assessment of the adequacy of the valuation of slow-moving inventories held by Tosoh Corporation was one of the most significant matters in our audit of the consolidated financial statements for the current fiscal year, and accordingly, a key audit matter.	The primary procedures we performed to assess the adequacy of the valuation of slow-moving inventories held by Tosoh Corporation included the following: (1) Internal control testing We tested the design and operating effectiveness of certain of Tosoh Corporation’s internal controls relevant to the identification of slow-moving inventories that are outside of the normal operating cycle and the valuation of them, including the process of preparing the sales plan based on forecasted demand. We also tested the design and operating effectiveness of the general and application controls of the relevant IT systems that ensure the accuracy and completeness of the amount of inventory classified in each aging category in the inventory aging report that management relies on to identify slow-moving inventories. (2) Assessment of the valuation of slow-moving inventories In order to assess the reasonableness of key assumptions adopted by management in identifying slow-moving inventories that are outside of the normal operating cycle, we inquired of management about the basis for which these assumptions were developed. In addition, we: ● assessed the reasonableness of key assumptions by individually evaluating the consistency of forecasted demand with the notification of expected order volume from major customers, and compared forecasted demand with market data regarding demand trends in the industries of major customers published by external organizations; and ● assessed the accuracy of forecasted demand by comparing past forecasted demand of slow-moving inventories with subsequent actual sales and evaluating the causes of any differences from actual results, and then analyzed the sensitivity when the effect of specific uncertainties were incorporated into the forecasted demand at the end of the current fiscal year.

Other Information

The other information comprises the information included in the Financial Statements, but does not include the consolidated financial statements, the financial statements, and our auditor's reports thereon.

We do not perform any work on the other information as we determine such information does not exist.

Responsibilities of Management and Corporate Auditors and the Board of Corporate Auditors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of 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 in accordance with accounting principles generally accepted in Japan 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.

Corporate auditors and the board of corporate auditors are responsible for overseeing the directors' performance of their duties with regard to the design, implementation and maintenance of 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 auditing standards generally accepted in Japan 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 our audit in accordance with auditing standards generally accepted in Japan, 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, while the objective of the audit is not to express 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 whether the presentation and disclosures in the consolidated financial statements are in accordance with accounting standards generally accepted in Japan, 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 corporate auditors and the board of corporate auditors regarding, among other matters, the planned scope and timing of the audit, significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide corporate auditors and the board of corporate auditors with a statement that we have complied with relevant ethical requirements regarding independence, and 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 corporate auditors and the board of corporate auditors, 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.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2023 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

We do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

Kentaro Yamamoto

Designated Engagement Partner
Certified Public Accountant

Takashi Watanabe
Designated Engagement Partner
Certified Public Accountant

Koichi Hamaguchi
Designated Engagement Partner
Certified Public Accountant

KPMG AZSA LLC
Tokyo Office, Japan
June 23, 2023

Notes to the Reader of Independent Auditor's Report:
This is a copy of the Independent Auditor's Report and the original copies are kept separately by the Company and KPMG AZSA LLC.

Independent Auditor's Report

Tosoh Corporation and its subsidiaries

For the Years ended March 31,
2023 and 2022

KPMG AZSA LLC
June 2023
This report contains 7 pages
Appendices comprise 59 pages

Independent Auditor's Report

To the Board of Directors of Tosoh Corporation:

Opinion

We have audited the accompanying consolidated financial statements of Tosoh Corpoartion ("the Company") and its consolidated subsidiaries (collectively referred to as "the Group"), which comprise the consolidated balance sheets as at March 31, 2023 and 2022, the consolidated statements of income and comprehensive income, changes in net assets and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2023 and 2022, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. 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 Japan, 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.

<table>
<tr><td colspan="2">Reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business where revenue is recognized for performance obligations satisfied over time</td></tr>
<tr><th>The key audit matter</th><th>How the matter was addressed in our audit</th></tr>
<tr><td>As described in Note 2, "SUMMARY OF ACCOUNTING POLICIES, Significant accounting estimates, 1. Revenue recognition of transactions related to construction contracts in the engineering segment that were recognized for performance obligations satisfied over time" to the consolidated financial statements, the revenues related to construction contracts in the engineering segment, which were recognized for performance obligations satisfied over time, excluding the revenues related to the cost recovery method, amounted to ¥70,204 million (US$525,755 thousand), representing approximately 6.6% of total revenue in the consolidated financial statements.

The consolidated subsidiaries recognize revenue</td><td>In order to assess the primary procedures we performed to assess the reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business of the consolidated subsidiary Organo Corporation where revenue is recognized for performance obligations satisfied over time, we requested the component auditor of Organo Corporation to perform an audit.

Then we evaluated the report of the component auditor as to whether sufficient and appropriate audit evidence was obtained from the following procedures among others:

(1) Internal control testing

Test of the design and operating effectiveness of</td></tr>
</table>

over time for construction contracts as they are satisfied based on the progress towards complete satisfaction of a performance obligation. The estimated progress is calculated as a percentage of accumulated costs incurred to date against the total construction costs. Total construction costs are comprised of the estimated cost for each contract and are the basis for the recognition of construction revenue. Any increases in work hours and changes in circumstances at the construction sites due to matters that occurred subsequent to the start of construction could result in changes in the work activities. Especially, because a large-scale construction related to the water treatment engineering business of the consolidated subsidiary, Organo Corporation, takes a long period of time to complete, there is a high degree of uncertainty in estimating the work activities and work hours toward completion. Therefore, management's determination of the following aspects of construction had a significant effect on the estimated total construction costs at the end of the fiscal year. ● whether all the work necessary to complete the construction contract was identified and the estimation of the cost relevant to the work was included in the estimated cost; and ● whether any changes in circumstances impacting the level of work required that occurred subsequent to the start of construction, were reflected within the estimated cost in a timely and appropriate manner. We, therefore, determined that our assessment of the reasonableness of the estimate of total construction costs for transactions related to the water treatment engineering business of the consolidated subsidiary Organo Corporation where revenue is recognized for performance obligations satisfied over time was one of the most significant matters in our audit of the consolidated financial statements for the current fiscal year, and accordingly, a key audit matter.	certain of Organo Corporation's internal controls relevant to the process of preparing the estimated cost and managing the cost for construction contracts focusing on the following controls: ● controls to prepare the appropriate estimated cost; and ● controls to reflect any changes in circumstances that occur after the start of construction within the project budget in a timely and appropriate manner. (2) Assessment of the reasonableness of the estimated total construction cost To evaluate the accuracy of estimated cost, by comparing the estimated cost of completed projects in the current fiscal year with the total actual cost. To examine large-scale construction projects with relatively high uncertainty in the estimation of the estimated cost, by performing: ● assessment whether all the work agreed upon with the customer was included in the project budget by comparing the project budget with the construction contract and the specification sheet; ● evaluation of the accuracy of the estimated cost by comparing the estimated cost as of the end of the fiscal year with their initial estimated cost and inquiry about the cause of significant variances between the two, and ensuring of the effect of events that were the causes of those variances were reflected in the latest estimated cost as of the end of the fiscal year, as necessary; and ● inspection of the materials for monthly construction status meetings and inquiry of the head of project management and other relevant personnel about any changes in circumstances that occurred after the start of construction and their judgment on whether to update the estimated cost, and assessment of the consistency of their responses with each other's.

Appropriateness of the amount of impairment loss on fixed assets related to the chlor-alkali business owned by Tohoku Tosoh Chemical Co., Ltd.	
The key audit matter	**How the matter was addressed in our audit**
As described in Note 11, "IMPAIRMENT LOSS" to the consolidated financial statements, an	The primary procedures we performed to assess the amount of impairment losses on fixed assets in

impairment loss of ¥7,701 million (US$57,672 thousand) was recorded in the consolidated statement of income of Tosoh Corporation for the current consolidated fiscal year for fixed assets related to the chlor-alkali business held by Tohoku Tosoh Chemical Co., Ltd., which is a consolidated subsidiary. While these long-lived assets are depreciated/amortized in a systematic manner, they need to be tested for impairment whenever there is an impairment indicator. The impairment test is performed by comparing the undiscounted future cash flows that are expected to be generated from the related asset groups with their carrying amounts. If the recognition of an impairment loss is deemed necessary, the carrying amount is reduced to the recoverable amount, and the resulting decrease in the carrying amount is recognized as an impairment loss. The recoverable amount is the higher of either the value in use or the net selling price. In the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., a consolidated subsidiary, has expected recurring operating losses for some consecutive years, and identified an impairment indicator. Accordingly, the Company performed an impairment test during the current fiscal year, it was determined that the recognition of an impairment loss was necessary. In measuring the impairment loss, the value in use is used as the recoverable amount. The future cash flows used for measuring the value in use were estimated based on the next fiscal year's budget and medium-term business plan prepared by the management of Tohoku Tosoh Chemical Co., Ltd.,. These estimates are based on the assumption that sales increase due to the increasing of orders from existing customers, the forecast of gross profit margin of caustic soda, which is a main product, and the production plan of the new plant for calcium hypochlorite will be achieved. Accordingly, management's judgment thereon had a significant effect on the estimated future cash flows. In addition, selecting appropriate models and input data for estimating the discount rate, used to calculate the value in use requires a high degree of expertise in valuation. We, therefore, determined that our assessment of the appropriateness of the Company's judgment as to the amount of impairment loss on fixed assets	the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., which is a consolidated subsidiary of the Company, included the following: (1) Internal control testing We tested the design and operating effectiveness of certain of the Company's internal controls relevant the appropriateness of the amount of impairment loss on fixed assets was evaluated. In this assessment, we focused our testing on controls designed to assess the reasonableness of future cash flow estimates prepared under the next fiscal year's budget and medium-term business plan. (2) Assessment of the appropriateness of the amount of impairment loss In order to assess the appropriateness of the key assumptions contained in the next fiscal year's budget and medium-term business plan for the chlor-alkali business of Tohoku Tosoh Chemical Co., Ltd., a consolidated subsidiary,. the following procedures were taken. We: ● assessed the consistency of the assumptons regarding the increasing of orders from existing customers with external information obtained by us and the materials of the Management Committee, including the results of interviews with existing customers. ● regarding the forecast of gross profit margin of caustic soda, assesed the consistency of the assumptions with the basic data on sales unit prices agreed with existing customers and electricity rates agreed with electric power companies, which are the main components of gross profit margin, and performed comparative analysis with past results and trend analysis. ● in order to evaluate the feasibility of the production plan of the new plant of calcium hypochlorite, visited the site and inquired of the production manager about the feasibility of measures to secure the production quantity. Furthermore, we performed the following procedures by involving a valuation specialist within our domestic network firms who assisted in our evaluation of the discount rate: ● assessment of the calculation method of discount rate, its main preconditions and appropriateness of the calculation process.

related to the chlor-alkali business owned by Tohoku Tosoh Chemical Co., Ltd. was one of the most significant matters in our audit of the consolidated financial statements for the current fiscal year, and accordingly, a key audit matter.	● assessment of the reasonableness of the input data through comparison with market data published by external organizations.

Adequacy of the valuation of slow-moving inventories held by Tosoh Corporation	
The key audit matter	**How the matter was addressed in our audit**
Tosoh Corporation and its consolidated subsidiaries (hereinafter collectively referred to as the “Group”) reported inventories of ¥257,133 million (US$1,925,657 thousand) on the consolidated balance sheets. As described in Note 2, “SUMMARY OF ACCOUNTING POLICIES, Significant accounting estimates, 2. The valuation of inventories” to the consolidated financial statements, ¥132,724 million (US$993,964 thousand) of those inventories were held by Tosoh Corporation representing approximately 11.1% of total assets in the consolidated financial statements. Inventories are measured at the lower of either the acquisition cost or the net selling price at the end of the fiscal year. In addition, for slow-moving inventories that are outside of the normal operating cycle, a valuation method that reduces the carrying amount is applied in order to reflect their reduced profitability. The Group identifies slow-moving inventories that are outside of the normal operating cycle from inventories whose turnover period exceeds a certain threshold considering the sales plan based on forecasted demand. This forecasted demand could significantly change due to factors beyond the control of management. Especially, as Tosoh Corporation has many product types and grades, the identification of slow-moving inventories that are outside of the normal operating cycle could change depending on how the company forecasts each demand, resulting in a significant effect on the valuation. We, therefore, determined that our assessment of the adequacy of the valuation of slow-moving inventories held by Tosoh Corporation was one of the most significant matters in our audit of the consolidated financial statements for the current fiscal year, and accordingly, a key audit matter.	The primary procedures we performed to assess the adequacy of the valuation of slow-moving inventories held by Tosoh Corporation included the following: (1) Internal control testing We tested the design and operating effectiveness of certain of Tosoh Corporation’s internal controls relevant to the identification of slow-moving inventories that are outside of the normal operating cycle and the valuation of them, including the process of preparing the sales plan based on forecasted demand. We also tested the design and operating effectiveness of the general and application controls of the relevant IT systems that ensure the accuracy and completeness of the amount of inventory classified in each aging category in the inventory aging report that management relies on to identify slow-moving inventories. (2) Assessment of the valuation of slow-moving inventories In order to assess the reasonableness of key assumptions adopted by management in identifying slow-moving inventories that are outside of the normal operating cycle, we inquired of management about the basis for which these assumptions were developed. In addition, we: ● assessed the reasonableness of key assumptions by individually evaluating the consistency of forecasted demand with the notification of expected order volume from major customers, and compared forecasted demand with market data regarding demand trends in the industries of major customers published by external organizations; and ● assessed the accuracy of forecasted demand by comparing past forecasted demand of slow-moving inventories with subsequent actual sales and evaluating the causes of any differences from actual results, and then analyzed the sensitivity when the effect of

	specific uncertainties were incorporated into the forecasted demand at the end of the current fiscal year.

Other Information

The other information comprises the information included in the Financial Statements, but does not include the consolidated financial statements, the financial statements, and our auditor's reports thereon.

We do not perform any work on the other information as we determine such information does not exist.

Responsibilities of Management and Corporate Auditors and the Board of Corporate Auditors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of 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 in accordance with accounting principles generally accepted in Japan 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.

Corporate auditors and the board of corporate auditors are responsible for overseeing the directors' performance of their duties with regard to the design, implementation and maintenance of 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 auditing standards generally accepted in Japan 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 our audit in accordance with auditing standards generally accepted in Japan, 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, while the objective of the audit is not to express 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 whether the presentation and disclosures in the consolidated financial statements are in accordance with accounting standards generally accepted in Japan, 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 corporate auditors and the board of corporate auditors regarding, among other matters, the planned scope and timing of the audit, significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide corporate auditors and the board of corporate auditors with a statement that we have complied with relevant ethical requirements regarding independence, and 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 corporate auditors and the board of corporate auditors, 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.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2023 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

We do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

Kentaro Yamamoto
Designated Engagement Partner
Certified Public Accountant

Takashi Watanabe
Designated Engagement Partner
Certified Public Accountant

Koichi Hamaguchi
Designated Engagement Partner
Certified Public Accountant

KPMG AZSA LLC
Tokyo Office, Japan
June 23, 2023