LINDE PLC

DIRECTORS' REPORT AND FINANCIAL STATEMENTS
FINANCIAL YEAR ENDED 31 DECEMBER 2022

FORWARD-LOOKING STATEMENTS

This document contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are identified by terms and phrases such as: anticipate, believe, intend, estimate, expect, continue, should, could, may, plan, project, predict, will, potential, forecast, and similar expressions. They are based on management's reasonable expectations and assumptions as of the date the statements are made but involve risks and uncertainties. These risks and uncertainties include, without limitation: the performance of stock markets generally; developments in worldwide and national economies and other international events and circumstances, including trade conflicts and tariffs; changes in foreign currencies and in interest rates; the cost and availability of electric power, natural gas and other raw materials; the ability to achieve price increases to offset cost increases; catastrophic events including natural disasters, epidemics, pandemics such as COVID-19, and acts of war and terrorism; the ability to attract, hire, and retain qualified personnel; the impact of changes in financial accounting standards; the impact of changes in pension plan liabilities; the impact of tax, environmental, healthcare and other legislation and government regulation in jurisdictions in which the company operates; the cost and outcomes of investigations, litigation and regulatory proceedings; the impact of potential unusual or non-recurring items; continued timely development and market acceptance of new products and applications; the impact of competitive products and pricing; future financial and operating performance of major customers and industries served; the impact of information technology system failures, network disruptions and breaches in data security; and the effectiveness and speed of integrating new acquisitions into the business. These risks and uncertainties may cause future results or circumstances to differ materially from adjusted projections, estimates or other forward-looking statements.

Linde plc assumes no obligation to update or provide revisions to any forward-looking statement in response to changing circumstances. The above listed risks and uncertainties are further described in the Principal Risks and Uncertainties section of this report, which should be reviewed carefully. Please consider Linde plc's forward-looking statements in light of those risks.

Directors' Report

PRINCIPAL ACTIVITIES

General

Linde plc is a public limited company formed under the laws of Ireland with its principal offices in the United Kingdom and United States. Linde is the largest industrial gas company worldwide and is a major technological innovator in the industrial gases industry. Its primary products in its industrial gases business are atmospheric gases (oxygen, nitrogen, argon, and rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, and acetylene). The company also designs and builds equipment that produces industrial gases and offers customers a wide range of gas production and processing services such as olefin plants, natural gas plants, air separation plants, hydrogen and synthesis gas plants and other types of plants.

Linde serves a diverse group of industries including healthcare, chemicals and energy, manufacturing, metals and mining, food and beverage, and electronics.

Industrial Gases Products and Manufacturing Processes

Atmospheric gases are the highest volume products produced by Linde. Using air as its raw material, Linde produces oxygen, nitrogen and argon through several air separation processes of which cryogenic air separation is the most prevalent. Rare gases, such as krypton, neon and xenon, are also produced through cryogenic air separation. As a pioneer in the industrial gases industry, Linde is a leader in developing a wide range of proprietary and patented applications and supply systems technology. Linde also led the development and commercialization of non-cryogenic air separation technologies for the production of industrial gases. These technologies open important new markets and optimize production capacity for the company by lowering the cost of supplying industrial gases. These technologies include proprietary vacuum pressure swing adsorption ("VPSA") and membrane separation to produce gaseous oxygen and nitrogen, respectively.

Process gases, including carbon dioxide, hydrogen, carbon monoxide, helium, specialty gases and acetylene are produced by methods other than air separation.

Hydrogen is produced from a range of feedstocks using an array of different technologies. Despite hydrogen being an invisible molecule, colors are often used to designate and differentiate between the production processes used to produce the molecule. The vast majority of hydrogen currently produced by Linde is what is termed gray hydrogen and is derived from natural gas or methane, using steam methane reformation technology. Linde has multiple technologies to produce other types of hydrogen, including blue and green, which are both considered types of clean energy. Blue hydrogen is produced by capturing the carbon emissions from the hydrogen plant and either utilizing them in a way that stops them from being emitted or sequestering them in the subsurface for the long term. Green hydrogen is produced by electrolysis using renewable energy or from the steam methane reforming of biomethane. Low carbon intensity, high purity hydrogen is also produced by purifying and recovering by-product hydrogen sources from the chemical and petrochemical industries.

Helium is sourced from certain helium-rich natural gas streams in the United States, with additional supplies being acquired from outside the United States. Carbon monoxide can be produced by either steam methane reforming or auto-thermal reforming of natural gas or other feed streams such as naphtha. Acetylene is primarily sourced as a chemical by-product, but may also be produced from calcium carbide and water. Most carbon dioxide is purchased from by-product sources, including chemical plants, refineries and industrial processes or is recovered from carbon dioxide wells. Carbon dioxide is processed in Linde's plants to produce commercial and food-grade carbon dioxide.

Industrial Gases Distribution

There are three basic distribution methods for industrial gases: (i) on-site or tonnage; (ii) merchant or bulk liquid; and (iii) packaged or cylinder gases. These distribution methods are often integrated, with products from all three supply modes coming from the same plant. The method of supply is generally determined by the lowest cost means of meeting the customer's needs, depending upon factors such as volume requirements, purity, pattern of usage, and the form in which the product is used (as a gas or as a cryogenic liquid).

On-site. Customers that require the largest volumes of product (typically oxygen, nitrogen and hydrogen) and that have a relatively constant demand pattern are supplied by cryogenic and process gas on-site plants. Linde constructs plants on or adjacent to these customers' sites and supplies the product directly to customers by pipeline. On-site product supply contracts generally are total requirement contracts with terms typically ranging from 10-20 years and containing minimum purchase requirements and price escalation provisions. Many of the cryogenic on-site plants also produce liquid products for the merchant market. Therefore, plants are typically not dedicated to a single customer. Advanced air separation processes allow on-site delivery to customers with smaller volume requirements.

Merchant. The merchant business is generally associated with distributable liquid oxygen, nitrogen, argon, carbon dioxide, hydrogen and helium. The deliveries generally are made from Linde’s plants by tanker trucks to storage containers at the customer's site which are owned and maintained by Linde and leased to the customer. Due to distribution cost, merchant oxygen and nitrogen generally have a relatively small distribution radius from the plants at which they are produced. Merchant argon, hydrogen and helium can be shipped much longer distances. The customer agreements used in the merchant business are usually three-to seven-year requirement contracts.

Packaged Gases. Customers requiring small volumes are supplied products in metal containers called cylinders, under medium to high pressure. Packaged gases include atmospheric gases, carbon dioxide, hydrogen, helium, acetylene and related products. Linde also produces and distributes in cylinders a wide range of specialty gases and mixtures. Cylinders may be delivered to the customer’s site or picked up by the customer at a packaging facility or retail store. Packaged gases are generally sold under one to three-year supply contracts and through purchase orders.

Engineering

Linde’s Engineering business has a global presence, with its focus on market segments such as air separation, hydrogen, synthesis, olefin and natural gas plants. The company utilizes its extensive process engineering know-how in the planning, design and construction of highly efficient turnkey plants for the production and processing of gases. With its state-of-the-art sustainable technologies, Engineering helps customers avoid, capture and utilize CO2 emissions. Its technology portfolio covers the entire value chain for production, liquefaction, storage, distribution and application of hydrogen which supports the transition to clean energy. Its digital services and solutions increase plant efficiency and performance.

Linde's plants are used in a wide variety of fields: in the petrochemical and chemical industries, in refineries and fertilizer plants, to recover air gases, to produce synthesis gases, to treat natural gas and to produce noble gases. The Engineering business either supplies plant components directly to the customer or to the industrial gas business of Linde, which operates the plants under a long-term gases supply contract.

BUSINESS REVIEW

CONSOLIDATED RESULTS OF OPERATIONS

The following table provides summary results of operations of Linde plc for 2022 and 2021:

(Millions of dollars, except per share data) **Year Ended 31 December**	**2022**	**2021**	**Variance**	
Revenue	$ 33,899	$ 31,259	$ 2,640	8 %
Cost of sales (includes depreciation)	23,203	21,623	1,580	7 %
Marketing and selling expenses, Administrative expenses and Research and development costs, and Impairment losses on receivables and contract assets (includes depreciation and amortization)	4,107	4,517	(410)	(9)%
Other operating income and (expenses) - net	(1,046)	(15)	(1,031)	N/A
Operating profit	**5,543**	**5,104**	439	9 %
Operating Margin	*16.4 %*	*16.3 %*		
Financial (income) and expenses - net	(16)	(81)	65	(80)%
Share of profit and loss from associates and joint ventures (at equity)	91	44	47	107 %
Income tax expense	1,506	1,334	172	13 %
PROFIT FOR THE YEAR	**$ 4,144**	**$ 3,895**	$ 249	6 %
attributable to Linde plc shareholders	$ 3,976	$ 3,738	$ 238	6 %
attributable to noncontrolling interests	$ 168	$ 157	$ 11	7 %
DILUTED EARNINGS PER SHARE - LINDE PLC SHAREHOLDERS	$ 7.89	$ 7.16	$ 0.73	10 %

Results of Operations, 2022 Compared With 2021

Revenue increased 8% to $33,899 million in 2022 compared to $31,259 million in 2021. Higher pricing across all geographic segments contributed 7% to revenues. Cost pass-through, representing the contractual billing of energy cost variances primarily to onsite customers, increased revenues by 6%, with minimal impact on operating profit. Volume growth across all end markets, except healthcare, and project start ups increased revenues by 1%. Currency translation decreased revenues by 5%, largely in EMEA and APAC, driven by the weakening of the Euro, Chinese yuan, British pound and Australian dollar against the U.S. dollar. The net impact of divestitures decreased sales by 1%.

Cost of sales increased 7% to $23,203 million in 2022 compared to $21,623 million in 2021 primarily due to inflation and higher volumes, partially offset by lower depreciation, productivity gains and currency effects. Cost of sales was 68.4% and 69.2% of revenues, respectively, in 2022 and 2021. The decrease as a percentage of revenues was due primarily to lower depreciation.

Marketing and selling expenses, Administrative expenses and Research and development costs and Impairment losses on receivables and contract assets ("SG&A/R&D") decreased $410 million in 2022 to $4,107 million, primarily due to lower amortization of intangible assets acquired in the merger and currency impacts. 2021 included $211 million of charges relating to cost reduction program and other charges, primarily severance. SG&A/R&D was 12.1% of revenues in 2022 versus 14.5% of revenues in 2021.

Other operating income and (expenses) - net in 2022 was a net cost of $1,046 million versus $15 million in 2021. 2022 charges relate primarily to impairment charges of Russian subsidiaries resulting from the ongoing war in Ukraine and related sanctions (see Note 7 to the consolidated financial statements for a summary of major components).

Operating profit of $5,543 million in 2022 increased $439 million, or 9% , from operating profit of $5,104 million in 2021. The increase in the year was driven primarily by higher pricing and productivity initiatives and lower depreciation and amortization driven by merger related intangible assets, partially offset by Russia-Ukraine conflict and other charges. Operating profit includes Russia-Ukraine conflict and other charges of $989 million in 2022 (see Note 7 to the consolidated financial statements), compared to cost reduction program and other charges of $273 million in 2021. A discussion of operating profit by segment is included in the segment discussion that follows.

Financial (income) and expenses – net in 2022 decreased $65 million, or 80%, versus 2021. The decrease was driven by the impact of foreign currency revaluation on unhedged intercompany loans that are not able to be designated as net investment hedges under international accounting standards, which resulted in a $152 million gain in 2022 as compared to a $203 million gain in 2021 (see Note 23 to the consolidated financial statements).

Share of profit and loss from associates and joint ventures (at equity) increased $47 million in 2022 versus 2021. 2021 included a $35 million impairment charge related to a joint venture in APAC (see Note 13 to the consolidated financial statements).

The reported effective tax rate ("ETR") for 2022 was 26.7% versus 25.5% in 2021. The increase in the rate is primarily related to the net tax expense resulting from the impairment of the company's business in Russia in 2022 and additional accruals for non-U.S. jurisdictions. 2021 includes a deferred income tax charge related to the revaluation of net deferred tax liabilities for a tax rate increase in the United Kingdom (see Note 9 to the consolidated financial statements). In addition, 2022 pre-tax income included a $152 million gain and 2021 included a $203 million gain related to foreign currency revaluation on unhedged intercompany loans which did not have a tax impact.

Profit for 2022 was $4,144 million, $249 million or 6% higher than $3,895 million in 2021. This is primarily driven by higher operating profit in the year versus the respective 2021 period.

Diluted earnings per share - Linde plc shareholders ("EPS") of $7.89 in 2022 increased 10% versus 2021, primarily due to higher profit and lower diluted shares outstanding.

SEGMENT DISCUSSION

Linde's operations consist of two major product lines: industrial gases and engineering. Linde's industrial gases operations are managed on a geographic basis, which represents three of the company's operating segments - Americas, EMEA (Europe/Middle East/Africa), and APAC (Asia/South Pacific); a fourth operating segment which represents the company's Engineering business, designs and manufactures equipment for air separation and other industrial gas applications specifically for end customers and is managed on a worldwide basis operating in all geographic segments. Each of these operating segments is a separate reporting segment for financial reporting purposes. Other consists of corporate costs and a few smaller businesses which individually do not meet the quantitative thresholds for separate presentation.

Linde assesses the performance of the operating segments determined in accordance with US GAAP. Accordingly, the analysis of key performance indicators and the associated segment discussion that follows are based on US GAAP results. A reconciliation from US GAAP results to those determined under EU-IFRS ("IFRS") for the years ended 31 December 2022 and 2021 is also provided. The following summary of US GAAP sales and operating profit by segment provides a basis for the discussion that follows. Linde evaluates the performance of its operating segments based on operating profit, excluding the items not indicative of ongoing business trends ("Segment operating profit").

The table below presents sales and operating profit information about reportable segments and Other for the years ended 31 December 2022 and 2021.

(Millions of dollars) **Year Ended 31 December**	2022	2021	Variance	
Sales				
Americas	$ 13,874	$ 12,103	$ 1,771	15 %
EMEA	8,443	7,643	800	10 %
APAC	6,480	6,133	347	6 %
Engineering	2,762	2,867	(105)	(4)%
Other	1,805	2,047	(242)	(12)%
Total US GAAP Sales	$ 33,364	$ 30,793	$ 2,571	8 %
GAAP adjustments [1]	535	466	69	15 %
Total IFRS Consolidated Sales	$ 33,899	$ 31,259	$ 2,640	8 %
Operating Profit				
Americas	$ 3,732	$ 3,368	$ 364	11 %
EMEA	2,013	1,889	124	7 %
APAC	1,670	1,502	168	11 %
Engineering	555	473	82	17 %
Other	(66)	(56)	(10)	(18)%
U.S. GAAP segment operating profit	$ 7,904	$ 7,176	$ 728	10 %
Reconciliation to Consolidated Operating Profit				
Russia-Ukraine conflict and other charges [2]	(1,029)	(273)	(756)	277 %
Purchase accounting impacts - Linde AG [3]	(1,506)	(1,919)	413	22 %
U.S. GAAP Consolidated Operating Profit	$ 5,369	$ 4,984	$ 385	8 %
GAAP adjustments [1]	174	120	54	45 %
IFRS Consolidated Operating Profit	$ 5,543	$ 5,104	$ 439	9 %

(1) Primarily related to consolidation of certain entities under IFRS versus equity method accounting for U.S. GAAP.
(2) Related to Russia-Ukraine conflict and other charges, see Note 25 to the consolidated financial statements.
(3) Impacts of the required purchase accounting related to the merger transaction, primarily the increased depreciation and amortization of assets recorded at fair value.

Americas

The Americas segment includes Linde's industrial gases operations in approximately 20 countries including the United States, Canada, Mexico and Brazil.

Sales for the Americas segment increased $1,771 million, or 15%, in 2022 versus 2021. Higher pricing contributed 6% to sales. Higher volumes increased sales by 4%, driven by higher demand across all end markets except healthcare, led by chemicals and energy. Cost pass-through increased sales by 5% with minimal impact on operating profit.

Operating profit in the Americas segment increased $364 million, or 11%, in 2022 versus 2021 driven primarily by higher pricing, volumes and continued productivity initiatives which more than offset inflation.

EMEA

The EMEA segment includes Linde's industrial gases operations in approximately 45 European, Middle Eastern and African countries including Germany, the United Kingdom, France, Sweden, and the Republic of South Africa.

EMEA segment sales increased $800 million, or 10%, in 2022 versus 2021. Higher price attainment increased sales by 13%. Cost pass-through representing the contractual billing of energy cost variances primarily to onsite customers increased sales by 13% with minimal impact on operating profit. Currency translation decreased sales by 11% due largely to the weakening of the Euro and British pound against the U.S. Dollar. Volumes decreased sales by 5%.

Operating profit for the EMEA segment increased $124 million, or 7%, in 2022 versus 2021. The increase was driven largely by higher pricing and continued productivity initiatives which more than offset currency and inflation.

APAC

The APAC segment includes Linde's industrial gases operations in approximately 20 Asian and South Pacific countries and regions including China, Australia, India and South Korea.

Sales for the APAC segment increased $347 million, or 6%, in 2022 versus 2021. Volumes increased 5% including project start-ups in the electronics and chemicals and energy end markets. Higher price increased sales by 5%. Cost pass-through increased sales by 2% with minimal impact on operating profit. Currency translation decreased sales by 6% driven primarily by the weakening of the Australian dollar, Korean won and Chinese Yuan against the U.S. Dollar.

Operating profit in the APAC segment increased $168 million, or 11%, in 2022 versus 2021. The increase was primarily driven by higher volumes and pricing, and continued productivity initiatives which more than offset the impact of currency and inflation.

Engineering

Engineering segment sales decreased $105 million, or 4%, in 2022 versus 2021. The decrease was driven by project timing and negative currency translation, partially offset by a $321 million project progress recognition during the third quarter.

Projects for Russia that were sanctioned and have been wound down represented approximately $894 million of the Engineering segment sales during 2022.

Engineering segment operating profit increased $82 million or 17%, in 2022 versus 2021 driven by the aforementioned third quarter project and a fourth quarter project settlement, partially offset by other project timing and currency impacts.

Other

Other consists of corporate costs and a few smaller businesses including: Surface Technologies, GIST, and global helium wholesale; which individually do not meet the quantitative thresholds for separate presentation.

Sales for Other decreased $242 million, or 12%, in 2022 versus 2021. Divestitures decreased sales by 12% due primarily to the sale of the GIST business as of 30 September 2022. Currency translation decreased sales 4%. Underlying sales increased 3% in the year driven primarily by price and higher aviation and electronic sales in the coatings business. Cost pass-through increased sales by 1% in 2022.

Sales of the GIST business which was divested as of 30 September 2022 represented approximately $630 million of other sales during 2022.

Operating profit in Other decreased $10 million, or 18%, in 2022 versus 2021, due primarily to higher sourcing costs in the global helium business and the impact of divestitures, partially offset by lower corporate costs.

CONSOLIDATED FINANCIAL POSITION

The following table provides a summary of consolidated financial position of Linde plc as of 31 December 2022 and 2021:

(Millions of dollars)	31/12/2022	31/12/2021	Variance	
Goodwill	$ 25,952	$ 27,184	$ (1,232)	(5)%
Other intangible assets - net	12,949	14,421	(1,472)	(10)%
Tangible assets - net	23,986	26,682	(2,696)	(10)%
Other assets	11,689	11,015	674	6 %
Cash and cash equivalents	5,555	2,935	2,620	89 %
TOTAL ASSETS	**$ 80,131**	**$ 82,237**	$ (2,106)	(3)%
Equity	41,771	46,074	(4,303)	(9)%
Pensions obligations and other provisions	2,232	3,413	(1,181)	(35)%
Financial debt	17,946	14,216	3,730	26 %
Other liabilities	18,182	18,534	(352)	(2)%
TOTAL EQUITY AND LIABILITIES	**$ 80,131**	**$ 82,237**	$ (2,106)	(3)%

Goodwill decreased $1,232 million, from $27,184 million as of 31 December 2021 to $25,952 million as of 31 December 2022 . This decrease is primarily related to the impact of negative currency translation during the year ended 31 December 2022 (see Note 11 to the consolidated financial statements).

Other intangible assets – net decreased $1,472 million, from $14,421 million as of 31 December 2021 to $12,949 million as of 31 December 2022. This decrease is primarily related to the amortization of finite lived intangible assets, the impact of negative currency translation and the impairment of assets relating to Russian subsidiaries as a result of the ongoing war in Ukraine and related sanctions (see Note 11 to the consolidated financial statements).

Tangible assets (property, plant and equipment – net) decreased $2,696 million, from $26,682 million as of 31 December 2021 to $23,986 million as of 31 December 2022. This decrease is primarily related to the depreciation of tangible assets, negative impact of currency translation and the impairment of assets relating to Russian subsidiaries as a result of the ongoing war in Ukraine and related sanctions, partially offset by capital expenditures during the year ended 31 December 2022 (see Note 12 to the consolidated financial statements).

Other assets increased $674 million, from $11,015 million as of 31 December 2021 to $11,689 million as of 31 December 2022 primarily driven by the remeasurement of pension assets and liabilities as of 31 December 2022.

Cash and cash equivalents increased $2,620 million, from $2,935 million as of 31 December 2021 to $5,555 million as of 31 December 2022. Cash provided from operating activities of $9,329 million was partially offset by cash outflows for investing and financing activities of $3,153 million and $3,479 million, respectively. See the "Liquidity and Capital Resources" discussion below for further detail. The cash is available for corporate uses, including among others, capital expenditures, dividends and share repurchases.

Equity decreased $4,303 million, from $46,074 million as of 31 December 2021 to $41,771 million as of 31 December 2022. This decrease was primarily driven by net share repurchases of $5,165 million, $2,344 million of dividend payments to Linde plc shareholders and adverse currency impacts of $1,954 million. This decrease was partially offset by profit for the year of $4,144 million and a $1,219 million benefit from pension remeasurements (see the statement of changes in consolidated equity and Note 16 to the consolidated financial statements).

Pension obligations and other provisions decreased $1,181 million, from $3,413 million as of 31 December 2021 to $2,232 million as of 31 December 2022 driven primarily by the remeasurement of pension obligations, which was favorably impacted by increased discount rates (see Note 17 to the consolidated financial statements).

Financial debt (the sum of current debt and non-current debt) increased $3,730 million, from $14,216 million as of 31 December 2021 to $17,946 million as of 31 December 2022, driven primarily by higher commercial paper borrowings and debt issuances, partially offset by repayments (see the "Liquidity and Capital Resources" discussion below and Note 19 to the consolidated financial statements).

Other liabilities decreased $352 million, from $18,534 million as of 31 December 2021 to $18,182 million as of 31 December 2022. This decrease was driven primarily by the impact of negative currency translation and timing of payments related to payables and taxes.

LIQUIDITY AND CAPITAL RESOURCES

Following is a summary of the consolidated statement of cash flows:

(Millions of dollars)

Year Ended 31 December	2022	2021	Variance
Cash flow from operating activities	$ 9,329	$ 10,161	$ (832)
Cash flow for investing activities	(3,153)	(3,085)	(68)
Cash flow for financing activities	(3,479)	(7,927)	4,448
Other cash activity	(77)	(59)	(18)
Change in cash and cash equivalents	2,620	(910)	3,530
Cash and cash equivalents, beginning-of-period	2,935	3,845	(910)
Cash and cash equivalents, end-of-period	$ 5,555	$ 2,935	$ 2,620

Cash flow from operating activities

Cash flow from operations was $9,329 million, a decrease of $832 million, or 8% from 2021. The decrease was driven primarily by higher working capital requirements, including lower inflows from contract liabilities from engineering customer advanced payments, partially offset by higher net income. Russia-Ukraine conflict and other charges, net of payments, were $862 million and $98 million for the years ended December 31, 2022 and 2021, respectively, representing charges of $989 million and $273 million net of related cash outflows of $127 million and $175 million, respectively, in each period.

As of December 31, 2022, Linde has approximately $1.7 billion recorded in contract liabilities within the consolidated statement of financial position related to engineering projects in Russia. Any obligation to satisfy the related residual contract liabilities may have an adverse effect on Linde's cash flows.

Cash flow for investing activities

Net cash used for investing activities was $3,153 million in 2022 compared to $3,085 million in 2021. The increase was primarily driven by higher capital expenditures and acquisitions, partially offset by proceeds from divestitures, net of cash divested and asset sales.

Capital expenditures in 2022 were $3,226 million, an increase of $62 million from 2021. Capital expenditures during 2022 related primarily to investments in new plant and production equipment for operating and growth requirements. Approximately 52% of the capital expenditures were in the Americas segment with 27% in the APAC segment and the rest primarily in the EMEA segment.

At 31 December 2022, Linde's sale of gas backlog of large projects under construction was approximately $5.7 billion. This represents the total estimated capital cost of large plants under construction.

Acquisition expenditures in 2022 were $122 million, an increase of $34 million from 2021. Acquisitions in each period related primarily to the Americas and EMEA. On 6 January 2023 Linde purchased the remaining 77% ownership interest in nexAir, LLC in an all cash transaction with a total purchase price of approximately $0.8 billion (see Note 32 to the consolidated financial statements).

Divestitures and asset sales in 2022 totaled $195 million as compared to $167 million in 2021. Divestiture proceeds for the year include cash received from the sale of the company's GIST business of $184 million, net of cash divested of $75 million, for net proceeds of $109 million (see Note 2 to the consolidated financial statements).

Cash flow for financing activities

Linde's financing strategy is to secure long-term committed funding by issuing public notes and debentures and commercial paper backed by a long-term bank credit agreement. Linde's international operations are funded through a combination of local borrowing and intercompany funding to minimize the total cost of funds and to manage and centralize currency exchange exposures. As deemed necessary, Linde manages its exposure to interest-rate changes through the use of financial derivatives (see Note 23 to the consolidated financial statements).

Cash used for financing activities was $3,479 million in 2022 compared to $7,927 million in 2021. Cash provided by debt was $4,444 million in 2022 versus cash used by debt of $467 million in 2021 primarily driven by higher commercial paper borrowings and debt issuances in 2022.

Cash dividends of $2,344 million increased $155 million from 2021 driven primarily by a 10% increase in dividends per share from $4.24 per share to $4.68 per share, partially offset by lower shares outstanding.

Net purchases of ordinary shares were $5,132 million in 2022 versus $4,562 million in 2021. Noncontrolling interest transactions and other payments were $115 million in 2022 versus $194 million in 2021.

The company believes that it has sufficient operating flexibility, cash reserves, and funding sources to maintain adequate amounts of liquidity to meet its business needs around the world. The company has a $5.0 billion and a $1.5 billion unsecured and undrawn revolving credit arrangement with no associated financial covenants. No borrowings were outstanding under the credit agreement as of 31 December 2022. The company does not anticipate any limitations on its ability to access the debt capital markets and/or other external funding sources and remains committed to its strong ratings from Moody's and Standard & Poors. At 31 December 2022, Linde's credit ratings as reported by Standard & Poor's and Moody's were A-1 and P-1 for short-term debt, respectively, and A and A2 for long-term debt, respectively.

Note 19 to the consolidated financial statements includes information with respect to the company's debt activity in 2022, current debt position, debt covenants and the available credit facilities; and Note 23 includes information relating to derivative financial instruments. Linde's credit facilities are with major financial institutions and are non-cancelable until maturity. Therefore, the company believes the risk of the financial institutions being unable to make required loans under the credit facilities, if requested, to be low. Linde's major bank credit and long-term debt agreements contain standard covenants. The company was in compliance with these covenants at 31 December 2022 and expects to remain in compliance for the foreseeable future.

Linde's total net financial debt outstanding (i.e. total financial debt less cash) was $12,391 million at 31 December 2022, $1,110 million lower than $11,281 million at 31 December 2021. The 31 December 2022 net debt balance includes $17,571 million in public securities, $375 million representing primarily global bank borrowings, net of $5,555 million of cash. Linde's global effective borrowing rate was approximately 1.7% for 2022.

Following is a summary of significant debt activity in 2022 through the date of filing:

- In January 2022, Linde repaid €1.0 billion of 0.250% notes that became due.
- In March 2022, Linde issued €500 million of 1.000% notes due 2027, €750 million of 1.375% notes due 2031, and €800 million of 1.625% notes due 2035.
- In May 2022, Linde repaid $500 million of 2.20% notes due in August 2022.
- In November 2022, Linde issued $300 million of 4.80% notes due in 2024 and $600 million of 4.70% notes due in 2025.
- In February 2023, Linde repaid $500 million of 2.70% notes that became due.
- In April 2023, Linde repaid €650 million of 2.00% notes and £300 million of 5.875% notes that became due.
- In June 2023, Linde issued €500 million of 3.625% notes due in 2025, €750 million of 3.375% notes due in 2029 and €650 million of 3.625% notes due in 2034.

On 28 February 2022, the company's board of directors approved a new share repurchase program for up to $10.0 billion of its ordinary shares expiring on 31 July 2024.

Other cash activity

Other cash activity includes the effects of currency translation on cash.

PRINCIPAL RISKS AND UNCERTAINTIES

Due to the size and geographic reach of the company's operations, a wide range of factors, many of which are outside of the company's control, could materially affect the company's future operations and financial performance. Management believes the following risks may significantly impact the company:

Weakening economic conditions in markets in which Linde does business may adversely impact its financial results and/or cash flows.

Linde serves a diverse group of industries across more than 80 countries, which generally leads to financial stability through various business cycles. However, a broad decline in general economic or business conditions in the industries served by its customers could adversely affect the demand for Linde's products and impair the ability of its customers to satisfy their obligations to Linde, resulting in uncollected receivables and/or unanticipated contract terminations or project delays. For example, global political and economic uncertainty could reduce investment activities of Linde's customers, which could adversely affect Linde's business.

In addition, many of Linde's customers are in businesses that are cyclical in nature, such as the chemicals, metals and energy industries. Downturns in these industries may adversely impact Linde during these cycles. Additionally, such conditions could impact the utilization of Linde's manufacturing capacity which may require it to recognize impairment losses on tangible assets such as property, plant and equipment, as well as intangible assets such as goodwill, customer relationships or intellectual property.

Increases in the cost of energy and raw materials and/or disruption in the supply of these materials could result in lost sales or reduced profitability.

Energy is the single largest cost item in the production and distribution of industrial gases. Most of Linde's energy requirements are in the form of electricity, natural gas and diesel fuel for distribution. Linde attempts to minimize the financial impact of variability in these costs through the management of customer contracts and reducing demand through operational productivity and energy efficiency. Large customer contracts typically have escalation and pass-through clauses to recover energy and feedstock costs. Such attempts may not successfully mitigate cost variability, which could negatively impact Linde's financial condition or results of operations. The supply of energy has not been a significant issue in the geographic areas where Linde conducts business. However, regional energy conditions are unpredictable and may pose future risk.

For carbon dioxide, carbon monoxide, helium, hydrogen, and specialty gases, raw materials are largely purchased from outside sources. Where feasible, Linde sources several of these raw materials, including carbon dioxide, hydrogen and calcium carbide, as chemical or industrial byproducts. In addition, Linde has contracts or commitments for, or readily available sources of, most of these raw materials; however, their long-term availability and prices are subject to market conditions. A disruption in supply of such raw materials could impact Linde's ability to meet contractual supply commitments.

Linde's international operations are subject to the risks of doing business abroad and international events and circumstances may adversely impact its business, financial condition or results of operations.

Linde has substantial international operations which are subject to risks including devaluations in currency exchange rates, transportation delays and interruptions, political and economic instability and disruptions, restrictions on the transfer of funds, trade conflicts and the imposition of duties and tariffs, import and export controls, changes in governmental policies, labor unrest, possible nationalization and/or expropriation of assets, changes in U.S. and non-U.S. tax policies and compliance with governmental regulations. These events could have an adverse effect on the international operations of Linde in the future by reducing the demand for its products, decreasing the prices at which it can sell its products, reducing the revenue from international operations or otherwise having an adverse effect on its business.

Currency exchange rate fluctuations and other related risks may adversely affect Linde's results.

Because a significant portion of Linde's revenue is denominated in currencies other than its reporting currency, the U.S. dollar, changes in exchange rates will produce fluctuations in revenue, costs and earnings and may also affect the book value of assets and liabilities and related equity. Although the company from time to time utilizes foreign exchange forward contracts to hedge these exposures, its efforts to minimize currency exposure through such hedging transactions may not be successful depending on market and business conditions. As a result, fluctuations in foreign currency exchange rates could adversely affect Linde's financial condition, results of operations or cash flows.

Macroeconomic factors may impact Linde's ability to obtain financing or increase the cost of obtaining financing which may adversely impact Linde's financial results and/or cash flows.

Volatility and disruption in the U.S., European and global credit and equity markets, from time to time, could make it more difficult for Linde to obtain financing for its operations and/or could increase the cost of obtaining financing. In addition, Linde's borrowing costs can be affected by short- and long-term debt ratings assigned by independent rating agencies which are based, in significant part, on its performance as measured by certain criteria such as interest coverage and leverage ratios. A decrease in these debt ratings could increase the cost of borrowing or make it more difficult to obtain financing.

An impairment of goodwill or intangible assets could negatively impact the company's financial results.

As of 31 December 2022, the net carrying value of goodwill and other indefinite-lived intangible assets was $26 billion and $2 billion, respectively, primarily as a result of the business combination and the related acquisition method of accounting applied to Linde AG. In accordance with generally accepted accounting principles, the company periodically assesses these assets to determine if they are impaired. Significant negative industry or economic trends, disruptions to business, unexpected significant changes or planned changes in use of the assets, divestitures and sustained market capitalization declines may result in recognition of impairments to goodwill or other indefinite-lived assets. Any charges relating to such impairments could have a material adverse impact on Linde's results of operations in the periods recognized.

Catastrophic events could disrupt the operations of Linde and/or its customers and suppliers and may have a significant adverse impact on the results of operations.

The occurrence of catastrophic events or natural disasters such as extreme weather, including hurricanes and floods; health epidemics; pandemics, such as COVID-19; and acts of war or terrorism, could disrupt or delay Linde’s ability to produce and distribute its products to customers and could potentially expose Linde to third-party liability claims. In addition, such events could impact Linde’s customers and suppliers resulting in temporary or long-term outages and/or the limitation of supply of energy and other raw materials used in normal business operations. Linde evaluates the direct and indirect business risks, consults with vendors, insurance providers and industry experts, makes investments in suitably resilient design and technology, and conducts regular reviews of the business risks with management. Despite these steps, however, these situations are outside Linde’s control and may have a significant adverse impact on its financial results.

The inability to attract and retain qualified personnel may adversely impact Linde’s business.

If Linde fails to attract, hire and retain qualified personnel, it may not be able to develop, market or sell its products or successfully manage its business. Linde is dependent upon a highly skilled, experienced and efficient workforce to be successful. Much of Linde’s competitive advantage is based on the expertise and experience of key personnel regarding marketing, technology, manufacturing and distribution infrastructure, systems and products. The inability to attract and hire qualified individuals or the loss of key employees in very skilled areas could have a negative effect on Linde’s financial results.

If Linde fails to keep pace with technological advances in the industry or if new technology initiatives do not become commercially accepted, customers may not continue to buy Linde’s products and results of operations could be adversely affected.

Linde’s research and development is directed toward developing new and improved methods for the production and distribution of industrial gases, the design and construction of plants and toward developing new markets and applications for the use of industrial and process gases. This results in the introduction of new applications and the development of new advanced process technologies. As a result of these efforts, Linde develops new and proprietary technologies and employs necessary measures to protect such technologies within the global geographies in which Linde operates. These technologies help Linde to create a competitive advantage and to provide a platform to grow its business. If Linde’s research and development activities do not keep pace with competitors or if Linde does not create new technologies that benefit customers, future results of operations could be adversely affected.

Risks related to pension benefit plans may adversely impact Linde’s results of operations and cash flows.

Pension benefits represent significant financial obligations that will be ultimately settled in the future with employees who meet eligibility requirements. Because of the uncertainties involved in estimating the timing and amount of future payments and asset returns, significant estimates are required to calculate pension expense and liabilities related to Linde’s plans. Linde utilizes the services of independent actuaries, whose models are used to facilitate these calculations. Several key assumptions are used in the actuarial models to calculate pension expense and liability amounts recorded in the consolidated financial statements. In particular, significant changes in actual investment returns on pension assets, discount rates, or legislative or regulatory changes could impact future results of operations and required pension contributions.

Operational risks may adversely impact Linde’s business or results of operations.

Linde’s operating results are dependent on the continued operation of its production facilities and its ability to meet customer contract requirements and other needs. Insufficient or excess capacity threatens Linde’s ability to generate competitive profit margins and may expose Linde to liabilities related to contract commitments. Operating results are also dependent on Linde’s ability to complete new construction projects on time, on budget and in accordance with performance requirements. Failure to do so may expose Linde's business to loss of revenue, potential litigation and loss of business reputation.

Also inherent in the management of Linde's production facilities and delivery systems, including storage, vehicle transportation and pipelines, are operational risks that require continuous training, oversight and control. Material operating failures at production, storage facilities or pipelines, including fire, toxic release and explosions, or the occurrence of vehicle transportation accidents could result in loss of life, damage to the environment, loss of production and/or extensive property damage, all of which may negatively impact Linde's financial results.

Linde may be subject to information technology system failures, network disruptions and breaches in data security.

Linde relies on information technology systems and networks for business and operational activities, and also stores and processes sensitive business and proprietary information in these systems and networks. These systems are susceptible to outages due to fire, flood, power loss, telecommunications failures, viruses, break-ins and similar events, or breaches of security.

Linde has taken steps to address these risks and concerns by implementing advanced security technologies, internal controls, network and data center resiliency and recovery process. Despite these steps, however, our information technology systems have in the past been and in the future will likely be subject to increasingly sophisticated cyber attacks. Operational failures and breaches of security from such attempts could lead to the loss or disclosure of confidential information or personal data belonging to Linde or our employees and customers or suppliers. These failures and breaches could result in business interruption or malfunction and lead to legal or regulatory actions that could result in a material adverse impact on Linde's operations, reputation and financial results. To date, such attempts have not had any significant impact on Linde's operations or financial results.

The inability to effectively integrate acquisitions or collaborate with joint venture partners could adversely impact Linde's financial position and results of operations.

Linde has evaluated and expects to continue to evaluate, a wide array of potential strategic acquisitions and joint ventures. Many of these transactions, if consummated, could be material to its financial condition and results of operations. In addition, the process of integrating an acquired company, business or group of assets may create unforeseen operating difficulties and expenditures. Although historically Linde has been successful with its acquisition strategy and execution, the areas where Linde may face risks include:

- the need to implement or remediate controls, procedures and policies appropriate for a larger public company at companies that prior to the acquisition lacked these controls, procedures and policies;
- diversion of management time and focus from operating existing business to acquisition integration challenges;
- cultural challenges associated with integrating employees from the acquired company into the existing organization;
- the need to integrate each company's accounting, management information, human resources and other administrative systems to permit effective management;
- difficulty with the assimilation of acquired operations and products;
- failure to achieve targeted synergies and cost reductions; and
- inability to retain key employees and business relationships of acquired companies.

Foreign acquisitions and joint ventures involve unique risks in addition to those mentioned herein, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Also, the anticipated benefit of potential future acquisitions may not materialize. Future acquisitions or dispositions could result in the incurrence of debt, contingent liabilities or amortization expenses, or impairments of goodwill, any of which could adversely impact Linde's financial results.

Linde is subject to a variety of international laws and government regulations and changes in, or failure to comply with, these laws or regulations could have an adverse impact on the company's business, financial position and results of operations.

Linde is subject to regulations in the following areas, among others:

- environmental protection, including climate change and energy efficiency laws and policies;
- U.S. and non-U.S. tax laws and currency controls;
- safety;
- securities laws applicable in the United States, the European Union, Germany, Ireland, and other jurisdictions;
- trade and import/export restrictions, as well as economic sanctions laws;
- antitrust matters;
- data protection;

- global anti-bribery laws, including the U.S. Foreign Corrupt Practices Act; and
- healthcare regulations.

Changes in these or other regulatory areas may impact Linde's profitability and may give rise to new or increased compliance risks: it may become more complex and costly to ensure compliance, and the level of sanctions in the event of non-compliance may rise. Noncompliance with such laws and regulations could result in penalties or sanctions, cancellation of marketing rights or restrictions on participation in, or even exclusion from, public tender proceedings, all of which could have a material adverse impact on Linde's financial results and/or reputation.

Such changes may also restrict Linde's ability to compete effectively in the marketplace. Changes to regulations in the areas of environmental protection and climate change, for example, may impact customer and competitor behavior driving structural changes in key end markets. While Linde will work to mitigate these risks through the pursuit of strategic alliances and investment in applications technologies to capture new growth areas, given the uncertainty about the type and scope of new regulations, it is difficult to predict how such changes and their impact on market behavior will ultimately impact Linde's business. However, such changes could have a material adverse impact on Linde's results of operations.

Doing business globally requires Linde to comply with anti-corruption, trade, compliance and economic sanctions and similar laws, and to implement policies and procedures designed to ensure that its employees and other intermediaries comply with the applicable restrictions. These restrictions include prohibitions on the sale or supply of certain products, services and any other economic resources to embargoed or sanctioned countries, governments, persons and entities. Compliance with these restrictions requires, among other things, screening of business partners. Despite its commitment to legal compliance and corporate ethics, the company cannot ensure that its policies and procedures will always protect it from intentional, reckless or negligent acts committed by employees or agents under the applicable laws. If Linde fails to comply with laws governing the conduct of international operations, Linde may be subject to criminal and civil penalties and other remedial measures, which could materially adversely affect its reputation, business and results of operations.

The outcome of litigation or governmental investigations may adversely impact the company's business or results of operations.

Linde's subsidiaries are party to various lawsuits and governmental investigations arising in the ordinary course of business. Adverse outcomes in some or all of the claims pending may result in significant monetary damages or injunctive relief that could adversely affect Linde's ability to conduct business. Linde and its subsidiaries may in the future become subject to further claims and litigation, which is impossible to predict. The litigation and other claims Linde faces are subject to inherent uncertainties. Legal or regulatory judgments or agreed settlements might give rise to expenses which are not covered, or are not fully covered, by insurance benefits and may also lead to negative publicity and reputational damage. An unfavorable outcome or determination could cause a material adverse impact on the company's results of operations.

Potential product defects or inadequate customer care may adversely impact Linde's business or results of operations.

Risks associated with products and services may result in potential liability claims, the loss of customers or damage to Linde's reputation. Principal possible causes of risks associated with products and services are product defects or an inadequate level of customer care when Linde is providing services.

Linde is exposed to legal risks relating to product liability in the countries where it operates, including countries such as the United States, where legal risks (in particular through class actions) have historically been more significant than in other countries. The outcome of any pending or future products and services proceedings or investigations cannot be predicted and legal or regulatory judgments or agreed settlements may give rise to significant losses, costs and expenses.

The manufacturing and sale of products as well as the construction and sale of plants by Linde may give rise to risks associated with the production, filling, storage, handling and transport of raw materials, goods or waste. Industrial gases are potentially hazardous substances and medical gases and the related healthcare services must comply with the relevant specifications in order to not adversely affect the health of patients treated with them.

Linde's products and services, if defective or not handled or performed appropriately, may lead to personal injuries, business interruptions, environmental damages or other significant damages, which may result, among other consequences, in liability, losses, monetary penalties or compensation payments, environmental clean-up costs or other costs and expenses, exclusion from certain market sectors deemed important for future development of the business and loss of reputation. All these consequences could have a material adverse effect on Linde's business and results of operations.

U.S. civil liabilities may not be enforceable against Linde.

Linde is organized under the laws of Ireland and substantial portions of its assets are located outside of the United States. In addition, certain directors and officers of Linde and its subsidiaries reside outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon Linde or such persons, or to enforce outside the United States judgments obtained against such persons in U.S. courts in any action, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. In addition, it may be difficult for investors to enforce, in original actions brought in courts in jurisdictions located outside the United States, rights predicated upon the U.S. federal securities laws.

A judgment for the payment of money rendered by a court in the United States based on civil liability would not be automatically enforceable in Ireland. There is no treaty between Ireland and the United States providing for the reciprocal enforcement of foreign judgments. The following requirements must be met before the foreign judgment will be deemed to be enforceable in Ireland (i) the judgment must be for a definite sum, (ii) the judgment must be final and conclusive; and (iii) the judgment must be provided by a court of competent jurisdiction.

An Irish court will also exercise its right to refuse judgment if the foreign judgment (i) was obtained by fraud; (ii) violated Irish public policy; (iii) is in breach of natural justice; or (iv) if the judgment is irreconcilable with an earlier foreign judgment.

In addition, there is doubt as to whether an Irish court would accept jurisdiction and impose civil liability on Linde or such persons in an original action predicated solely upon the U.S. federal securities laws brought in a court of competent jurisdiction in Ireland against Linde or such member, officer or expert, respectively.

Changes in tax laws or policy could adversely impact the company's financial position or results of operations.

Linde and its subsidiaries are subject to the tax rules and regulations in the U.S., Germany, Ireland, the U.K. and other countries in which they operate. Those tax rules and regulations are subject to change on a prospective or retroactive basis. Under current economic and political conditions tax rates and policies in any jurisdiction, including the U.S., the U.K. and the EU, are subject to significant changes which could result in a significant change to Linde's current and deferred income tax. In particular,since Linde is currently treated as U.K. tax resident, any potential changes in the tax rules applying to U.K. tax-resident companies would directly affect Linde.

A change in Linde's tax residency could have a negative effect on the company's future profitability, and may trigger taxes on dividends or exit charges. If Linde ceases to be resident in the U.K. and becomes resident in another jurisdiction, it may be subject to U.K. exit charges, and/or could become liable for additional tax charges in the other jurisdiction. If Linde were to be treated as resident in more than one jurisdiction, it could be subject to duplicative taxation. Furthermore, although Linde is incorporated in Ireland and is not expected to be treated as a domestic corporation for U.S. federal income tax purposes, it is possible that the IRS could challenge this result or that changes in U.S. federal income tax law could alter this result. If the IRS successfully asserted such a position or the law were to change, significant adverse tax consequences may result for Linde, the company and Linde's shareholders.

Changes in tax laws may result in higher tax expense and tax payments. In addition, changes in tax legislation and uncertainty about the tax environment in some regions may restrict Linde's opportunity to enforce its respective rights under the law. Linde also operates in countries with complex tax regulations which could be interpreted in different ways. Linde and its subsidiaries are subject to audits by taxing authorities in various jurisdictions or other review actions by the relevant financial or tax authorities. The ultimate tax outcome may differ from the amounts recorded in Linde's or its subsidiaries' financial statements and may materially affect their respective financial results for the period when such determination is made.

FINANCIAL INSTRUMENTS

In its normal operations, Linde is exposed to market risks relating to fluctuations in interest rates, foreign currency exchange rates, energy costs and to a lesser extent precious metal prices. The objective of financial risk management at Linde is to minimize the negative impact of such fluctuations on the company's earnings and cash flows. To manage these risks, among other strategies, Linde routinely enters into various derivative financial instruments ("derivatives") including interest-rate swap and treasury rate lock agreements, currency-swap agreements, forward contracts, currency options, and commodity-swap agreements. These instruments are not entered into for trading purposes and Linde only uses commonly traded and non-leveraged instruments. Counterparties to Linde's derivatives are major banking institutions with credit ratings of investment grade or better thereby minimizing the risk of credit loss. As of year-end, Linde had existing Credit Support Annexes ("CSAs") in place for certain of their principal counterparties to minimize potential default risk and to mitigate counterparty risk. Under the CSAs, the fair values of derivatives for the purpose of interest rate and currency management are collateralized with cash on a regular basis.

There are three types of derivatives that the company enters into: (i) those relating to fair-value exposures, (ii) those relating to cash-flow exposures, and (iii) those relating to foreign currency net investment exposures. Fair-value exposures relate to changes in the fair value of recognized assets or liabilities, primarily financial assets and financial liabilities, and firm commitments. Cash-flow exposures relate to the variability of future cash flows associated with recognized assets or liabilities, or forecasted transactions for which no underlying exposure is yet reported in the consolidated statement of financial position. Net investment exposures relate to the impact of foreign currency exchange rate changes on the carrying value of net assets denominated in foreign currencies.

Interest Rate Risk

At 31 December 2022, Linde had debt totaling $17,946 million ($14,216 million at 31 December 2021). For fixed-rate instruments, interest rate changes affect the fair market value but do not impact earnings or cash flows. Conversely, for floating-rate instruments, interest rate changes generally do not affect the fair market value of the instrument but impact future earnings and cash flows, assuming that other factors are held constant. At 31 December 2022, including the impact of derivatives Linde had fixed-rate debt of $13,032 million and floating-rate debt of $4,914 million, representing 73% and 27%, respectively, of total debt. At 31 December 2021, Linde had fixed-rate debt of $12,492 million and floating-rate debt of $1,724 million, representing 88% and 12%, respectively, of total debt.

In order to mitigate interest rate risk, when considered appropriate interest-rate swaps are entered into as hedges of underlying financial instruments to effectively change the characteristics of the interest rate without actually changing the underlying financial instrument. At 31 December 2022, Linde had fixed-to-floating interest rate swaps outstanding that were designated as hedging instruments of the underlying debt issuances - refer to Note 19 to the consolidated financial statements for additional information.

Foreign Currency Risk

Linde's exchange-rate exposures result primarily from its investments and ongoing operations in Latin America (primarily Brazil and Mexico), Europe (primarily Germany, Scandinavia, and the U.K.), Canada, Asia Pacific (primarily Australia and China) and other business transactions such as the procurement of equipment from foreign sources. Linde frequently utilizes currency contracts to hedge these exposures. See Note 23 to the consolidated financial statements for additional information.

Further details of the financial risk management objectives and policies and the exposure of the company to price risk, credit risk, liquidity risk and cash flow risk are provided in Note 23 to the consolidated financial statements.

RESEARCH AND DEVELOPMENT

Linde's research and development is directed toward development of gas processing, separation and liquefaction technologies, and clean energy technologies; improving distribution of industrial gases and the development of new markets and applications for these gases. This results in the development of new advanced air separation, hydrogen, synthesis gas, natural gas, adsorption and chemical process technologies; novel clean energy and carbon management solutions; as well as the frequent introduction of new industrial gas applications. Research and development is primarily conducted at Munich, Germany, Tonawanda, New York, Burr Ridge, Illinois and Shanghai, China.

DIVIDENDS

On 28 February 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the first quarter of 2022 (the "Q1 Dividend"). The Q1 Dividend was paid on 25 March 2022 to shareholders of record on 11 March 2022.

On 26 April 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the second quarter of 2022 (the "Q2 Dividend"). The Q2 Dividend was paid on 17 June 2022 to shareholders of record on 3 June 2022.

On 25 July 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the third quarter of 2022 (the "Q3 Dividend"). The Q3 Dividend was paid on 16 September 2022 to shareholders of record on 2 September 2022.

On 24 October 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the fourth quarter of 2022 (the "Q4 Dividend"). The Q4 Dividend was paid on 16 December 2022 to shareholders of record on 02 December 2022.

For additional information, see Note 16 to the consolidated financial statements.

FUTURE DEVELOPMENTS

Linde provides quarterly updates on operating results, material trends that may affect financial performance, and financial earnings guidance via earnings releases and investor teleconferences. These materials are available on the company's website, www.linde.com but are not incorporated herein.

EVENTS SINCE THE STATEMENT OF FINANCIAL POSITION DATE

Acquisition of nexAir, LLC

On 5 January 2023, Linde completed the acquisition of nexAir, LLC, a gas distribution and welding supply company in the United States, in order to further expand the company's geographic footprint into different regions. Prior to completion of the acquisition, Linde held a 23% interest in nexAir, LLC. Pursuant to a signed purchase agreement between Linde and nexAir, LLC, Linde purchased the remaining 77% ownership interest in an all cash transaction with a total purchase price of $859 million, or $804 million net of cash acquired. nexAir, LLC, had annual sales of approximately $400 million in 2022.

Intercompany Reorganization

On 18 January 2023, shareholders approved the company's proposal for an intercompany reorganization that resulted in the delisting of its ordinary shares from the Frankfurt Stock Exchange. Following the completion of legal and regulatory approvals, Linde completed the intercompany reorganization and delisting process, and its ordinary shares were delisted from the Frankfurt Stock Exchange on 1 March 2023.

On 1 March 2023, in connection with the shareholder approved intercompany reorganization that resulted in the delisting of old Linde plc from the New York Stock Exchange (NYSE) and the Frankfurt Stock Exchange (FSE), and the subsequent relisting of new Linde plc to the NYSE, Linde shareholders automatically received one share of the new holding company, listed on the NYSE in exchange for each share of Linde plc that was previously owned. The company issued 490,766,972 new Linde shares. Linde plc's historical treasury shares were immediately canceled which resulted in an approximately $15 billion decrease in treasury shares and retained earnings in equity attributable to shareholders.

Dividends After Year End

On 28 February 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the first quarter of 2023 (the "Q1 Dividend"). The Q1 Dividend was payable on 28 March 2023 to shareholders of record on 14 March 2023.

On 24 April 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the second quarter of 2023 (the "Q2 Dividend"). The Q2 Dividend is payable on 16 June 2023 to shareholders of record on 2 June 2023.

On 24 July 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the third quarter of 2022 (the "Q3 Dividend"). The Q3 Dividend is payable on 19 September 2023 to shareholders of record on 5 September 2023.

Own Shares

From the period 1 January 2023 through 30 June 2023, an additional 5,221 thousand ordinary shares were purchased by the company for total consideration of 1,802 million, or an average price of $345.06 per share.

On 28 February 2022, the company's board of directors approved the repurchase of $10.0 billion of its ordinary shares ("2022 program") which could take place from time to time on the open market (and could include the use of 10b5-1 trading plans), subject to market and business conditions. The 2022 program has a maximum repurchase amount of 15% of outstanding shares, began on 01 March 2022 and expires on 31 July 2024.

Other Developments

In February 2023, Linde repaid $500 million of 2.70% notes that became due.

In April 2023, Linde repaid €650 million of 2.00% notes and £300 million of 5.875% notes that became due.

In June 2023, Linde issued €500 million of 3.625% notes due in 2025, €750 million of 3.375% notes due in 2029 and €650 million of 3.625% notes due in 2034.

OWN SHARES

On 25 January 2021, the company's board of directors approved the repurchase of $5.0 billion of its ordinary shares ("2021 program") which could take place from time to time on the open market (and could include the use of 10b5-1 trading plans), subject to market and business conditions. The 2021 program has a maximum repurchase amount of 15% of outstanding shares, began on 01 February 2021 and expires on 31 July 2023 and was fully utilized as of February 28, 2022.

On 28 February 2022, the company's board of directors approved the repurchase of $10.0 billion of its ordinary shares ("2022 program") which could take place from time to time on the open market (and could include the use of 10b5-1 trading plans), subject to market and business conditions. The 2022 program has a maximum repurchase amount of 15% of outstanding shares, began on 01 March 2022 and expires on 31 July 2024. As of 31 December 2022, the company had repurchased $4.6 billion of its ordinary shares pursuant to the 2022 program, leaving an additional $5.4 billion authorized under the 2022 program.

As of 31 December 2022 and 2021, the company had treasury shares of 59,555 thousand and 43,332 thousand, respectively. During the year ended 31 December 2022, 17,034 thousand ordinary shares were purchased by the company for total considerations of $5.1 billion, or an average purchase price of $302.14 per share (€0.001 nominal value). The consideration includes stamp duty, commission and all customary fees. These shares were acquired in order to reduce the shares outstanding or to meet obligations under Linde plc equity awards. See Note 16 to the consolidated financial statements for more information.

On 1 March 2023, in connection with the shareholder approved intercompany reorganization that resulted in the delisting of old Linde plc from the New York Stock Exchange (NYSE) and the Frankfurt Stock Exchange (FSE), and the subsequent relisting of new Linde plc to the NYSE, Linde shareholders automatically received one share of the new holding company, listed on the NYSE in exchange for each share of Linde plc that was previously owned. The company issued 490,766,972 new Linde shares. Linde plc's historical treasury shares were immediately canceled which resulted in an approximately $15 billion decrease in treasury shares and retained earnings in equity attributable to shareholders'.

All share purchases by the company are structured as redemptions under Irish law.

POLITICAL DONATIONS

No political contributions that require disclosure under Irish law were made during fiscal years 2022 or 2021.

ACCOUNTING RECORDS

The measures that the directors have taken to secure compliance with the requirements of sections 281 to 285, with regard to the keeping of accounting records, include the provision of appropriate resources to maintain adequate accounting records throughout the company, including the appointment of personnel with appropriate qualifications, experience and expertise.

The company’s accounting records are maintained at Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom and 10 Riverview Drive, Danbury, Connecticut, 06810, United States.

SUBSIDIARY COMPANIES AND BRANCHES

Information regarding subsidiary undertakings, including information regarding branches, is provided in Note 31 to the consolidated financial statements.

CORPORATE GOVERNANCE STATEMENT

Corporate Governance Practices

Linde plc is incorporated in Ireland, and is subject to Irish company law pursuant to the Irish Companies Act 2014 (the "Act"). In addition, Linde plc ordinary shares were listed and trade on the New York Stock Exchange ("NYSE") and the Frankfurt Stock Exchange ("FSE") as of 31 December 2022.

In connection with the closing of the intercompany reorganization on 1 March 2023, Linde shareholders automatically received one share of the new holding company, listed on the New York Stock Exchange, in exchange for each share of Linde plc that was previously owned. The new holding company is also named "Linde plc" and trades under the existing ticker LIN. As a result of this intercompany reorganization, Linde's ordinary shares were no longer listed on the FSE as of March 1, 2023.

Linde plc's primary governance obligations arise by virtue of its listing on NYSE, and as such, the company is subject to the corporate governance rules of the NYSE, requiring it to adopt certain governance policies (which the company has complied with), and to the reporting and other rules of the United States Securities and Exchange Commission (the "SEC"), requiring it to file Forms 10-K, 10-Q, 8-K and proxy statements.

A short summary of the key aspects of Linde plc's corporate governance structure is set forth below.

Board and Governance Information (as of 31 December 2022)			
Size of Board	10 [1]	**Annual Board and Committee Evaluations**	Yes
Number of Independent Directors (excludes CEO)	8 80%	**Limits service on other Boards for Directors (4 other Boards)** **Limits service on other Boards for CEO (2 other Boards)**	Yes Yes
Split Chairman and CEO	Yes	**Succession Planning Process**	Yes
Board Committees (Audit, Human Capital, Nomination & Governance, Sustainability[2] and Executive)	5	**Board Risk Oversight**	Yes
Board Meetings	5	**Code of Conduct for Directors, Officers and Employees**	Yes
Annual Election of Directors	Yes	**Stock Ownership Guidelines for Directors and Executive Officers**	Yes
Mandatory Retirement Age	72 [3]	**Anti-Hedging and Pledging Policies**	Yes
Board Diversity - two women, one African American, one Asian Director	Yes	**Clawback Policy**	Yes
Majority Voting in Director Elections	Yes	**Rights Agreement (Poison Pill)**	No
Proxy Access	Yes	**Board Oversight of Comprehensive Sustainability Program**	Yes
		Shareholders May Call Special Meetings	Yes

1 - Board size was changed from 14 to 10 effective 1 March 2022, with the appointment of Mr. Sanjiv Lamba to the Board and the retirement of five directors: Prof. Dr. Wolfgang Reitzle, Prof. Dr. Clemens Börsig, Dr. Nance Dicciani, Mr. Franz Fehrenbach, Mr. Larry D. McVay from the Board.

Internal Corporate Governance Framework

Linde plc is subject to its own internal corporate governance guidelines (the "Guidelines"), as adopted by the board of directors of Linde plc (the "Board of Directors" or "Board"), the current version of which is available at https://www.linde.com/about-linde/corporate-governance.

Internal Control and Risk Management Systems in Relation to the Financial Reporting Process

Linde maintains accounting systems, including internal accounting controls, monitored by a staff of internal auditors, that are designed to provide reasonable assurance of the reliability of financial records and the protection of assets. The concept of reasonable assurance is based on recognition that the cost of a system should not exceed the related benefits. The effectiveness of those systems depends primarily upon the careful selection of financial and other managers, clear delegation of authority and assignment of accountability, inculcation of high business ethics and conflict-of-interest standards, policies and procedures for coordinating the management of corporate resources, and the leadership and commitment of top management.

The Audit Committee of the Board of Directors, which consists solely of non-employee directors, is responsible for overseeing the functioning of the accounting system and related controls and the preparation of annual financial statements. The Audit Committee periodically meets with management, internal auditors and the independent accountants to review and evaluate their accounting, auditing and financial reporting activities and responsibilities, including management's assessment of internal control over financial reporting. The external auditors and internal auditors have full and free access to the Audit Committee and meet with the committee, with and without management present. Details of the composition and operation of the Audit Committee are available at page 27 of this report.

Linde's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of management, including the company's principal executive officer and principal financial officer, the company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (often referred to as COSO). Based on this evaluation, management concluded that the company's internal control over financial reporting was effective as of 31 December 2022.

Information required under the European Communities (Takeover Bids (Directive 2004/ 25/EC)) Regulations 2006

As required by the Takeover Bids Regulations, the information contained below represents the position as at 31 December 2022.

Structure of the company's capital

The capital of the company is divided into ordinary shares of €0.001 each, A ordinary shares of €1.00 each, deferred shares of €1.00 each and preferred shares of €0.001 each.

As at 31 December 2022, there were 552,012,862 ordinary shares in issue. As at 31 December 2022, there were no A ordinary shares, deferred shares or preferred shares in issue.

Further detail on the structure of the company's capital is set out in Note 16 to the consolidated financial statements.

Rights and Obligations attaching to the classes of shares

Ordinary shares

Dividend rights

Under Irish law, dividends are payable on the ordinary shares of the company only out of profits available for distribution. Subject to the provisions of the Act, holders of the ordinary shares of the company are entitled to receive such dividends as may be declared by the company by ordinary resolution, provided that the dividend cannot exceed the amount recommended by the Board of Directors. The company may pay shareholders interim dividends if it appears to the Board of Directors that they are justified by the profits of the company available for distribution. Any dividend which has remained unclaimed for twelve years from the date of its declaration may be forfeited and cease to remain owing by the company.

Details of dividends declared by Linde plc are available at page 19 of this report.

Voting rights

At any general meeting, a resolution put to the vote of the meeting is decided on a poll. Every shareholder who is present in person or by proxy has one vote for every ordinary share of €0.001 each.

The necessary quorum for a general meeting is two persons present in person or by proxy and having the right to attend and vote at the meeting and together holding shares representing more than 50% of the votes that may be cast by all shareholders at the relevant time. All business is considered to be special business if it is transacted at an extraordinary general meeting ("EGM") as is all business transacted at an annual general meeting ("AGM") other than the declaration of a dividend, the consideration of the company's statutory financial statements and reports of the Board of Directors and Auditors on those statements, the review by the shareholders of the company's affairs, the election of directors in the place of those retiring, the reappointment of the retiring Auditors (subject to sections 380 and 382 to 385 of the Act), the fixing of the remuneration of the Auditors and the consideration of a special resolution for the purpose of section 1102(2)(b) of the Act. Any business that is required to be dealt with by way of special resolution must be passed by not less than 75% of the votes cast by such shareholders as, being entitled so to do, vote in person or by proxy at a general meeting at which not less than twenty-one clear days' notice specifying the text or substance of the proposed resolution has been duly given.

Any business that is required to be dealt with by way of ordinary resolution must be passed by a simple majority of the votes cast by the shareholders as, being entitled to do so, vote in person or by proxy at a general meeting. Where an equal number of votes have been cast on any resolution the Chairman of the meeting is not entitled to a second or casting vote.

An EGM (other than an EGM called for the passing of a special resolution, which must be called by not less than twenty-one clear days' notice) may be called by not less than 14 clear days' notice where:

(a) all shareholders, who hold shares that carry rights to vote at the meeting, are permitted to vote by electronic means at the meeting; and
(b) a special resolution reducing the period of notice to fourteen days has been passed at the immediately preceding AGM, or at a general meeting held since that meeting.

Liquidation rights

In the event of any surplus arising on the occasion of the liquidation of the company, the ordinary shareholders would be entitled to a share in that surplus in proportion to the capital at the commencement of the liquidation paid up or credited as paid up on the ordinary shares held by them respectively.

A Ordinary Shares and Deferred Shares

As at 31 December 2022, there were no A ordinary shares or deferred shares in issue. On incorporation, Linde plc issued 25,000 ordinary shares to meet the minimum public limited company capitalization threshold required by Irish company law. These 25,000 ordinary shares were subsequently converted into A ordinary shares and were later converted into deferred shares, acquired by the company for nil consideration and cancelled.

The rights and obligations attaching to the A ordinary shares are the same as those attaching to the ordinary shares. The deferred shares are non-voting shares and do not convey upon the holder the right to be paid a dividend or to receive notice of or to attend, vote or speak at a general meeting. The deferred shares confer the right on a return of capital, on a winding-up or otherwise, only to the repayment of the nominal value paid up on the deferred shares after repayment of the nominal value of the ordinary shares.

Preferred shares

As at 31 December 2022, there were no preferred shares in issue. Where authorized to issue unissued shares in the capital of the company (including where relevant, by shareholder approval under section 1021 of the Act), and subject to the scope of any such authority, in accordance with the company's articles of association (the "Articles"), the Board of Directors are authorized to issue all or any of the authorized but unissued preferred shares from time to time in one or more classes or series, and to fix for each such class or series such voting power, full or limited or no voting power, and such designations, preferences or special rights and qualifications, limitations or restrictions thereof in any resolution adopted by the Board of Directors providing for the issuance of such class or series of preferred shares.

Variation of class rights

Whenever the share capital of the company is divided into different classes of shares, the rights attached to any class may be varied or abrogated with the consent in writing of 75% in nominal value of the issued shares of that class, or with the sanction of a special resolution passed at a separate general meeting of the holders of the shares of that class.

Percentage of the company's capital represented by class of share

The ordinary shares represent 95.89% of the authorized share capital and 100% of the issued share capital. The A ordinary shares represent 1.37% of the authorized share capital and 0% of the issued share capital. The deferred shares represent 1.37% of the authorized share capital and 0% of the issued share capital. The preferred shares represent 1.37 % of the authorized share capital and 0% of the issued share capital.

Restrictions on the transfer of shares in the company

There are no restrictions imposed by the company on the transfer of shares, nor are there any requirements to obtain the approval of the company or other shareholders for a transfer of shares, save in certain limited circumstances set out in the Articles. A copy of the Articles may be found on www.linde.com or may be obtained on request from the company Secretary.

Rules of the company concerning the appointment and replacement of directors

Please see "Composition and Operation of Board of Directors and Committees of Board of Directors" section at page 27 below.

Rules of the company concerning the amendment of the company's Articles

The company's Articles may be amended by special resolution passed at an AGM or EGM. An AGM and an EGM called for the passing of a special resolution shall be called by not less than twenty-one clear days' notice. Special resolutions must be approved by not less than 75% of the votes cast by such shareholders as, being entitled so to do, vote in person or by proxy. No business may be transacted at any general meeting unless a quorum of shareholders is present at the time when the meeting proceeds to business. The necessary quorum for a general meeting is two persons present in person or by proxy and having the right to attend and vote at the meeting and together holding shares representing more than 50% of the votes that may be cast by all shareholders at the relevant time.

Powers of the company's directors, including powers in relation to issuing or buying back by the company of its shares

Under its Articles, responsibility for the management of the business of the company has been delegated by the company's shareholders to the Board of Directors, who in turn exercise all powers of the company as are not, by the Articles, reserved for the company's shareholders. The Board of Directors has further delegated the management of the company to its committees, management and the Chief Executive Officer.

The Board of Directors may exercise all the borrowing powers of the company and may give security in connection therewith. These borrowing powers may be amended or restricted only by the shareholders in general meeting.

The shareholders of the company in general meeting may at any time and from time to time by resolution increase the share capital of the company by such amount as they think proper. Whenever the share capital of the company is so increased, the Board of Directors may, subject to various provisions of the Articles, issue shares to such amount not exceeding the amount of such enlargement as they think proper. All ordinary shares so issued shall rank in equal priority with existing ordinary shares.

Subject to provisions of the Act, to any rights conferred on any class of shares in the company and to the Articles, the company may purchase any of its shares of any class and may cancel any shares so purchased or hold such shares as treasury shares (the "treasury shares") with liberty to re-issue any such treasury shares in accordance with section 109 of the Act. The company shall not make market purchases of its own shares unless such purchases shall have been authorized by an ordinary resolution of the company.

For purposes of Irish law, repurchases of shares in Linde plc may be effected by a redemption if the repurchased shares are redeemable shares or are deemed to be redeemable shares by Linde plc's Articles. Under Irish law, a company may issue redeemable shares and redeem them out of distributable reserves or the proceeds of a new issue of shares for that purpose. All redeemable shares must also be fully paid. Redeemable shares may, upon redemption, be cancelled or held in treasury. The Linde plc Articles provide that, unless the Board of Directors determines otherwise, each Linde plc ordinary share shall be deemed to be a redeemable share on, and from the time of, the existence or creation of an agreement, transaction or trade between Linde plc and any person pursuant to which Linde plc acquires or will acquire Linde plc ordinary shares, or an interest in Linde plc ordinary shares, from the relevant person. Redeemable shares of Linde plc shall have the same characteristics as any other Linde plc share save that they shall be redeemable in accordance with the arrangement.

On 21 January 2019, the Board of Directors authorized a further share repurchase program for up to $6.0 billion of its ordinary shares (the "2019 Program"). Under the 2019 Program, Linde was permitted to acquire up to 15% of its outstanding ordinary shares in the period from 1 May 2019 (or the date following the announcement of the end of the 2018 Program, if earlier) through 1 February 2021. The purpose of the 2019 Program was to reduce the share capital or to meet obligations under Linde equity awards.

On 25 January 2021, the Board of Directors authorized a further share repurchase program of up to $5.0 billion of its ordinary shares ("2021 Program"). Under the 2021 Program, Linde was permitted to acquire up to 15% of its outstanding ordinary shares in the period from 1 February 2021 through 31 July 2023. The purpose of the 2021 Program is to reduce the share capital or to meet obligations under Linde equity awards. This Program was fully utilized as of 28 February 2022.

On 28 February 2022, the Board of Directors authorized a further share repurchase program for up to $10.0 billion of its ordinary shares (the "2022 Program"). Under the 2022 Program, Linde may acquire up to 15% of its outstanding ordinary shares in the period from 1 March 2022 through 31 July 2024. The purpose of the 2022 Program was to reduce the share capital or to meet obligations under Linde equity awards.

The 2019, 2021 and 2022 Programs have been structured as redemptions for Irish law purposes and are being effected pursuant to Article 9 of the Articles.

Severance and Change-in-Control Arrangements

The company provides severance benefits to eligible employees, including Executive Officers, consistent with the terms of its severance programs and agreements, as well as applicable local law, which could apply as a result of a change-in-control of the company where an employee's employment is terminated without cause as a result of such change-in-control.

Significant agreements relating to a change of control subsequent to a takeover bid

In the financial years 2007 to 2017, Linde AG issued benchmark bonds under its €10 billion debt issuance programme, either itself or via Linde Finance B. V., a Dutch subsidiary of Linde plc. Under the terms and conditions of the bond issuances, in the event of a change of control of the company, the bond creditor may demand immediate repayment if such change of control leads to the withdrawal of the credit rating or to a reduction in the rating to or below certain credit rating levels for unsubordinated unsecured liabilities.

There are other significant financing agreements in place with the company / certain subsidiary companies, each of which includes specific rules that apply in the event of a change in control of the company. In particular, these rules provide for a duty on the part of the company / the relevant subsidiary to provide information to the contracting party, and also provide for cancellation rights for the contracting party.

There are customer contracts in place with the company/certain subsidiary companies, containing clauses granting the customer special cancellation rights in the event of a change of control of the company. In the event that these special cancellation rights are exercised, the contracts provide for appropriate compensation in favor of the customer.

Under the terms and conditions of the 2009 Praxair, Inc. Long-Term Incentive Plan (the "2009 Plan"), which was assumed by the company pursuant to the business combination, and under the 2021 Linde Plc Long-term Incentive Plan, in the event of a change of control of the company, special rules may be adopted. Those special rules provide, in the event of a change of control of the company, that cancellation rights apply, which means that option/matching shares rights may be settled in cash in an amount to be determined in accordance with the 2009 Plan.

Shareholders' Meetings

The company operates under the Act. The Act provides for two types of shareholder meetings: the AGM with all other general meetings being called an EGM.

The company must hold a general meeting each year as its AGM, in addition to any other general meetings held in that year. Not more than 15 months may elapse between the date of one AGM and the next. EGMs can also be convened at the request of shareholders holding not less than 5% of the voting share capital of the company. The notice period for an AGM and an EGM to consider any special resolution (a resolution which requires a 75% majority vote, not a simple majority) is 21 clear days.

No business shall be transacted at any general meeting unless a quorum is present at the time when the meeting proceeds to business. Two shareholders present in person or by proxy and having the right to attend and vote at the meeting and together holding shares representing more than 50% of the votes that may be cast by all shareholders at the relevant time shall be a quorum. Only those shareholders registered on the company's register of shareholders at the prescribed record date, being a date not more than 48 hours before the general meeting to which it relates, are entitled to attend and vote at a general meeting.

Under the Act, ordinary resolutions may be passed by a majority of votes cast in favor, while special resolutions require a 75% majority of votes cast in favor. Any shareholder who is entitled to attend, speak and vote at a general meeting is entitled to appoint one or more proxies to attend, speak and vote on his or her behalf. A proxy need not be a shareholder of the company. All resolutions are determined by a poll.

As further described on page 26, the management of the business of the company has been delegated by the company's shareholders to the Board of Directors, who may exercise all the powers of the company save for those reserved to shareholders. Matters reserved to shareholders in general meetings include the election of directors, the declaration of final dividends on the recommendation of the directors, the fixing of the remuneration of the external auditor, amendments to the Articles, measures to increase or reduce the ordinary share capital and the authority to issue shares.

Composition and Operation of Board of Directors and Committees of Board of Directors

Board of Directors

As of December 2022, Linde plc had ten directors, including Sanjiv Lamba who was also the CEO.

On 1 March 2022, Prof. Dr. Clemens Börsig, Franz Fehrenbach, Prof. Dr. Wolfgang Reitzle, Dr. Nance Dicciani and Larry D. McVay each retired as directors of Linde plc.

On 25 October 2021, Linde plc announced that the Board of Directors had appointed Sanjiv Lamba to succeed Steve Angel as CEO and join the Board of Directors and Steve Angel to succeed Wolfgang Reitzle as Chairman, effective 1 March 2022 and such appointments duly took effect on that date.

Under the Linde plc Articles, directors retire at each AGM and may be re-elected by shareholders at that meeting.

Linde's Articles also provide that a shareholder, or a group of up to 20 shareholders, who have owned at least 3% of the company's outstanding ordinary shares continually for at least three years, may nominate persons for election as directors and have these nominees included in the company's proxy statement. The shareholders or group must meet the requirements in the company's Articles. The number of nominees is limited to the greater of two persons or 20% of the number of directors serving on the Board.

The directors of the company during the financial year are listed in the table below.

Directors	Appointment Date
Prof. Dr. Wolfgang Reitzle	22 October 2018
Mr. Stephen F. Angel	22 October 2018
Prof. Dr. Ann-Kristin Achleitner	22 October 2018
Prof. Dr. Clemens Börsig	22 October 2018
Dr. Nance Dicciani	22 October 2018
Dr. Thomas Enders	22 October 2018
Mr. Franz Fehrenbach	22 October 2018
Mr. Edward Galante	22 October 2018
Mr. Joe Kaeser	01 November 2021
Mr. Larry D. McVay	22 October 2018
Dr. Victoria Ossadnik	22 October 2018
Prof. Dr. Martin H. Richenhagen	22 October 2018
Mr. Alberto Weisser	01 November 2021
Mr. Robert Wood	22 October 2018

Committees of Board of Directors

The Board of Directors has five committees: Audit, Human Capital, Nomination & Governance, Sustainability and Executive Committees, of which each consists of six directors, except the Executive Committee and Sustainability Committee, each of which consists of four directors.

Audit Committee

Committee Chair:

- Prof. Dr. Clemens Börsig (retired as of 1 March 2022)

- Prof. Dr. Martin H. Richenhagen (as of 1 March 2022)

Members (as of 28 February 2022):
- Dr. Nance K. Dicciani
- Dr. Thomas Enders
- Edward G. Galante
- Larry D. McVay
- Dr. Victoria Ossadnik

Members (as of 31 December 2022):
- Dr. Thomas Enders
- Dr. Victoria Ossadnik
- Alberto Weisser

Meetings in 2022: 6

The Audit Committee assists the Board in its oversight of (a) the independence, qualifications and performance of Linde's independent auditor, (b) the integrity of Linde's financial statements, (c) the performance of Linde's internal audit function, and (d) Linde's compliance with legal and regulatory requirements. In furtherance of these responsibilities, the Audit Committee, among other duties,

(1) appoints the independent auditor to audit Linde's financial statements, approves the fees and terms of such engagement, approves any non-audit engagements of the independent auditor, and meets regularly with, and receives various reports from, the independent auditor. The independent auditor reports directly to the Audit Committee;

(2) reviews Linde's principal policies for accounting and financial reporting and its disclosure controls and processes, and reviews with management and the independent auditor Linde's financial statements prior to their publication;

(3) reviews assessments of Linde's internal controls, the performance of the Internal Audit function, the performance evaluations of the General Auditor and the Chief Compliance Officer, and the guidelines and policies by which Linde undertakes risk assessment and risk management; and

(4) reviews the effectiveness of Linde's compliance with laws, business conduct, integrity and ethics programs.

During 2019, the Audit Committee conducted a comprehensive, competitive formal tender process to consider, and ultimately to recommend to the Board, the selection of an independent auditor for the company in accordance with applicable rules of the European Union. The Audit Committee considered and evaluated internationally recognized independent registered public accounting firms, including PwC, based upon a thorough set of criteria that the Audit Committee adopted. After conducting this process, the Audit Committee selected PwC as the independent auditor.

Human Capital Committee

Committee Chair:
- Edward G. Galante

Members (as of 28 February 2022):
- Prof. Dr. Ann-Kristin Achleitner
- Dr. Nance K. Dicciani
- Franz Fehrenbach
- Dr. Victoria Ossadnik
- Prof. Dr. Martin H. Richenhagen

Members (as of 31 December 2022):
- Prof. Dr. Ann-Kristin Achleitner
- Joseph Kaeser
- Prof. Dr. Martin H. Richenhagen
- Robert L. Wood

Meetings in 2022: 4

The Human Capital Committee assists the Board in its oversight of (a) Linde's compensation and incentive policies and programs, and (b) management development and succession, in both cases particularly as they apply to Linde's executive officers. In furtherance of these responsibilities, the Human Capital Committee, among other duties,

(1) determines Linde's policies relating to the compensation of executive officers and assesses the competitiveness and appropriateness of their compensation and benefits;

(2) determines the salaries, performance-based variable compensation, equity awards, terms of employment, retirement or severance, benefits, and perquisites of executive officers;

(3) establishes the corporate goals relevant to the CEO's compensation, evaluates the CEO's performance in light of these goals and sets the CEO's compensation accordingly;

(4) reviews management's long-range planning for executive development and succession, and develops a CEO succession plan;

(5) reviews design, administration and risk associated with Linde's management incentive compensation and equity compensation plans; and

(6) reviews periodically the company's diversity policies and objectives, and programs to achieve those objectives.

Executive Committee

Committee Chair:
- Prof. Dr. Wolfgang Reitzle (retired as of 1 March 2022)
- Stephen F. Angel (as of 1 March 2022)

Members (as of 28 February 2022):
- Stephen F. Angel
- Dr. Thomas Enders
- Robert L. Wood

Members (as of 31 December 2022):
- Dr. Thomas Enders
- Sanjiv Lamba
- Robert L. Wood

Meetings in 2022: 1

The purpose of the Executive Committee is primarily to act on behalf of the entire Board with respect to certain matters that may arise in between regularly scheduled Board meetings, and act on certain other matters from time to time. In particular, the Executive Committee duties include, among others:

(1) evaluating and approving any investments, acquisitions, partnerships or divestments requiring Board approval, that are within value thresholds specified by the Board;

(2) evaluating and approving any financing or other capital markets transactions requiring Board approval, that are within value thresholds specified by the Board; and

(3) acting upon any other such matters within the competencies of the Board, that are not reserved solely to the Board, that are within value thresholds specified by the Board and, in the opinion of the Chairman of the Board, should not be postponed until the next regularly scheduled Board meeting.

Nomination and Governance Committee

Committee Chair:
- Robert L. Wood (as of 28 February 2022)
- Josef Kaeser (as of 1 March 2022)

Members (as of 28 February 2022)::

- Prof. Dr. Ann-Kristin Achleitner
- Prof. Dr. Clemens Börsig
- Franz Fehrenbach
- Larry D. McVay
- Prof. Dr. Martin H. Richenhagen

Members (as of 31 December 2022):
- Edward G. Galante
- Dr. Victoria Ossadnik

Meetings in 2022: 5

The Nomination and Governance Committee assists the Board in its oversight of (a) the selection, qualifications, compensation and performance of Linde's directors, (b) Linde's governance, including the practices and effectiveness of the Board, and (c) various important public policy concerns that affect the company. In furtherance of these responsibilities, the Nomination and Governance Committee, among other duties,

(1) recommends to the Board nominees for election as directors, and periodically reviews potential candidates, including incumbent directors;

(2) reviews policies with respect to the composition, compensation, organization and practices of the Board, and developments in corporate governance matters generally; and

(3) reviews Linde's policies and responses to broad public policy issues such as social responsibility, corporate citizenship, charitable contributions, legislative issues, and important shareholder issues, including management and shareholder proposals offered for shareholder approval.

Sustainability Committee

Committee Chair:
- Dr. Thomas Enders (as of 31 December 2022)

Members (as of 31 December 2022):
- Prof. Dr. Ann-Kristin Achleitner
- Alberto Weisser
- Robert L. Wood

The Sustainability Committee assists the Board with its oversight of the company's programs, policies, practices and strategies related to environmental matters generally, including:

(1) the company's decarbonization efforts, including those related to the reduction of greenhouse gas emissions from operations;
(2) the company's clean energy efforts, including those related to clean hydrogen as well as technology and innovation for decarbonization solutions;
(3) sustainable productivity, water conservation and management, energy consumption, product stewardship and zero waste sites; and
(4) the company's environmental sustainability goals, including those related to climate change and greenhouse gas emissions, and the company's Sustainability Report.

DIRECTORS' AND COMPANY SECRETARY'S INTERESTS

No director, company secretary or any member of their immediate families had any interest in shares or debentures of any subsidiary. Directors' remuneration is set forth in Note 28 to the consolidated financial statements. The interests of the directors and the secretaries of the company in office as at 31 December 2022 in the ordinary share capital of Linde plc as of 31 December 2022 and 2021, (or, if he or she was not a director on 31 December 2022, when he or she became a director), as required to be stated pursuant to section 329 of the Act, are presented in the table below.

	At 31 December 2022		At 31 December 2021	
Directors	**Ordinary Shares(1)**	**Options**	**Ordinary Shares(1)**	**Options**
Prof. Dr. Wolfgang Reitzle	20,211	—	18,914	—
Mr. Stephen F. Angel	580,862	1,306,118	580,601	1,345,908
Prof. Dr. Ann-Kristin Achleitner	2,852	—	2,334	—
Prof. Dr. Clemens Börsig	2,793	—	2,275	—
Dr. Nance Dicciani	19,590	—	19,072	—
Dr. Thomas Enders	11,587	—	11,069	—
Mr. Franz Fehrenbach	5,081	—	4,188	—
Mr. Edward Galante	13,062	—	12,544	—
Mr. Joe Kaeser	1,000	—	1,000	—
Mr. Larry D. McVay	13,309	—	12,790	—
Dr. Victoria Ossadnik	1,795	—	1,276	—
Prof. Dr. Martin H. Richenhagen	5,951	—	5,432	—
Mr. Alberto Weisser	—	—	—	—
Mr. Robert Wood	15,839	—	15,261	—
Secretary				
Susan Kelly	31	—	—	—
Anthony M. Pepper	1,529	7,330	1,155	6,865

(1) Excludes stock units, including restricted share units, deferred stock units and performance share units, as the units have no ordinary share voting rights. Any interests in stock units as of December 31, 2022 are reported in Note 28 of this IFRS report.

DIRECTORS' COMPLIANCE STATEMENT

As required by section 225(2) of the Act, the directors acknowledge that they are responsible for securing the company's compliance with its relevant obligations (as defined in section 225(1)). The directors further confirm that a "compliance policy statement" (as defined in section 225(3)(a)) has been drawn up, that appropriate arrangements and structures that are, in the directors' opinion, designed to secure material compliance with the relevant obligations have been put in place and that a review of those arrangements and structures has been conducted in the financial year to which this report relates.

STATEMENT OF DISCLOSURES TO AUDITORS

So far as each person who was a director at the date of approving this report is aware, there is no relevant audit information, being information needed by the auditor in connection with preparing its report, of which the auditor is unaware. Having made enquiries of fellow directors and the company's auditor, each director has taken all the steps that he/she is obliged to take as a director in order to make himself/herself aware of any relevant audit information and to establish that the auditor is aware of that information.

DIRECTORS' RESPONSIBILITY STATEMENT

The directors are responsible for preparing the directors' report and the financial statements in accordance with Irish law.

Irish law requires the directors to prepare financial statements for each financial year that gives a true and fair view of the company's assets, liabilities and financial position as at the end of the financial year and of the profit and loss of the company for the financial year. Under that law, the Directors have prepared the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union ("IFRS") and with those parts of the Act applicable to companies applying IFRS and the Parent company financial statements in accordance with Irish Generally Accepted Accounting Practice (accounting standards issued by the UK Financial Reporting Council, including Financial Reporting Standard 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland and Irish law).

Under Irish law, the directors shall not approve the financial statements unless they are satisfied that they give a true and fair view of the company's assets, liabilities and financial position as at the end of the financial year and the profit and loss of the company for the financial year.

In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and estimates that are reasonable and prudent;
- state whether the financial statements have been prepared in accordance with applicable accounting standards and identify the standards in question, subject to any material departures from those standards being disclosed and explained in the notes to the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to:

- correctly record and explain the transactions of the company;
- enable, at any time, the assets, liabilities, financial position and profit and loss of the company to be determined with reasonable accuracy; and
- enable the directors to ensure that the financial statements comply with the Companies Act and enable those financial statements to be audited.

The directors are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website. Legislation in Ireland governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Approved by the Board of Directors and signed on its behalf on 28 July 2023 by:

/s/ Sanjiv Lamba	/s/ Prof. Dr. Martin H. Richenhagen
Sanjiv Lamba	Martin Richenhagen
Chief Executive Officer and Director	*Director*

Report of Independent Auditors

To the Board of Directors and Shareholders of Linde plc

Report on the Audit of the Financial Statements

Opinion

We have audited the accompanying consolidated financial statements of Linde plc and its subsidiaries (the "Company"), which comprise the consolidated statement of financial position as of December 31, 2022 and 2021, and the related consolidated statements of profit and loss, of comprehensive income, of changes in equity, and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"), which as discussed in Note 1 to the consolidated financial statements, have been prepared on the basis of International Financial Reporting Standards as adopted by the European Union.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Company as of 31 December 2022 and 2021, and the results of its operations and its cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

Basis for opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS) and in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit, which include relevant ethical requirements in the United States of America and the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants*. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Basis of Accounting

As discussed in Note 1 to the consolidated financial statements, the Company prepares its consolidated financial statements on the basis of International Financial Reporting Standards as adopted by the European Union, which differs from accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Responsibilities of Management and those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation 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 Company's ability to continue as a going concern for at least, but not limited to, twelve months from the end of the reporting period, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or cease operations, or has no realistic alternative but to do so.

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

Auditors' 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 auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS and ISAs will always detect a material misstatement when it exists. 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. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with US GAAS and ISAs, we:

- Exercise professional judgment and maintain professional scepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision, and performance of the group audit of the Company. We remain solely responsible for our audit opinion.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Director's Report, but does not include the consolidated financial statements or our auditors' report thereon. Our opinion on the consolidated financial statements does not cover the other information , and we do not express an opinion, except to the extent otherwise explicitly stated under the Report on Other Legal and Regulatory Requirements – EU Audit Directive Addressing the Directors' Report section of our report, or any form of assurance thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the consolidated financial statements or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Report on Other Legal and Regulatory Requirements – EU Audit Directive Addressing the Directors Report

With respect to the Directors' Report, we considered whether the Directors' Report includes the disclosures required by the Irish Companies Act of 2014 that are relevant to the Company.

Based on the work undertaken in the course of our audit:

- In our opinion, the information given in the Directors' Report for the financial year for which the consolidated financial statements are prepared is consistent with the consolidated financial statements and has been prepared in accordance with the Irish Companies Act 2014; and
- Based on our knowledge and understanding of the Company and its environment obtained in the course of the audit, we have not identified any material misstatements in the Directors' Report.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Stamford, Connecticut

July 28, 2023

Consolidated Financial Statements

CONSOLIDATED STATEMENT OF PROFIT AND LOSS

For The Years Ended 31 December *(Millions of dollars, except per share data)*	*Note*	2022	2021
Revenue	[6]	$ 33,899	$ 31,259
Cost of sales		23,203	21,623
GROSS PROFIT		**$ 10,696**	**$ 9,636**
Marketing and selling expenses		1,900	2,109
Research and development costs		208	217
Administration expenses		1,836	2,062
Impairment losses on receivables and contract assets	[23]	163	129
Other operating income	[7]	416	365
Other operating expenses	[7]	1,462	380
OPERATING PROFIT		**$ 5,543**	**$ 5,104**
Financial income	[8]	48	29
Financial expenses	[8]	32	(52)
Share of profit and loss from associates and joint ventures (at equity)	[13]	91	44
PROFIT BEFORE TAX		**$ 5,650**	**$ 5,229**
Income tax expense	[9]	1,506	1,334
PROFIT FOR THE YEAR		**$ 4,144**	**$ 3,895**
attributable to Linde plc shareholders		3,976	3,738
attributable to noncontrolling interests		168	157
PROFIT FOR THE YEAR - LINDE PLC SHAREHOLDERS		$ 3,976	$ 3,738
EARNINGS PER SHARE – LINDE PLC SHAREHOLDERS	[10]		
Earnings per share in USD – undiluted		$ 7.96	$ 7.23
Earnings per share in USD – diluted		$ 7.89	$ 7.16

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Years Ended 31 December *(Millions of dollars)*	*Note*	**2022**	**2021**
PROFIT FOR THE YEAR		$ 4,144	$ 3,895
OTHER COMPREHENSIVE INCOME (LOSS)			
ITEMS THAT WILL BE RECLASSIFIED SUBSEQUENTLY TO PROFIT AND LOSS			
Currency translation adjustments			
Foreign currency translation adjustments		(1,807)	(1,238)
Reclassifications to net income		(147)	(52)
Income taxes		—	(7)
Currency translation adjustments		(1,954)	(1,297)
Derivative instruments	[23]		
Current year unrealized gain (loss)		106	140
Reclassifications to net income		(129)	(49)
Income taxes		9	(20)
Derivative instruments		(14)	71
ITEMS THAT WILL NOT BE RECLASSIFIED SUBSEQUENTLY TO PROFIT AND LOSS			
Funded status - retirement obligation remeasurement	[17]	1,582	1,264
Income Taxes		(363)	(262)
Funded status - retirement obligations		1,219	1,002
TOTAL OTHER COMPREHENSIVE INCOME (LOSS)		(749)	(224)
COMPREHENSIVE INCOME (INCLUDING NONCONTROLLING INTERESTS)		$ 3,395	$ 3,671
Less: noncontrolling interests		(87)	(179)
COMPREHENSIVE INCOME - LINDE PLC		$ 3,308	$ 3,492

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(Millions of dollars)	*Note*	31/12/2022	31/12/2021
ASSETS			
Goodwill	[11]	$ 25,952	$ 27,184
Other intangible assets - net	[11]	12,949	14,421
Tangible assets - net	[12]	23,986	26,682
Right of use assets	[20]	887	1,034
Investments in associates and joint ventures (at equity)	[13]	1,516	1,630
Other financial assets	[13]	347	132
Receivables from finance leases	[15]	22	29
Miscellaneous other receivables and other assets	[15]	981	557
Deferred tax assets	[9]	232	241
NON-CURRENT ASSETS		**$ 66,872**	**$ 71,910**
Inventories	[14]	1,990	1,751
Receivables from finance leases	[15]	6	8
Trade receivables	[15]	4,506	4,397
Contract assets	[6, 15]	124	130
Miscellaneous other receivables and other assets	[15]	914	984
Income tax receivables	[15]	164	122
Cash and cash equivalents	[24]	5,555	2,935
CURRENT ASSETS		**$ 13,259**	**$ 10,327**
TOTAL ASSETS		**$ 80,131**	**$ 82,237**

(Millions of dollars)	*Note*	**31/12/2022**	**31/12/2021**
EQUITY AND LIABILITIES			
Called-up share capital presented as equity	[16]	$ 1	$ 1
Retained earnings	[16]	57,283	54,432
Treasury shares	[16]	(14,737)	(9,808)
Other reserves	[16]	(2,443)	(320)
TOTAL EQUITY ATTRIBUTABLE TO LINDE PLC SHAREHOLDERS		**$ 40,104**	**$ 44,305**
Noncontrolling interests	[16]	1,667	1,769
TOTAL EQUITY		**$ 41,771**	**$ 46,074**
Long-term pensions and similar obligations	[17]	637	1,802
Other non-current provisions	[18]	711	820
Deferred tax liabilities	[9]	5,850	6,182
Financial liabilities	[19]	12,271	11,416
Liabilities from leases	[20]	679	768
Contract liabilities	[6, 21]	923	769
Income tax liabilities	[21]	139	178
Other non-current liabilities	[21]	335	279
NON-CURRENT LIABILITIES		**$ 21,545**	**$ 22,214**
Current pensions and similar obligations	[17]	52	38
Current provisions	[18]	832	753
Financial liabilities	[19]	5,675	2,800
Liabilities from leases	[20]	225	274
Trade payables	[21]	4,559	4,790
Contract liabilities	[6, 21]	3,083	2,946
Other current liabilities	[21]	1,408	1,578
Income tax liabilities	[21]	981	770
CURRENT LIABILITIES		**$ 16,815**	**$ 13,949**
TOTAL EQUITY AND LIABILITIES		**$ 80,131**	**$ 82,237**

On behalf of the board

/s/ Sanjiv Lamba
Sanjiv Lamba
Chief Executive Officer and Director

/s/ Prof. Dr. Martin H. Richenhagen
Martin Richenhagen
Director

28 July 2023

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

			Other reserves						
(Millions of dollars)	**Called-up share capital**	**Retained earnings (including remeasurement of defined benefit plans)**	**Currency translation differences**	**Hedging instruments**	**Other**	**Treasury shares**	**Total equity attributable to Linde plc shareholders**	**Non-controlling interests**	**Total equity**
AS AT 01/01/2021	**$ 1**	**$ 51,881**	**$ 971**	**$ 4**	**$ (74)**	**$ (5,374)**	**$ 47,409**	**$ 2,649**	**$ 50,058**
Profit for the year	—	3,738	—	—	—	—	3,738	157	3,895
Other comprehensive income (net of tax)	—	1,002	(1,319)	71	—	—	(246)	22	(224)
TOTAL COMPREHENSIVE INCOME	**—**	**4,740**	**(1,319)**	**71**	—	**—**	**3,492**	**179**	**3,671**
Dividend payments	—	(2,189)	—	—	—	—	(2,189)	(174)	(2,363)
Changes as a result of share option schemes and stock purchase plans	—	—	—	—	27	(4,434)	(4,407)	—	(4,407)
Redemption value adjustments	**—**	**—**	**—**	**—**	—	—	—	—	—
DISTRIBUTIONS TO OWNERS OF THE COMPANY	**—**	**(2,189)**	**—**	**—**	**27**	**(4,434)**	**(6,596)**	**(174)**	**(6,770)**
CHANGES IN OWNERSHIP INTERESTS IN SUBSIDIARIES	—	—	—	—	—	—	—	(885)	(885)
AT 31/12/2021	**$ 1**	**$ 54,432**	**$ (348)**	**$ 75**	**$ (47)**	**$ (9,808)**	**$ 44,305**	**$ 1,769**	**$ 46,074**
Profit for the year	—	3,976	—	—	—	—	3,976	168	4,144
Other comprehensive income (net of tax)	—	1,219	(1,873)	(14)	—	—	(668)	(81)	(749)
TOTAL COMPREHENSIVE INCOME	**—**	**5,195**	**(1,873)**	**(14)**	—	**—**	**3,308**	**87**	**3,395**
Dividend payments	—	(2,344)	—	—	—	—	(2,344)	(129)	(2,473)
Changes as a result of share option schemes and stock purchase plans	—	—	—	—	(236)	(4,929)	(5,165)	—	(5,165)
DISTRIBUTIONS TO OWNERS OF THE COMPANY	**—**	**(2,344)**	**—**	**—**	**(236)**	**(4,929)**	**(7,509)**	**(129)**	**(7,638)**
CHANGES IN OWNERSHIP INTERESTS IN SUBSIDIARIES	—	—	—	—	—	—	—	(60)	(60)
AT 31/12/2022	**$ 1**	**$ 57,283**	**$ (2,221)**	**$ 61**	**$ (283)**	**$ (14,737)**	**$ 40,104**	**$ 1,667**	**$ 41,771**

CONSOLIDATED STATEMENT OF CASH FLOWS

For The Years Ended 31 December *(Millions of dollars)*	*Note*	**2022**	**2021**
Profit for the year attributable to Linde plc shareholders		$ 3,976	$ 3,738
Add: Profit for the year attributable to noncontrolling interests		168	157
Profit for the year		4,144	3,895
Adjustments to profit after tax to calculate cash flow from operating activities			
Russia-Ukraine conflict and other charges, net of payments		862	98
Amortization of intangible assets/depreciation of tangible assets	[11,12,20]	4,580	5,072
Deferred income taxes		(479)	(284)
Share of profit and loss from associates and joint ventures (at equity)	[13]	(91)	(44)
Distributions/dividends received from associates and joint ventures	[13]	78	96
Share based compensation		107	128
Non-cash charges and other		(26)	(85)
Changes in assets and liabilities			
Change in trade receivables	[15]	(484)	(548)
Contract assets & liabilities	[6]	307	1,326
Change in inventories	[14]	(344)	(130)
Change in prepaid and other current assets	[15]	(130)	75
Change in payables, provisions and accruals	[18, 21]	423	413
Pension contributions		(51)	(42)
Long-term assets, liabilities and other		433	191
CASH FLOW FROM OPERATING ACTIVITIES		**$ 9,329**	**$ 10,161**
Capital expenditures		(3,226)	(3,164)
Acquisitions / Payments for investments in consolidated companies		(122)	(88)
Proceeds on disposal of tangible and intangible assets, and receivables from leases		195	167
CASH FLOW (FOR)/FROM INVESTING ACTIVITIES		**$ (3,153)**	**$ (3,085)**

(Millions of dollars)	*Note*	2022	2021
Dividend payments to Linde plc shareholders		$ (2,344)	$ (2,189)
Cash inflows (outflows) due to changes of noncontrolling interests		(115)	(194)
Issuance of ordinary shares		36	50
Purchases of ordinary shares		(5,168)	(4,612)
Current debt borrowings (repayments) - net		3,022	(1,350)
Non-current debt borrowings		3,228	2,329
Non-current debt repayments		(1,806)	(1,446)
Cash outflows for the repayment of liabilities from leases		(322)	(330)
Other cash flows		(10)	(185)
CASH FLOW FOR FINANCING ACTIVITIES		**$ (3,479)**	**$ (7,927)**
CHANGE IN CASH AND CASH EQUIVALENTS	[24]	**2,697**	**(851)**
OPENING BALANCE OF CASH AND CASH EQUIVALENTS	[24]	**$ 2,935**	**$ 3,845**
Effects of currency translation		(77)	(59)
CLOSING BALANCE OF CASH AND CASH EQUIVALENTS	[24]	**$ 5,555**	**$ 2,935**

OTHER CASH FLOW FROM OPERATING ACTIVITIES			
Income taxes paid		$ 1,782	$ 1,760
Interest paid, net of capitalized interest		$ 172	$ 234

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

[1] Business Overview and Basis of Preparation

Linde (Registration number 602527) is an incorporated public limited company formed under the laws of Ireland. Linde's registered office is located at Ten Earlsfort Terrace, Dublin 2, D02 T380 Ireland. Linde's principal executive offices are located at Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom and 10 Riverview Drive, Danbury, Connecticut, 06810, United States. Linde trades on the New York Stock Exchange ("NYSE") and on the Frankfurt Stock Exchange under the symbol LIN as of 31 December 2022.

On 18 January 2023, shareholders approved the company's proposal for an intercompany reorganization that resulted in the delisting of its ordinary shares from the Frankfurt Stock Exchange.

On 1 March 2023, Linde plc (formerly known as Rounderway plc), a public limited company incorporated under the laws of Ireland with registered number 606357 (the "Company"), as the successor to Linde plc, a public limited company incorporated under the laws of Ireland with registered number 602527 (the "Predecessor"), completed a reorganization in accordance with the Irish Companies Act 2014 (the "Reorganization"). The Reorganization was completed pursuant to (i) the terms of the Scheme of Arrangement, dated as of December 9, 2022, between the Predecessor, and the holders of the Predecessor's outstanding shares (the "Scheme") and (ii) the terms of the Common Draft Terms of Merger, dated as of December 2, 2022 (the "Terms of Merger"), between the Predecessor and the Company, pursuant to which the Predecessor was merged with and into the Company pursuant to a "merger by absorption" implemented pursuant to the provisions of Chapter 16 of Part 17 of the Irish Companies Act 2014, effective as of the Effective Time (as defined in the Terms of Merger), whereupon the separate corporate existence of the Predecessor ceased and the Company continued as the surviving entity (the "Merger"). As a result of the Reorganization, each outstanding ordinary share, €0.001 nominal value per share, of the Predecessor (the "Predecessor Shares") was exchanged for one ordinary share, €0.001 nominal value per share, of the Company (the "New Linde Shares"), and the Company changed its name from "Rounderway plc" to "Linde plc". Upon consummation of the Merger, the Company, by operation of law, assumed all obligations of the Predecessor.

Following the completion of legal and regulatory approvals, Linde completed the intercompany reorganization and delisting process, and its ordinary shares were delisted from the Frankfurt Stock Exchange on 1 March 2023. In connection with the closing of the intercompany reorganization, Linde shareholders automatically received one share of the new holding company, listed on the New York Stock Exchange, in exchange for each share of Linde plc that was previously owned. The new holding company is also named "Linde plc" and trades under the existing ticker LIN (see Note 32).

The consolidated financial statements of Linde for the year ended 31 December 2022 have been prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union pursuant to EU Regulation No. 1606/2002 of the European Parliament, the Council on the application of International Accounting Standards in the European Union and interpretations issued by the IFRS Interpretations Committee (IFRS IC) applicable to companies reporting under IFRS. The consolidated financial statements have also been prepared in accordance with the provisions of the Irish Companies Act ("Companies Act 2014"), as applicable to companies reporting under IFRS.

The consolidated financial statements of Linde have been prepared on a historical cost basis, except for the following: 1) certain financial assets and liabilities (including derivative instruments) - measured at fair value 2) certain assets and disposal groups held for sale acquired in a business combination- measured at fair value less costs to sell and 3) defined benefit pension plans - plans assets measured at fair value.

The consolidated financial statements of Linde have been prepared on a going concern basis. The company believes that it has sufficient operating flexibility, cash reserves, and funding sources to maintain adequate amounts of liquidity to meet its business needs around the world. The company has a $5 billion unsecured and a $1.5 billion undrawn revolving credit agreement with no associated financial covenants. No borrowings were outstanding under the credit agreements as of 31 December 2022 (see Note 19). The company does not anticipate any limitations on its ability to access the debt capital markets and/or other external funding sources and remains committed to its strong credit ratings.

The reporting currency is the US dollar ("USD"). All amounts are shown in millions of US dollars ($ million), unless stated otherwise. Expenses are presented by function in the consolidated statement of profit and loss.

The annual financial statements of companies included in the consolidation are prepared at the same reporting date as the annual financial statements of Linde plc.

The consolidated financial statements of Linde plc and subsidiaries were authorized for issue by the Board of Directors on 28 July 2023. The Board of Directors has the power to amend and reissue financial statements.

[2] Acquisitions and Divestitures

Acquisitions

Acquisitions were $122 million and $88 million during the years ended 31 December 2022 and 2021, respectively. Acquisitions were primarily related to the Americas and EMEA.

Divestitures

Sale of GIST business

In the second half of 2022, the company completed the sale of its GIST business. Proceeds from the sale were $184 million, net of cash divested of $75 million, for net proceeds of $109 million. The sale resulted in a loss of $21 million (benefit of $3 million, after tax), recorded within other operating expenses in the consolidated statement of profit and loss.

Deconsolidation of subsidiary in APAC

Effective 1 January 2021, Linde deconsolidated a subsidiary with operations in APAC, due to the expiration of certain contractual rights that the parties mutually agreed not to renew. From the effective date, the joint venture is reflected at equity on Linde's consolidated statement of financial position with the corresponding results reflected in share of profit and loss from associates and joint ventures (at equity) on the consolidated statement of profit and loss.

The fair value of the joint venture at 1 January 2021 was determined using a discounted cash flow model and approximated the carrying amount of its net assets. The net carrying value of $0.6 billion was mainly comprised of assets of approximately $2.5 billion (primarily Other intangible assets - net of $1.2 billion and Tangible assets - net of $0.9 billion), net of liabilities of approximately $1 billion (primarily Financial liabilities of $0.6 billion and deferred tax liabilities of $0.3 billion) and Noncontrolling interests of approximately $0.9 billion. Upon deconsolidation, a joint venture at equity was recorded representing Linde's share of the joint venture's net assets. The deconsolidation resulted in a gain of $52 million recorded within administration expenses related to the release of the currency translation adjustment balance recorded within other comprehensive income. The company did not receive any consideration, cash or otherwise, as part of the deconsolidation. The subsidiary contributed sales of approximately $600 million in 2020.

[3] Scope of consolidation

The following table provides the structure of companies included in the consolidated financial statements:

	As at 01/01/2022	Additions	Disposals	As at 31/12/2022
Consolidated subsidiaries	**625**	**4**	**26**	**603**
Companies accounted for as a joint operation	**5**	**0**	**1**	**4**
Companies accounted for using the equity method	**73**	**2**	**1**	**74**

Changes in the scope of the consolidation may arise as a result of acquisitions, sales, mergers, closures or as a result of changes in the assessment as to whether Linde plc exercises control or joint control.

The following table shows the fully consolidated subsidiaries that make use of the exemption options provided for in §264 (3)/§264b HGB for the preparation, audit and disclosure of the annual financial statements and/or the management report and notes to the financial statements. For these fully consolidated companies, the consolidated financial statements of Linde Plc are the exempting consolidated financial statements.

Overview of the German companies that make use of the exemption provision set out in the German commercial Code (HGB)	
Name	**Registered Office**
Coatec Gesellschaft für Oberflächenveredelung mbH	Schluechtern
Commercium Immobilien- und Beteiligungs-GmbH	Pullach
Gas & More GmbH	Pullach
Hydromotive GmbH & Co. KG	Leuna
Hydromotive Verwaltungs-GmbH	Leuna
Linde GmbH	Pullach
Linde Electronics GmbH & Co. KG	Pullach
Linde Electronics Verwaltungs GmbH	Pullach
Linde Gas Produktionsgesellschaft mbH & Co. KG	Pullach
Linde Gas Therapeutics GmbH	Oberschleissheim
Linde Gas Verwaltungs GmbH	Pullach
Linde Holding GmbH	Pullach
Linde Schweißtechnik GmbH	Pullach
MTA GmbH Medizin-Technischer-Anlagenbau	Mainhausen
Praxair Surface Technologies GmbH	Ratingen
Selas-Linde GmbH	Pullach

[4] Foreign Currency Translation

The consolidated financial statements are presented in USD currency units, which is the company's functional and presentation currency.

Items included in the financial statements of each of the company's entities are measured using the currency of the primary economic environment in which the entity operates ("the functional currency"). Transactions in foreign currency are translated into the relevant functional currency of the individual entity on the transaction date. After initial recognition, foreign currency fluctuations relating to monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit and loss. Foreign exchange gains and losses that relate to borrowings are presented in the statement of profit and loss, within finance costs. All other foreign exchange gains and losses are presented in the consolidated statement of profit and loss on a net basis within other operating income/expense. For non-monetary items, historical translation rates form the measurement basis.

Translation differences arising from the translation of items into the reporting currency are recognized in other comprehensive income. The financial statements of foreign subsidiaries, including any fair value adjustments identified during a purchase price allocation, that have a functional currency different from the presentation currency are translated into the presentation currency in accordance with IAS 21, *The Effects of Changes in Foreign Exchange Rates*.

Assets and liabilities, contingent liabilities, and other financial commitments are translated at the closing rate on the reporting date (closing rate method). Items in the consolidated statement of profit and loss for the year are translated at a rate which approximates to the translation rate on the date of the transaction (the average rate).

Foreign exchange gains and losses are deferred in equity if they relate to qualifying cash flow hedges and qualifying net investment hedges or are attributable to part of the net investment in a foreign operation. The company had net investment hedges during the years ended 31 December 2022 and 2021, respectively (see Note 23).

The financial statements of foreign companies accounted for using the equity method of accounting are translated using the same principles for the adjustment of equity as are applied to consolidated subsidiaries.

In general, the financial statements of subsidiaries which report in a functional currency which is the currency of a hyperinflationary economy are adjusted for the change in purchasing power arising from the inflation in accordance with IAS 29, *Financial Reporting in Hyperinflationary Economies*.

Principal exchange rates of Linde plc:

		Statement of Profit and Loss		Statement of Financial Position	
	Percent of 2022 Consolidated	Average Year Ended 31 December,		31 December,	
Currency	**Revenue**	**2022**	**2021**	**2022**	**2021**
Euro	21 %	0.95	0.85	0.93	0.88
Chinese yuan	8 %	6.72	6.45	6.90	6.36
British pound	6 %	0.81	0.73	0.83	0.74
Australia dollar	4 %	1.44	1.33	1.47	1.38
Brazilian real	4 %	5.16	5.39	5.28	5.58
Korean won	3 %	1,286	1,144	1,266	1,189
Canadian dollar	3 %	1.36	1.25	1.36	1.26
Mexican peso	2 %	20.10	20.28	19.50	20.53
Indian rupee	2 %	78.49	73.91	82.73	74.34
Republic of South African rand	1 %	16.30	14.77	17.04	15.94
Swedish krona	1 %	10.08	8.58	10.43	9.05
Thailand bhat	1 %	34.96	31.93	34.61	33.40

[5] Accounting Policies

This note provides a list of the significant accounting policies adopted in the preparation of these consolidated financial statements to the extent they have not already been disclosed in the other notes. These policies have been consistently applied to all the years presented, unless otherwise stated.

The financial statements of companies included in the consolidated financial statements of Linde have been prepared using uniform accounting policies in accordance with IFRS 10, *Consolidated Financial Statements* ("IFRS 10").

The preparation of the consolidated financial statements in accordance with IFRS requires management judgments and estimates for some items, which might have an impact on their recognition and measurement in the consolidated statement of financial position and consolidated statement of profit and loss. The actual amounts realized may differ from these estimates.

All amounts disclosed in the financial statements and notes have been rounded to the nearest million currency units unless otherwise stated.

The primary accounting and valuation policies, as well as the estimates and management judgments associated with them are explained below:

Principles in consolidation

Consolidation

The consolidated financial statements comprise Linde and all the companies over which Linde is able to exercise control as defined by IFRS 10.

Control is achieved when Linde has power over the investee, is exposed or has rights to variable returns from its involvement with the investee, and has the ability to affect those returns through its power to direct the activities of the investee. If Linde holds a majority of the voting rights in a company, this typically indicates that it exercises control over the company in the absence of any other restrictive contractual agreements. Subsidiaries are fully consolidated from the date on which control is transferred to the company. They are deconsolidated from the date the control ceases.

Inter-company sales, income and expenses and accounts receivable and payable between group companies are eliminated. Inter-company profits and losses arising from inter-company deliveries of non-current assets and inventories are also eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the company.

Noncontrolling Interests

Noncontrolling interests in the results and equity of subsidiaries are shown separately in the consolidated statement of profit and loss, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of financial position.

Joint arrangements

Linde has several joint arrangements in which it has joint control with one or several parties through a contractual agreement. If joint control exists, Linde needs to distinguish whether the investment is a joint operation or a joint venture. This distinction is dependent on whether Linde has rights to the assets and obligations for the liabilities of the arrangement or whether it has rights to the net assets of the arrangement. To make the distinction, Linde considers the structure and legal form of the arrangement, any contractual agreements which might apply and any other relevant circumstances.

Significant influence

Associates over which Linde can exercise significant influence as defined by IAS 28, *Investments in Associates and Joint Ventures* are also accounted for using the equity method of accounting. Significant influence is presumed if Linde holds (directly or indirectly) 20 percent or more of the voting rights in an investee.

Joint ventures

Investments in associates and joint ventures are accounted for under the equity method at cost at the date of acquisition. In subsequent periods, the carrying amount is adjusted up or down to reflect Linde's share of the total comprehensive income of the investee. Any distributions received from the investee and other changes in the investee's equity reduce or increase the carrying amount of the investment. If the losses of an associate or joint venture attributable to Linde equal or exceed the value of the interest held in this associate or joint venture, no further losses are recognized unless Linde incurs an obligation or makes payments on behalf of the associate or joint venture. The same principles apply to companies accounted for using the equity method as for the consolidation of subsidiaries.

Investments in associates and joint ventures are reviewed for impairment whenever events or circumstances reflect that an impairment may have occurred.

Joint operations

If the joint arrangement qualifies as a joint operation, Linde recognizes the assets, liabilities, revenues and expenses relating to its interest in the joint operation in accordance with the IFRS's applicable to the particular assets, liabilities, revenues and expenses.

Other investments

Other investments, when taken individually and together, are immaterial in terms of total assets, revenue and profit and loss for the year and do not have a significant impact on its consolidated net assets, financial position and results of operations.

Change in ownership interests

Linde treats transactions with noncontrolling interests that do not result in a loss of control as equity transactions. When noncontrolling interests are acquired, any remaining balance between the acquisition cost and the share of net assets acquired is offset directly in equity.

When Linde loses control over a subsidiary, it derecognizes: the assets and liabilities of the subsidiary, any related noncontrolling interests and other components of equity. Any resulting gain or loss is recognized in profit and loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

When Linde ceases to consolidate (or account for as an equity method investment) an investment because of a loss of control, joint control or significant influence, any retained interest in the entity is remeasured to its fair value when control is lost. Any resulting gain or loss is recognized in profit and loss. In addition, any amounts previously recognized in other comprehensive income related to that entity are accounted for as if the company had directly (or partially) disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit and loss.

Significant Judgement: Management judgements in relation to control

When assessing whether Linde has control, joint control or significant influence over companies in which it holds less than 100 percent of the voting rights, management judgment is required to assess whether it controls the investee. In addition, companies are fully consolidated if Linde exerts increased management authority in those companies and is able to exercise the most extensive decision-making powers over major portions of the operating activities of the entities.

In assessing whether it controls the investee, the company analyzes the following factors, among others, which may require judgment: (i) governance structure, through the respective shareholder agreement, operating agreement and / or any other agreement in place that may convey decision-making capability and indicate which party is exercising power over relevant activities; (ii) review of any relevant venture activities and respective economic risks and rewards between venture partners; and (iii) rights granted to venture partners related to the design and operations of the plant(s), budgeting process, and management appointment process.

Changes to contractual agreements or facts and circumstances are monitored on an ongoing basis and are evaluated to determine whether they have an impact on the assessment as to whether Linde is exercising control or joint control over its investment.

Business Combinations

Business combinations require estimates to be made when determining fair values. When discounted cash flow methods are used, discretionary aspects include in particular the time period and amount of the cash flow and the determination of an appropriate discount rate. In connection with management judgments about purchase price allocations in the case of significant business combinations, Linde may utilize external valuation services.

Acquisitions are accounted for using the acquisition method of accounting. The cost of an acquisition is measured at the fair value of the assets acquired, and liabilities assumed. Any excess of the purchase price and noncontrolling interests recognized over the fair value of the net identifiable assets and liabilities acquired is recorded as goodwill. Allocations of the purchase price are initially based on preliminary estimates and assumptions at the date of acquisition and are subject to revision based on final information received, including appraisals and other analyses which support underlying estimates.

The company recognizes noncontrolling interests in an acquired entity either at fair value or at the noncontrolling interest's proportionate share of the acquired entity's net identifiable assets. This decision is made on an acquisition-by-acquisition basis.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date. Any gains or losses arising from such remeasurement are recognized in the consolidated statement of profit and loss.

Intangible assets

Intangible assets are stated at acquisition cost or manufacturing cost less accumulated amortization and any impairment losses. An intangible asset is recognized if it can be identified as an asset, if it is probable that the future economic benefits that are attributable to the asset will flow to Linde, and if the cost of the asset can be measured reliably. It is important to determine whether the intangible assets have finite or indefinite useful lives. The estimated useful life of customer relationships purchased is calculated on the basis of the term of the contractual relationship underlying the customer relationship, or on the basis of expected customer behavior. Goodwill, intangible assets with indefinite useful lives and intangible assets not yet ready for use are not amortized but are subject instead to an impairment test once a year, or more often if there is any indication that an asset may be impaired. Other intangible assets are tested for impairment whenever events, or changes in circumstances, indicate that the asset may be impaired. If the reason for an impairment loss recognized in prior years no longer exists, the carrying amount of the intangible asset is increased to a maximum figure of the carrying amount that would have been determined had no impairment loss been recognized.

The "Linde" brand name is considered to have an indefinite useful life. The brand has been long established and will continue to be used as the name for the merged company. The Linde brand has been used and in existence for many years, demonstrating proven value over that period. The brand name continues to have a strong market presence and there are no material legal, contractual, or other factors that limit its useful life. Based on an analysis of these relevant factors there is no foreseeable limit to the period over which the asset is expected to generate cash inflows. The company performs annual impairment testing each year in the fourth quarter.

In a business combination, goodwill is initially measured at cost, which is the excess of the fair value of consideration transferred over the fair value of net assets (including noncontrolling interests) acquired. After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is tested for impairment annually, in the financial year of acquisition, if later, or more frequently if events or circumstances indicate that an impairment loss may have been incurred. The company performs the annual impairment testing in the fourth quarter.

Goodwill acquired in a business combination is, from the acquisition date, allocated to each of the company's groups of cash-generating units ("CGUs") that are expected to benefit from the combination. The impairment review of goodwill is performed for the following groups of CGUs: North America, Lincare, Latin America, EMEA, Greater China, South Pacific, South Korea/South Asia & ASEAN, Surface Technologies, Electronic Materials (EM), Helium, and Engineering, as management monitors goodwill at that level during the reporting period presented.

Impairment is determined for goodwill and indefinite lived intangibles by assessing the recoverable amount of each group of CGUs to which the goodwill and indefinite lived intangibles are allocated to. When the recoverable amount of the group of CGUs is less than its carrying amount, an impairment loss is recognized. The recoverable amount is determined as the group of CGU's fair value less costs of disposal. If the carrying amount of the group of CGUs exceeds or is close to the fair value less costs of disposal, a test is performed to determine whether the value in use is higher than the carrying amount. In order to determine the fair value of the group of CGUs, the company utilizes a market multiples approach, multiplying the earnings before interest, tax, depreciation, and amortization ("EBITDA") of each group of CGU's by an EBITDA multiple. Impairment losses relating to goodwill are not reversed in future periods.

Costs incurred in connection with the purchase of software or in-house development of software used internally, including the costs of bringing this software to an operational state, are capitalized and amortized on a straight-line basis.

The useful lives of intangible assets are:

Intangible Asset Classification	Amortization Period
Customer relationships	3 - 30 years
Linde Brand	Indefinite useful life
Brands / Tradenames	3 - 30 years
Other intangible assets	3 - 20 years

Tangible assets

Tangible assets are reported at acquisition cost or manufacturing cost less accumulated depreciation based on the estimated useful life of the asset and any impairment losses. Tangible assets are depreciated using the straight-line method, and the depreciation expense is disclosed in the consolidated statement of profit and loss under the heading which corresponds to the functional features of the underlying asset.

The depreciation method and the estimated useful lives of the assets are reviewed on an annual basis and adapted to prevailing conditions.

The following useful lives apply to the different types of tangible assets:

	Depreciable Lives (Yrs)
Production plants (primarily 15-year life)	10-20
Storage tanks	15-20
Transportation equipment and other	3-15
Cylinders	10-30
Buildings	25-40
Land and improvements	0-20

Useful lives are estimated based on past experience. Assumptions also need to be made when Linde assesses whether an asset may be capitalized and which components of the cost of the asset may be capitalized. Estimates need to be made, for example, of the expected future economic benefits of an asset or the expected future costs of the dismantling of plants. In addition, the capitalization of costs which are incurred during the operating phase of an asset, such as the costs of upgrades to plants or their complete overhaul, depends on whether these costs will lead to better or higher output or whether they extend the estimated useful life of the asset. The company capitalizes borrowing costs as part of the cost of constructing major facilities.

If significant events or market developments indicate an impairment in the value of the tangible or intangible asset, Linde reviews the recoverability of the carrying amount of the asset by testing for impairment. The impairment test is performed at the CGU level to which the asset belongs. A cash generating unit is the smallest identifiable group of assets that generates cash inflows from external parties that are largely independent of the cash inflows from other assets. In identifying whether cash inflows are largely independent, Linde considers various factors including how management monitors the operations and how management makes decisions about continuing or disposing of the entity's assets and operations. The recoverable amount of the CGU is calculated, which is the higher of its fair value less costs of disposal and its value in use. Linde typically uses value in use. To determine the value in use, estimated future cash flows are discounted at a rate which reflects the risk specific to the CGU. When estimating future cash flows, segment specific, technological, economic and general developments are taken into account. If the reason for an impairment loss recognized in prior years no longer exists, the carrying amount of the tangible asset is increased to the new recoverable amount, but not exceeding the carrying amount that would have been determined had no impairment loss been recognized.

Inventories

Inventories are reported at the lower of acquisition or manufacturing cost and net realizable value. Cost is determined using the average-cost method.

Provisions for pensions and similar obligations

The valuation of pension provisions is based on the projected unit credit method set out in IAS 19, *Employee Benefits* ("IAS 19") for defined benefit obligations. This method takes into account not only vested future benefits and known pensions at the reporting date, but also expected future increases in salaries and pensions. The calculation of the provisions is determined using actuarial reports.

The fair value of the plan assets is deducted from the present value of the pension obligations (gross pension obligation) to determine the net pension obligation or net pension asset with respect to defined benefit pension plans. The net pension asset is adjusted if necessary to comply with the rules relating to the asset ceiling set out in IAS 19.64. According to IAS 19.64, a net pension asset may only be disclosed if Linde, under its obligation as an employer, has the right to receive a refund of the surplus or to reduce future contributions.

The net interest expense for the financial year is calculated by multiplying the net pension obligation or net pension asset at the beginning of the period by the interest rate underlying the discounting of the gross defined benefit obligation at the beginning of the period.

The discount rate is calculated on the basis of the returns achieved on the relevant call date for high quality fixed-interest corporate bonds in the market. The currency and period to maturity of the underlying bonds correspond to the currency and probable period to maturity of the post-employment benefit obligations. If such returns are not available, the discount rates are based on market returns for government bonds.

Remeasurements comprise the actuarial gains and losses on the remeasurement of the gross defined benefit obligation and the difference between the return on plan assets actually realized and the return assumed at the beginning of the period, which is based on the discount rate of the corresponding gross defined benefit obligation. If a pension plan is overfunded and the asset ceiling applies, remeasurements also comprise the change in the net asset from the application of the asset ceiling rules to the extent that this has not been accounted for in net interest.

Actuarial gains and losses arise from changes in actuarial assumptions or from variations between earlier actuarial assumptions and actual events.

All remeasurements (i.e. actuarial gains and losses, the cumulative effect of an asset ceiling and the effects of an increase in the pension obligation in accordance with IFRIC 14, *The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction*) are recognized immediately in other comprehensive income.

The expense arising from additions to the pension provisions resulting from service during the period and past service costs are allocated to functional costs. The net interest expense or net interest income from defined benefit plans is disclosed in the financial result. For each pension plan, it is established whether the net figure is net interest expense or net interest income and the amounts are disclosed accordingly in the financial result.

Leases

Linde assesses whether a contract is, or contains a lease at inception of the contract. A lease conveys the right to direct the use and obtain substantially all of the economic benefits of an identified asset for a period of time in exchange for consideration.

A right of use asset and corresponding lease liability are recognized at commencement of the lease. The lease liability is measured at the present value of the lease payments, discounted at the rate implicit in the lease, or if that cannot be readily determined, at the lessee's incremental borrowing rate specific to the term, country and currency of the lease. Lease payments include fixed payments and variable lease payments dependent on an index or rate, initially measured using the index or rate at commencement. The lease liability is subsequently measured at amortized cost using the effective interest rate method. The right of use asset is initially measured at cost. The right of use asset is subsequently depreciated on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset. The right of use asset is tested for impairment if there are any indicators of impairment.
See Note 20 for further information relating to Leases.

Miscellaneous provisions

In accordance with IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, miscellaneous provisions are recognized when a present obligation to a third party exists as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Miscellaneous provisions are recognized for all identifiable risks and liabilities of uncertain timing or amount. The amounts provided are the best estimate of the probable expenditure required to settle the obligation and are not offset against recourse claims. The settlement amount is calculated based on the assessment of the probability of an outflow of resources, and on past experience and the circumstances known at the reporting date. This also includes any cost increases which need to be taken into account at the reporting date. The actual outflow of resources at a future date may therefore vary from the figure included in other provisions. Provisions which relate to periods of more than twelve months are discounted.

Provisions include provisions for warranties, onerous contracts and provisions for litigation. Assumptions are made here about the probability of occurrence of the risk and the expected future outflow of resources. The uncertainty associated with the measurement of warranty provisions is relatively moderate, as Linde has recourse to historical warranty cost ratios when determining the amounts to be set aside.

Litigation is associated with great uncertainty. A degree of discretion is required to assess whether a present obligation to a third party exists at the reporting date as a result of a past event, whether it is probable that an outflow of resources will be required in the future to settle the obligation and whether a reliable estimate can be made of the amount of the obligation. The current status of outstanding litigation is regularly reviewed and updated by Linde's legal department and lawyers appointed by Linde. Changes to this status as a result of new information may result in adjustments being made to the provision.

Provisions for warranty claims are recognized taking current or estimated future claims experience into account.

Dismantling provisions are capitalized when they arise, at the discounted value of the obligation, and a provision for the same amount is established at the same time. An estimate is made, based on past experience, of future costs expected to be incurred to dismantle plants and restore the land on which the plant was built to its original condition. The expected costs are reassessed on an annual basis and the amount of the provision is adjusted if required. The depreciation charged on the asset and the unwinding of interest applied to the provision are both allocated as an expense to the periods of use of the asset.

Provisions for restructuring are recognised if a formal, detailed restructuring plan has been drawn up and communicated to the relevant parties.

Income tax provisions are disclosed in income tax liabilities.

Revenue recognition

Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which Linde expects to be entitled in exchange for those goods or services. If the consideration in a contract includes a variable amount, Linde estimates the amount of consideration to which it will be entitled in exchange for transferring the goods to the customer. The variable consideration is estimated at contract inception and is recognized only when it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with the variable consideration is subsequently resolved.

Revenue is recognized when or as performance obligations are satisfied by transferring control of a promised good or service to a customer (see Note 6).

Linde pays sales commissions to its employees for each contract that they obtain for supply of gas, sales of equipment and installation services.

Linde has elected to apply the optional practical expedient for costs to obtain a contract which allows Linde to immediately expense sales commissions (included under employee benefits and part of marketing and selling expense) because the amortization period of the asset that Linde otherwise would have used is one year or less.

Cost of sales

Cost of sales are comprised of the cost of goods and services sold and the cost of merchandise sold. It includes not only the cost of direct materials and direct manufacturing expenses, but also overhead including depreciation of production plants, amortization of certain intangible assets and inventory write-downs.

Research and development costs

Research costs and development costs which cannot be capitalized are recognized immediately in profit and loss.

Financial result

The financial result includes:

- interest expenses on liabilities,
- dividends received,
- interest income on receivables,
- gains and losses on financial instruments recognized in profit and loss,
- the net interest expense and net interest income from defined benefit plans, and
- interest expense and income from finance leases.

Interest income and interest expenses are recognized in profit and loss on the basis of the effective interest rate method.

Financial instruments

Financial assets and liabilities are only recognized in the statement of financial position when Linde becomes a party to the contractual provisions of the financial instrument. In the normal course of events, purchases and sales of financial assets are accounted for on settlement day. The same does not apply to derivatives, which are accounted for on the trading day.

The classification of financial instruments at initial recognition depends on their contractual terms and the business model for managing the instruments.

Financial assets are classified, at initial recognition, as financial assets at amortized cost, fair value through other comprehensive income ("OCI"), or fair value through profit and loss. Linde did not elect the fair value option. Linde measures financial assets at amortized cost if both the business model and the solely payments of principal and interest ("SPPI") tests are met. Debt instruments are measured at fair value through OCI if both the business model and the SPPI tests are met. An entity can elect on an instrument-by-instrument basis to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under IAS 32, *Financial Instruments: Presentation* and are not held for trading. Linde did not elect to classify investments under this category. Financial assets at fair value through profit and loss include equity investments and derivative financial assets unless they are designated as effective hedging instruments. Linde trade receivables are generally measured at amortized cost.

Business model assessment

The company determines its business model at the level that best reflects how it manages groups of financial assets to achieve its business objective.

The company's business model is not assessed on an instrument-by-instrument basis, but at a higher level of aggregated portfolios that is based on observable factors.

Financial instruments are initially recognized at fair value. Transaction expenses which are directly attributable to the acquisition or issue of financial instruments are only included in the determination of the carrying amount if the financial instruments are not recognized at fair value through profit and loss.

Financial assets at amortized cost are subsequently measured using the effective interest ("EIR") method and are subject to impairment testing. Linde's financial assets at amortized cost include trade receivables, receivables from finance leases, loan receivables and other financial assets included under other assets. Trade receivables are measured at the transaction price, the face value less impairment losses recognized if the receivables do not contain a significant financing component. Management has considered factors such as the difference between the cash price for assets and transaction prices within its agreements, terms of its agreements and market interest rates. Management has reviewed its current portfolio noting that its receivables do not contain significant financing components.

The starting point of the impairment model for trade receivables, contract assets and lease receivables is an analysis of the actual historical default rates per business and product area, taking into account regional circumstances. These historical default rates are adjusted for the impact of current macroeconomic changes, if indicated, taking into account forward-looking information.

Furthermore, a critical review of the default rates takes place against the background of the expectations of the responsible management with regard to the realizability of the receivables.

Expected credit losses ("ECLs") are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the company expects to receive, discounted at the appropriate effective interest rate.

The company generally considers a financial asset to be in default (credit impaired) when contractual payments are 360 days past due unless specific circumstances warrant exceptions, such as those backed by federal governments. In certain cases, the company may also consider a financial asset to be in default when internal or external information indicates that the company is unlikely to receive the outstanding contractual amounts. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

A financial asset is derecognized if it is settled, Linde loses its contractual entitlement to cash flows from such an asset or if it transfers virtually all the risks and opportunities associated with that financial asset. No financial assets that would not qualify for derecognition were transferred or sold to another party by Linde.

All derivative financial instruments are reported at fair value, irrespective of their purpose or the reason for which they were acquired. Embedded derivatives (i. e. derivatives which are included in host contracts) are separated from the host contract and accounted for as derivative financial instruments, if certain requirements are met.

For more information about risk management and the impact on the statement of financial position of derivative financial instruments see Note 23.

Financial liabilities are classified, at initial recognition, as financial liabilities at amortized cost, at fair value through profit and loss, or as derivatives designated as hedging instruments in an effective hedge. All financial liabilities are recognized initially at fair value and, in the case of financial liabilities at amortized cost, net of directly attributable transaction costs. Liabilities from finance leases, trade payables, financial debt, as well as miscellaneous liabilities, are reported at amortized cost as long as they are not derivative financial instruments. Differences between historical cost and the repayment amount are accounted for using the effective interest rate method. The carrying amount of the financial debt which comprises the hedged item in a fair value hedge is adjusted for the corresponding gain or loss with respect to the hedged risk. A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires.

Financial liabilities which contain both an equity portion and a liability portion (commonly refer as “compound financial instruments”) are classified in accordance with IAS 32. The financial instruments issued by Linde are classified entirely as financial liabilities and reported at fair value. No material compound financial instruments exist.

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

Income taxes

The income tax expense or credit for the period is the tax payable on the current period’s taxable income based on the applicable income tax rate for each jurisdiction adjusted by changes in deferred tax assets and liabilities attributable to temporary differences and to unused tax losses. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred taxes

Deferred tax assets and liabilities are accounted for in accordance with IAS 12, *Income Taxes* under the liability method in respect of all temporary differences between the carrying amounts of the assets and liabilities under IFRS and the corresponding tax base used in the computation of taxable profit, and in respect of all consolidation adjustments affecting net income and unused tax loss carryforwards.

Deferred tax assets are only recognised for unused tax losses to the extent that it is probable that taxable profits will be available in future years against which the tax losses can be utilized. Deferred taxes are calculated at the tax rates that apply to the period when the asset is realized or the liability is settled, using tax rates set out in laws that have been enacted or substantively enacted in the individual countries by the reporting date.

The company evaluates deferred tax assets quarterly to ensure that estimated future taxable income will be sufficient in character (e.g., capital gain versus ordinary income treatment), amount and timing to result in their recovery. After considering the positive and negative evidence, the company reduces the assets to their realizable value when management determines that it is probable (i.e., greater than 50% likelihood) that a deferred tax asset will not be realized.

Reclassifications

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

Critical accounting estimates & Significant sources of estimation uncertainty

The preparation of the group financial statements in accordance with IFRS requires decisions and estimates for some items, which might have an effect on their recognition and measurement in the statement of financial position and statement of profit and loss. The actual amounts realized may differ from these estimates. Estimates that are considered by management to be critical to understanding Linde's financial statements include: (i) the assessment of the need to recognize and the measurement of impairment losses relating to goodwill and indefinite lived intangible assets (See Note 11); and (ii) the assessment of the stage of completion of long-term construction contracts (See Note 6).

Impairment testing relating to intangible assets

Indefinite lived other intangible assets and groups of cash-generating units to which goodwill has been allocated are tested annually for impairment, or more frequently if there is an indication of possible impairment.

Impairment testing involves comparing the carrying amount of each group of cash-generating units which contains goodwill and/or indefinite lived intangible assets to the recoverable amount (a significant estimate), which is the higher of its fair value less costs of disposal or value in use. If the carrying amount exceeds the recoverable amount, an impairment loss must be recognized for the difference.

The recoverable amount is generally determined on the basis of the fair value less costs of disposal. In order to determine the fair value, the company utilizes a market multiples approach, multiplying the earnings before interest, tax, depreciation, and amortization ("EBITDA") of each group of cash-generating units by an EBITDA multiple. The EBITDA multiple used to determine fair value is generally calculated based on external financial information as of the date at which the impairment test is performed, based on the enterprise value of comparable companies divided by the EBITDA of those companies. The share prices of comparable companies, used to calculate the enterprise value, are derived from publicly available information. Inputs such as adjusted EBITDA of comparable companies, are developed by the external provider using financial data published by these companies. The key source of estimation uncertainty in relation to the determination of fair value in this method is the resulting EBITDA multiple which could be affected by fluctuations in global equity markets. Changes in these estimates may lead to a significant impact on future financial statements.

Revenue recognition for long-term construction contracts

Revenues for long-term construction contracts are generally recognized over time primarily using a cost incurred input method. Costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations. The result is applied to total expected revenue and results in financial statement recognition of revenue in addition to costs incurred to date. Any expected loss on a contract is recognized as an expense immediately.

The cost incurred input method places considerable importance on accurate estimates of the extent of progress towards completion and may involve estimates on the scope of deliveries and services required to fulfill the contractually defined obligations. The key source of estimation uncertainty is the total estimated costs at completion including material, labor and overhead costs and the resultant state of completion of the contracts. There are inherent uncertainties associated with the estimation process, including technical complexity, duration of construction cycle, potential cost inflation (whether equipment or manpower), and scope considerations all of which may affect the total estimation process. Changes in these estimates may lead to a significant impact on future financial statements.

New accounting standards and interpretations adopted in the current period

No standards or interpretations have been adopted within the consolidated financial statements of Linde plc for the year ended 31 December 2022 which had a material impact. New standards will continue to be monitored to determine the potential impact to the financial statements and disclosed if material.

New accounting standards and interpretations that have not yet been adopted

The following standards have been issued by the IASB, but have not been applied in the consolidated financial statements of Linde for the year ended 31 December 2022, as they are either not yet effective and/or have not yet been adopted by the European Union:

In May 2021, the IASB issued Deferred Tax Assets and Liabilities arising from a Single Transaction amendments as part of IAS 12. These amendments require the recognition of deferred taxes arising from a single transaction that give rise to equal taxable and deductible temporary differences. The amendments are effective for annual periods beginning 1 January 2023. Linde is currently evaluating the impact of this guidance on the consolidated financial statements.

There are no new additional standards issued by IASB that are expected to have a material impact to the consolidated financial statements.

[6] Revenue

Contracts with Customers

Linde serves a diverse group of industries including healthcare, chemicals and energy, manufacturing, metals and mining, food and beverage, and electronics.

Industrial Gases

Within each of the company's geographic segments for industrial gases, there are three basic distribution methods: (i) on-site or tonnage; (ii) merchant or bulk liquid; and (iii) packaged or cylinder gases. The distribution method used by Linde to supply a customer is determined by many factors, including the customer's volume requirements and location. The distribution method generally determines the contract terms with the customer and, accordingly, the revenue recognition accounting practices. Linde's primary products in its industrial gases business are atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). These products are generally sold through one of the three distribution methods.

Following is a description of each of the three industrial gases distribution methods and the respective revenue recognition policies:

On-site. Customers that require the largest volumes of product and that have a relatively constant demand pattern are supplied by cryogenic and process gas on-site plants. Linde constructs plants on or adjacent to these customers' sites and supplies the product directly to customers by pipeline. Where there are large concentrations of customers, a single pipeline may be connected to several plants and customers. On-site product supply contracts generally are total requirement contracts with terms typically ranging from 10-20 years and contain minimum purchase requirements and price escalation provisions. Many of the cryogenic on-site plants also produce liquid products for the merchant market. Therefore, plants are typically not dedicated to a single customer. Additionally, Linde is responsible for the design, construction, operations and maintenance of the plants and our customers typically have no involvement in these activities. Advanced air separation processes also allow on-site delivery to customers with smaller volume requirements.

The company's performance obligations related to on-site customers are satisfied over time as customers receive and obtain control of the product. Linde has elected to apply the practical expedient for measuring progress towards the completion of a performance obligation and recognizes revenue as the company has the right to invoice each customer, which generally corresponds with product delivery. Accordingly, revenue is recognized when product is delivered to the customer and the company has the right to invoice the customer in accordance with the contract terms. Consideration in these contracts is generally based on pricing which fluctuates with various price indices. Variable components of consideration exist within on-site contracts but are considered constrained.

Merchant. Merchant deliveries generally are made from Linde's plants by tanker trucks to storage containers at the customer's site. Due to the relatively high distribution cost, merchant oxygen and nitrogen generally have a relatively small distribution radius from the plants at which they are produced. Merchant argon, hydrogen and helium can be shipped much longer distances. The customer agreements used in the merchant business are usually three to seven year supply agreements based on the requirements of the customer. These contracts generally do not contain minimum purchase requirements or volume commitments.

The company's performance obligations related to merchant customers are generally satisfied at a point in time as the customers receive and obtain control of the product. Revenue is recognized when product is delivered to the customer and the company has the right to invoice the customer in accordance with the contract terms. Any variable components of consideration within merchant contracts are constrained however this consideration is not significant.

Packaged Gases. Customers requiring small volumes are supplied products in containers called cylinders, under medium to high pressure. Linde distributes merchant gases from its production plants to company-owned cylinder filling plants where cylinders are then filled for distribution to customers. Cylinders may be delivered to the customer's site or picked up by the customer at a packaging facility or retail store. Linde invoices the customer for the industrial gases and the use of the cylinder container(s). The company also sells hardgoods and welding equipment purchased from independent manufacturers. Packaged gases are generally sold under one to three-year supply contracts and purchase orders and do not contain minimum purchase requirements or volume commitments.

The company's performance obligations related to packaged gases are satisfied at a point in time. Accordingly, revenue is recognized when product is delivered to the customer or when the customer picks up product from a packaged gas facility or retail store, and the company has the right to payment from the customer in accordance with the contract terms. Any variable consideration is constrained and will be recognized when the uncertainty related to the consideration is resolved.

Engineering

The company designs and manufactures equipment for air separation and other industrial gas applications manufactured specifically for end customers. Sale of equipment contracts are generally comprised of a single performance obligation. Revenue from sale of equipment is generally recognized over time as Linde has an enforceable right to payment for performance completed to date and performance does not create an asset with alternative use. For contracts recognized over time, revenue is recognized primarily using a cost incurred input method. Costs incurred to date relative to total estimated costs at completion are used to measure progress toward satisfying performance obligations. Costs incurred include material, labor, and overhead costs and represent work contributing and proportionate to the transfer of control to the customer. Contract modifications are typically accounted for as part of the existing contract and are recognized as a cumulative adjustment for the inception-to-date effect of such change.

Contract Assets and Liabilities

Contract assets and liabilities result from differences in timing of revenue recognition and customer invoicing. Contract assets primarily relate to sale of equipment contracts for which revenue is recognized over time. The balance represents unbilled revenue which occurs when revenue recognized under the measure of progress exceeds amounts invoiced to customers. Customer invoices may be based on the passage of time, the achievement of certain contractual milestones or a combination of both criteria. Contract liabilities include advance payments or right to consideration prior to performance under the contract. Contract liabilities are recognized as revenue as performance obligations are satisfied under contract terms. Linde has contract assets of $124 million at 31 December 2022 and $130 million at 31 December 2021. Total contract liabilities are $4,006 million at 31 December 2022 (current contract liabilities of $3,083 million and non-current contract liabilities of $923 million in the consolidated statement of financial position). As of 31 December 2022 Linde has approximately $1.7 billion recorded in contract liabilities related to engineering projects subject to sanctions in Russia. Total contract liabilities were $3,715 million at 31 December 2021 (current contract liabilities of $2,946 million and non-current of $769 million in the consolidated statement of financial position). Revenue recognized for the twelve months ended 31 December 2022 that was included in the contract liability at 31 December 2021 was $1,307 million. Contract assets and liabilities primarily relate to the Engineering business.

Payment Terms and Other

Linde generally receives payment after performance obligations are satisfied, and customer prepayments are not typical for the industrial gases business. Payment terms vary based on the country where sales originate and local customary payment practices. Linde does not offer extended financing outside of customary payment terms. Amounts billed for sales and use taxes, value-added taxes, and certain excise and other specific transactional taxes imposed on revenue producing transactions are presented on a net basis and are not included in sales within the consolidated statement of profit and loss. Additionally, sales returns and allowances are not a normal practice in the industry and are not significant.

Disaggregated Revenue Information

As described above and in Note 25, the company manages its industrial gases business on a geographic basis, while the Engineering and other businesses are generally managed on a global basis. Furthermore, the company believes that reporting sales by distribution method by reportable geographic segment best illustrates the nature, timing, type of customer, and contract terms for its revenues, including terms and pricing.

The following tables show sales by distribution method at the consolidated level and for each reportable segment and Other for the years ended 31 December 2022 and 2021.

(Millions of dollars)	2022						
Sales	**Americas**	**EMEA**	**APAC**	**Engineering**	**Other**	**Total**	**%**
Merchant	$ 3,786	$ 2,513	$ 2,239	$ —	$ 176	$ 8,714	26 %
On-Site	4,048	2,450	2,948	—	—	9,446	28 %
Packaged Gas	5,831	3,466	1,523	—	51	10,871	32 %
Other	209	53	266	2,762	1,578	4,868	14 %
	$ 13,874	$ 8,482	$ 6,976	$ 2,762	$ 1,805	$ 33,899	100 %

(Millions of dollars)	2021						
Sales	**Americas**	**EMEA**	**APAC**	**Engineering**	**Other**	**Total**	**%**
Merchant	$ 3,279	$ 2,229	$ 2,201	$ —	$ 173	$ 7,882	25 %
On-Site	3,225	1,876	2,725	—	—	7,826	25 %
Packaged Gas	5,456	3,539	1,532	—	24	10,551	34 %
Other	143	53	124	2,830	1,850	5,000	16 %
	$ 12,103	$ 7,697	$ 6,582	$ 2,830	$ 2,047	$ 31,259	100 %

Remaining Performance Obligations

As described above, Linde's contracts with on-site customers are under long-term supply arrangements which generally require the customer to purchase their requirements from Linde and also have minimum purchase requirements. Additionally, plant sales from the Linde Engineering business are primarily contracted on a fixed price basis. The company estimates the consideration related to future minimum purchase requirements is approximately $51 billion for 2022 and $49 billion for 2021 (excludes Russian projects which are impacted by sanctions). This amount excludes all on-site sales above minimum purchase requirements, which can be significant depending on customer needs. In the future, actual amounts will be different due to impacts from several factors, many of which are beyond the company's control including, but not limited to, timing of newly signed, terminated and renewed contracts, inflationary price escalations, currency exchange rates, and pass-through costs related to natural gas and electricity. The actual duration of long-term supply contracts ranges up to twenty years. The company estimates that approximately half of the revenue related to minimum purchase requirements will be earned in the next five years and the remaining thereafter.

[7] Other Operating Income and Expenses

Other Operating Income

(Millions of dollars)	**2022**	**2021**
Exchange gains including hedges	$ 203	$ 117
Profit on disposal of non-current assets	35	53
Compensation payments received	3	14
Partnership income	18	13
Ancillary revenue	24	13
Miscellaneous operating income	133	155
TOTAL	**$ 416**	**$ 365**

Other Operating Expense

(Millions of dollars)	**2022**	**2021**
Exchange losses including hedges	$ 221	$ 145
Loss on disposal of non-current assets	47	75
Russia-Ukraine conflict and other charges	989	—
Miscellaneous operating expenses	205	160
TOTAL	**$ 1,462**	**$ 380**

Russia-Ukraine Conflict

In response to the Russian invasion of Ukraine, multiple jurisdictions, including Europe and the U.S., have imposed several tranches of economic sanctions on Russia. As a result, Linde recorded an impairment charge of $850 million ($762 million after tax) during 2022, which is comprised of impairments of assets, primarily fixed assets, of the company's Russian gases and engineering business entities and impairments of assets which are maintained by international entities in support of the Russian business. The recoverable amount of Linde's Russian subsidiaries were determined using a probability weighted discounted cash flow model. The impairment charges were $683 million and $167 million for the EMEA and Engineering segments, respectively.

Merger-Related Costs and Other Charges

Merger-related costs and other charges were $139 million ($93 million, after tax) for the year ended 31 December 2022, primarily related to severance actions within the Engineering segment recorded during the fourth quarter, the impairment of an investment in a joint venture at equity in the EMEA segment, and the sale of the GIST business completed on 30 September 2022.

Classification in the consolidated financial statements

The costs are shown within other operating expenses on the Consolidated Statement of Profit and Loss. On the Consolidated Statement of Cash Flows, the impact of these costs, net of cash payments, is shown as an adjustment to reconcile profit to net cash provided by operating activities. In Note 25 Segment Information, Linde excluded these costs from its management definition of segment operating profit; a reconciliation of segment operating profit to consolidated operating profit is shown within the segment operating profit table.

[8] Financial income and expenses

Financial Income

(Millions of dollars)	**2022**	**2021**
Income from investments	32	25
Other interest and similar income	16	4
TOTAL	**$ 48**	**$ 29**

Financial Expense

(Millions of dollars)	**2022**	**2021**
Net interest expense from defined benefit plans, see Note 17	$ 26	$ 26
Finance expense for finance leases in accordance with IFRS16 and IFRIC 4/IAS 17	23	24
Interest incurred on debt including hedged transactions (a)	30	(47)
Amortization on acquired debt	(35)	(53)
Capitalized interest	(62)	(58)
Loss from investments	3	24
Other interest and similar charges	47	32
TOTAL	**$ 32**	**$ (52)**

(a) 2022 includes $152 million of a gain related to the currency movements on unhedged exposures of €4.4 billion ($5.0 billion) intercompany Euro-denominated credit facilities and CNY 3.2 billion ($445 million) CNY-denominated credit facilities that do not qualify for net investment hedge treatment under international accounting standards (see Note 23). 2021 includes $203 million of a gain related to unhedged exposures of €2.6 billion ($3.0 billion) intercompany Euro-denominated credit facilities.

In financial income and financial expenses, gains and losses from fair value hedge accounting on debt instruments are offset against each other, in order to give a fair presentation of the economic effect of the underlying hedging relationship. Financial income and financial expenses relating to derivatives were also disclosed net. An overview of the composition of the financial result can be found in Note 23.

[9] Income Tax Expense

Pre-tax income applicable to U.S. and non-U.S. operations is as follows:

(Millions of dollars) **Year Ended 31 December**	**2022**	**2021**
United States	$ 2,451	$ 1,965
Non-U.S.	3,199	3,264
Total income before income taxes	$ 5,650	$ 5,229

Provision for Income Taxes

The following is an analysis of the provision for income taxes:

(Millions of dollars) **Year Ended 31 December**	**2022**	**2021**
Current tax expense (benefit)		
U.S. federal	$ 517	$ 331
U.S. state and local	99	98
Non-U.S.	1,369	1,189
	$ 1,985	$ 1,618
Deferred tax expense (benefit)		
U.S. federal	$ (23)	$ 54
U.S. state and local	5	6
Non-U.S.	(461)	(344)
	(479)	(284)
Total income taxes (a)	$ 1,506	$ 1,334

(a) Includes prior year current income tax benefit of $57 million and $44 million for 2022 and 2021, respectively; includes prior year deferred income tax benefit of $56 million and prior year deferred income tax expense of $102 million for 2022 and 2021, respectively.

Effective Tax Rate Reconciliation

An analysis of the difference between the provision for income taxes and the amount computed by applying the U.S. statutory income tax rate to pre-tax income follows:

(Dollar amounts in millions) **Year Ended 31 December**	**2022**		**2021**	
U.S. statutory income tax	$ 1,187	21.0 %	$ 1,098	21.0 %
U.S. state and local taxes – net of federal benefit	82	1.5 %	82	1.5 %
U.S. tax credits and deductions (a)	(16)	(0.3)%	(23)	(0.4)%
Non-U.S. tax differentials (b)	133	2.4 %	249	4.8 %
Russia/Ukraine Charges (Note 7)	108	1.9 %	0	— %
Exchange rate (gain)/loss (c)	(32)	(0.6)%	(43)	(0.8)%
Other – net (d)	44	0.8 %	(29)	(0.6)%
Provision for income taxes	$ 1,506	26.7 %	$ 1,334	25.5 %

(a) U.S. tax credits and deductions relate to foreign derived intangible income and the research and experimentation tax credit.

(b) Primarily related to differences between the U.S. tax rate of 21% and the statutory tax rate in the countries where the company operates. Excluding 2021, which included a $122 million deferred income tax charge related to a tax rate increase in the U.K, other permanent items and tax rate changes were not significant.

(c) Related to currency movement on unhedged exposure of intercompany credit facilities (See Note 23)

(d) Other – net included an accrual of $85 million for the potential settlement of an international income tax matter in 2022, and a net decrease of $47 million in 2021 related to an audit settlement.

Net Deferred Tax Liabilities

Net deferred tax liabilities included in the consolidated statement of financial position are comprised of the following:

	31 December	
(Millions of dollars)	**2022**	**2021**
Deferred tax liabilities		
Fixed assets (a)	$ 2,810	$ 3,235
Goodwill	173	166
Other intangible assets	3,060	3,405
Subsidiary/equity investments	545	586
Other (b)	471	631
	$ 7,059	$ 8,023
Deferred tax assets		
Carryforwards	120	190
Benefit plans and related (c)	357	870
Inventory	68	57
Accruals and other (d)	896	965
	1,441	2,082
Net deferred tax liabilities (e)	$ 5,618	$ 5,941
Recorded in the consolidated statement of financial position as:		
Deferred tax assets	232	241
Deferred tax liabilities	5,850	6,182
	$ 5,618	$ 5,941

(a) Excludes $39 million and $19 million of fixed assets in 2022 related to the impairment of Russia and sale of GIST, respectively (See Notes 7 and 2).

(b) Includes $206 million in 2022 and $238 million in 2021 related to right-of-use lease assets.

(c) Includes deferred taxes of $430 million and $67 million as of 31 December 2022 and 2021, respectively, related to pension / OPEB funded status (see Notes 8 and 17).

(d) Includes $220 million in 2022 and $251 million in 2021 related to lease liabilities and $25 million and $42 million as of 31 December 2022 and 2021, respectively, related to research and development costs.

(e) Movements in deferred tax assets and liabilities result from the following items:

	For Year Ended 31 December	
(Millions of dollars)	**2022**	**2021**
Net deferred tax liability, 1 January	$ 5,941	$ 6,554
Deferred income tax expense (benefit) (a)	(479)	(284)
Change in Consolidated Equity	462	138
Other (b)	(17)	(266)
Translation adjustments	(289)	(201)
Net deferred tax liability, 31 December	$ 5,618	$ 5,941

(a) In 2022 and 2021, the net deferred income tax benefit of $479 million and $284 million comprised primarily of deferred income tax benefit related to fixed assets and intangibles. 2021 also includes a $122 million deferred income tax charge related to a tax rate increase in the United Kingdom.

(b) 2021 includes $268 million reduction, $249 million related to Intangibles and $19 million related to other assets, due to the effects of the deconsolidation of a joint venture with operations in APAC (See Note 2).

The company evaluates deferred tax assets quarterly to ensure that estimated future taxable income will be sufficient in character (e.g., capital gain versus ordinary income treatment), amount and timing to result in their recovery. After considering the positive and negative evidence, the company reduces the assets to their realizable value when management determines that it is probable (i.e., greater than 50% likelihood) that a deferred tax asset will not be realized. Considerable judgment is required in valuing deferred tax assets.

The company had $120 million and $184 million of deferred tax assets relating to net operating losses ("NOLs") and tax credits as of 31 December 2022 and 2021, respectively. These deferred tax assets include $89 million and $134 million relating to NOLs and $31 million and $50 million related to tax credits as of 31 December 2022 and 2021, respectively.

Deferred tax assets have not been recognized relating to NOL's of $722 million ($721 million at 31 December 2021), tax credits of $53 million ($52 million at 31 December 2021) and deductible temporary differences of $454 million ($272 million at 31 December 2021). The tax benefits related to NOL's, tax credits and deductible temporary differences were not recognized as it is probable (i.e., greater than 50% likelihood) that the NOL's and deferred tax assets will not be realized.

Of the loss carryforwards and tax credits not recognized totaling $775 million ($773 million at 31 December 2021), $367 million ($280 million at 31 December 2021) expire within 5 years, $234 million ($238 million at 31 December 2021) expire after 5 years and $174 million ($255 million at 31 December 2021) have no expiration.

The company has $545 million of foreign income taxes accrued related to its investments in subsidiaries and equity investments as of 31 December 2022. A provision has not been made for any additional foreign income tax at 31 December 2022 on approximately $33 billion related to its investments in subsidiaries because the company controls the subsidiaries and intends to remain indefinitely reinvested. While the $33 billion could become subject to additional foreign income tax if there is a sale of a subsidiary or if earnings are remitted as dividends, it is not practicable to estimate the unrecognized deferred tax liability.

Distributions to Linde plc shareholders do not have any impact on income taxes at the level of Linde plc.

[10] Earnings Per Share

Year Ended 31 December	2022	2021
Numerator (Millions of dollars)		
Net income – Linde plc	$ 3,976	$ 3,738
Denominator (Thousands of shares)		
Weighted average shares outstanding	499,254	516,507
Shares earned and issuable under compensation plans	482	389
Weighted average shares used in basic earnings per share	499,736	516,896
Effect of dilutive securities		
Share options and awards	4,302	4,979
Weighted average shares used in diluted earnings per share	504,038	521,875
Basic Earnings Per Common Share	$ 7.96	$ 7.23
Diluted Earnings Per Common Share	$ 7.89	$ 7.16

Further information about the share option schemes is given in Note 22.

[11] Goodwill/Other Intangible Assets - net

Movement Schedule Intangible Assets - Acquisition Cost

(Millions of dollars)	Goodwill	Customer Relationships	Brands/ Tradenames	Other Intangible Assets	Total
Year beginning 1 January 2021	**$ 28,334**	**$ 14,554**	**$ 2,894**	**$ 1,692**	**$ 47,474**
Currency adjustments	(957)	(455)	(112)	(68)	(1,592)
Additions, primarily due to acquisitions	46	12	—	61	119
Disposals (Note 2)	(243)	(1,113)	(94)	(45)	(1,495)
Other *	4	(355)	(2)	(14)	(367)
Year ended 31 December 2021	**$ 27,184**	**$ 12,643**	**$ 2,686**	**$ 1,626**	**$ 44,139**
Currency adjustments	(1,245)	(714)	(120)	(55)	(2,134)
Additions, primarily due to acquisitions	72	19	—	53	144
Disposals (Note 2)	(63)	(143)	—	(43)	(249)
Other *	4	(16)	—	115	103
Year ended 31 December 2022	**$ 25,952**	**$ 11,789**	**$ 2,566**	**$ 1,696**	**$ 42,003**

Schedule of Intangible Assets - Cumulative Amortization

(Millions of dollars)	Goodwill	Customer Relationships	Brands/ Tradenames	Other Intangible Assets	Total
Year beginning 1 January 2021	**$ —**	**$ 1,580**	**$ 118**	**$ 592**	**$ 2,290**
Currency adjustments	—	(59)	(3)	(22)	(84)
Amortization	—	602	45	125	772
Disposals (Note 2)	—	(66)	(1)	(12)	(79)
Other *	—	(351)	1	(15)	(365)
Year ended 31 December 2021	**$ —**	**$ 1,706**	**$ 160**	**$ 668**	**$ 2,534**
Currency adjustments	—	(95)	(5)	(13)	(113)
Amortization	—	466	42	110	618
Disposals (Note 2)	—	(35)	—	(14)	(49)
Other *	—	(4)	—	116	112
Year ended 31 December 2022	**$ —**	**$ 2,038**	**$ 197**	**$ 867**	**$ 3,102**
NET CARRYING AMOUNT AT 31/12/2021	**$ 27,184**	**$ 10,937**	**$ 2,526**	**$ 958**	**$ 41,605**
NET CARRYING AMOUNT AT 31/12/2022	**$ 25,952**	**$ 9,751**	**$ 2,369**	**$ 829**	**$ 38,901**

* Other primarily relates to the write-off of fully amortized assets and reclassifications. 2021 Other is primarily due to merger related customer lists in the Americas.

The Linde name acquired in the merger of $1,706 million has an indefinite useful life. The indefinite lived asset has been assessed for impairment, and there is no indication that the recoverable amount is below the carrying amount. The indefinite lived asset is held primarily within the EMEA and Engineering CGUs.

The amortization expense for intangible assets with finite useful lives was disclosed in functional costs, principally in marketing and selling expenses.

Technologies and software solutions are the main components of other intangible assets.

The carrying amount of goodwill for each group of CGUs as of 31 December 2022 and 2021 is as follows:

(Millions of dollars)	31/12/2022	31/12/2021
EMEA	$ 9,507	$ 10,301
North America	6,131	6,091
South Pacific	2,350	2,510
Engineering	2,354	2,502
Latin America	1,952	1,943
Greater China	1,402	1,485
Lincare	1,073	1,072
South Korea, South Asia & ASEAN	964	1,030
Surface Technologies	133	140
Electronic Materials	77	77
GIST	—	24
Helium	9	9
Total	$ 25,952	$ 27,184

The company performs annual impairment testing each year. Impairment testing is performed by the group of cash-generating units ("CGUs"), at which management monitors goodwill.

The recoverable amount of each operating segment is determined using the unit's fair value. In order to determine the fair value of an operating segment, the company utilizes a market multiples approach, multiplying the earnings before interest, tax, depreciation, and amortization ("EBITDA") of each unit by an EBITDA multiple.

The EBITDA multiple used to determine fair value was calculated based on external financial information as of the date at which the impairment test is performed, based on the enterprise value of comparable companies divided by the EBITDA of these companies. The share prices of comparable companies, used to calculate the enterprise value, are derived from publicly available information. Inputs such as adjusted earnings before interest, tax, depreciation, and amortization of comparable companies, are developed by the external provider using financial data published by these companies. The data used to calculate the multiple is assigned to Level 2 of the fair value hierarchy.

The company has not recorded any goodwill impairment losses. As of 31 December 2022 and 31 December 2021 the recoverable amounts of each unit exceeded their net carrying amount.

The range of all market multiples used as of 31 December 2022 and 31 December 2021 were 9.9 to 12.6 and 11.6 to 14.7, respectively. Market multiples of 12.6 and 14.7 were used as of 31 December 2022 and 31 December 2021, respectively, to value the CGUs for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit is significant in comparison with the company's total carrying amounts.

[12] Tangible assets - net

Schedule of Tangible Assets - Acquisition Cost

(Millions of dollars)	Production plants (primarily 15-year life)	Storage tanks	Transportation equipment and other	Cylinders (primarily 30-year life)	Buildings	Land and improvements	Construction in progress	Total
Year beginning 1 January 2021	**$ 30,070**	**$ 4,782**	**$ 2,675**	**$ 4,483**	**$ 2,535**	**$ 1,097**	**$ 3,218**	**$ 48,861**
Additions due to acquisitions	1	—	3	6	1	—	—	11
Additions	1,606	126	198	139	91	7	1,003	3,170
Disposals (Note 2)	(1,037)	—	(90)	(58)	(63)	(119)	(259)	(1,626)
Currency and other adjustments	(791)	(471)	210	(99)	763	136	(815)	(1,067)
Year ended 31 December 2021	**$ 29,849**	**$ 4,437**	**$ 2,996**	**$ 4,471**	**$ 3,327**	**$ 1,121**	**$ 3,147**	**$ 49,348**
Additions due to acquisitions	4	—	2	3	3	—	—	12
Additions	1,196	162	224	154	48	7	1,226	3,017
Disposals (Notes 2 & 3)	(1,179)	(130)	(281)	(133)	(444)	(48)	(156)	(2,371)
Currency and other adjustments	1,245	333	498	109	102	(33)	(974)	1,280
Year ended 31 December 2022	**$ 31,115**	**$ 4,802**	**$ 3,439**	**$ 4,604**	**$ 3,036**	**$ 1,047**	**$ 3,243**	**$ 51,286**

Schedule of Tangible Assets - Cumulative Depreciation

(Millions of dollars)	Production plants (primarily 15-year life)	Storage tanks	Transportation equipment and other	Cylinders (primarily 30-year life)	Buildings	Land and improvements	Construction in progress	Total
Year beginning 1 January 2021	**$ 13,762**	**$ 2,240**	**$ 1,513**	**$ 1,478**	**$ 376**	**$ 89**	**$ —**	**$ 19,458**
Depreciation	2,711	377	289	404	204	11	—	3,996
Disposals (Note 2)	(441)	32	(49)	(25)	6	(9)	—	(486)
Currency and other adjustments	(691)	(329)	67	(33)	590	94	—	(302)
Year ended 31 December 2021	15,341	2,320	1,820	1,824	1,176	185	—	22,666
Depreciation	2,555	281	302	355	158	10	—	3,661
Disposals (Notes 2 & 3)	(712)	(79)	(228)	(111)	(231)	(2)	—	(1,363)
Currency and other adjustments	1,113	396	457	199	172	(1)	—	2,336
Year ended 31 December 2022	**18,297**	**2,918**	**2,351**	**2,267**	**1,275**	**192**	**—**	**27,300**
NET CARRYING AMOUNT AT 12/31/2021	**14,508**	**2,117**	**1,176**	**2,647**	**2,151**	**936**	**3,147**	**26,682**
NET CARRYING AMOUNT AT 12/31/2022	**$ 12,818**	**$ 1,884**	**$ 1,088**	**$ 2,337**	**$ 1,761**	**$ 855**	**$ 3,243**	**$ 23,986**

Impairment tests were based on the recoverable amount of the assets examined, whereby generally the value in use was applied. The impairment losses relating to tangible assets are largely included in cost of sales, with the exception of charges relating to impairing the company's Russian gas and engineering business, which are included in other operating expenses.

Borrowing costs during the construction phase of $62 million (2021: $58 million) were capitalized, based on an approximate 3.5% interest rate for both 2022 and 2021.

Tangible assets pledged as security as of 31 December 2022 were immaterial.

[13] Investments in associates and joint ventures/other financial assets

Schedule of Financial Assets - Acquisition Cost

(Millions of dollars)	Investments in associates and joint ventures (at equity)	Other investments	Non-current Loans	Total
Year beginning 1 January 2021	**$ 1,057**	**$ 14**	**$ 103**	**$ 1,174**
Currency adjustments	(28)	(2)	(3)	(33)
Additions (a)	704	58	1	763
Reductions (b)	(103)	(6)	(6)	(115)
Transfers (c)	—	13	(40)	(27)
Year ended 31 December 2021	**$ 1,630**	**$ 77**	**$ 55**	**$ 1,762**
Currency adjustments	(99)	(4)	4	(99)
Additions (a,d)	114	169	98	381
Reductions (b)	(129)	(28)	(14)	(171)
Transfers (c)	—	—	(10)	(10)
Year ended 31 December 2022	**$ 1,516**	**$ 214**	**$ 133**	**$ 1,863**

(a) Investments in associates and joint ventures (at equity) includes the impact from the deconsolidation of a subsidiary in APAC, which is now reflected as a joint venture at equity. Refer to Note 2 of the consolidated financial statements of the company for further information.
(b) For investments in associates and joint ventures (at equity), relates primarily to distributions/dividends received from associates and joint ventures. The year ended 31 December 2022 also reflects the impairment of a joint venture at equity in the EMEA segment (see Note 7).
(c) For non-current loans, relates primarily to reclasses of non-current to current loans.
(d) Linde impaired its Russian gas and engineering business entities as of 30 June 2022 (see Note 3). Amount reflected in additions for other investments primarily represents the remaining investment value of its Russian subsidiaries.

The share of profit and loss from associates and joint ventures in the 2022 financial year was $91 million (2021: $44 million). $92 million of the total figure related to the APAC segment (2021: $43 million) offset by $1 million of loss from associates and joint ventures related to the EMEA segment (2021: $1 million).

On the reporting date, there were no contingent liabilities relating to shares in associates or joint ventures. There were no payment obligations relating to joint ventures and associates that had not been recognized in the statement of financial position at 31 December 2022 and 2021. There were no significant restrictions on the ability of the associates and joint ventures to transfer dividends or funds to Linde or to repay loans to Linde as of 31 December 2022 and 2021. Cumulative amortization was not considered material.

More information about associates and joint ventures is given in Note 31.

No individual investment in associates or joint ventures is material and as such no individual financial information is disclosed. Aggregate financial information about associates and joint ventures based on the investment in those associates held by Linde is immaterial and is therefore not disclosed separately.

[14] Inventories

(Millions of dollars)	31/12/2022	31/12/2021
Inventories		
Raw materials and supplies	$ 567	$ 402
Work in process	368	334
Finished goods (including merchandise)	1,055	1,015
Total Inventories	**$ 1,990**	**$ 1,751**

At 31 December 2022, the total inventory allowance was $190 million ($169 million at 31 December 2021). The inventories recognized as an expense in the 2022 financial year were $20.1 billion ($18.5 billion in 2021). Employee expenses are not a significant component of capitalized inventory costs.

[15] Receivables from finance leases, trade receivables, miscellaneous receivables and assets and income tax receivables

	Current		Non-current		Total	
	31 December		31 December		31 December	
(Millions of dollars)	2022	2021	2022	2021	2022	2021
Receivables from finance leases	$ 6	$ 8	$ 22	$ 29	$ 28	$ 37
Contract assets	124	130	—	—	124	130
Trade receivables	4,506	4,397	1	3	4,507	4,400
Income tax receivables	164	122	—	—	164	122
Miscellaneous other receivables and other assets	914	984	981	557	1,895	1,541
Derivatives with positive fair values	24	101	4	35	28	136
Prepaid and other deferred charges	440	408	66	62	506	470
Other taxes	232	213	—	—	232	213
Other receivables and assets	218	262	911	460	1,129	722
Total	$ 5,714	$ 5,641	$ 1,004	$ 589	$ 6,718	$ 6,230

Receivables from finance leases

Almost all the receivables from finance leases relate to agreements which are classified as embedded finance leases according to IFRS 16. The counterparty risk arising from receivables from finance leases is covered by the air separation plants and other plants underlying the contracts.

Other receivables and assets

Other receivables and assets include the revaluation of pension assets (see Note 17).

[16] Equity

Equity Presentation

Called-up share capital presented as equity ("Called-up share capital") represents the notional value of outstanding ordinary shares.

Share premium represents the accumulated premiums arising on the issue of shares.

Retained earnings (including remeasurement of defined benefit plans) represents the portion of profit for the year retained by the company that has not been declared or distributed to shareholders as dividends.

Treasury shares represent the premium over par value of Linde plc shares that have been repurchased by the company and not yet cancelled or retired.

Other reserves reports the differences arising from currency translation differences of the financial statements of foreign subsidiaries and gains or losses on the remeasurement of securities and hedging instruments, accounted for in equity rather than being recognised in the statement of profit and loss.

Linde plc Shareholders' Equity

At 31 December 2022 and 2021, Linde has total authorized share capital of €1,825,000 divided into 1,750,000,000 ordinary shares of €0.001 each, 25,000 A ordinary shares of €1.00 each, 25,000 deferred shares of €1.00 each and 25,000,000 preferred shares of €0.001 each.

At 31 December 2022 and 2021, there were 552,012,862 of Linde plc ordinary shares issued. At 31 December 2022 and 2021, there were 492,457,627 and 508,680,879 of Linde plc ordinary shares outstanding. In addition, at the end of both periods, there were no shares of A ordinary shares, deferred shares or preferred shares issued or outstanding.

The Linde Board of Directors may from time to time authorize the issuance of one or more series of preferred shares and, in connection with the creation of such series, determine the characteristics of each such series including, without limitation, the preference and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions of the series.

Other Linde plc Ordinary Share and Treasury Share Transactions

Linde may issue new ordinary shares for dividend reinvestment and stock purchase plans and employee savings and incentive plans. The number of new Linde ordinary shares issued from merger date through 31 December 2019 was 958,293 shares. No new ordinary shares were issued in 2021 or 2022.

On 22 January 2019, the Linde Board of Directors authorized a new share repurchase program for up to $6.0 billion of its ordinary shares under which Linde repurchased 24,847,354 shares through 31 December 2021. This program expired on 1 February 2021.

On 25 January 2021, the company's Board of Directors authorized a new share repurchase program for up to $5.0 billion ordinary shares under which Linde repurchased 16,662,678 shares through 31 December 2022. This program is set to expire on 31 July 2023 and was fully utilized as of February 28, 2022.

On 28 February 2022, the company's Board of Directors approved a new share repurchase program for up to $10.0 billion of its ordinary shares under which Linde repurchased 15,474,759 shares through 31 December 2022. This program is set to expire on 31 July 2024.

On 28 February 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the first quarter of 2022 (the “Q1 Dividend”). The Q1 Dividend was paid on 25 March 2022 to shareholders of record on 11 March 2022.

On 26 April 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the second quarter of 2022 (the “Q2 Dividend”). The Q2 Dividend was paid on 17 June 2022 to shareholders of record on 3 June 2022.

On 25 July 2022, the directors of Linde plc declared an interim dividend of $1.17 per share for the third quarter of 2022 (the “Q3 Dividend”). The Q3 Dividend was paid on 16 September 2022 to shareholders of record on 2 September 2022.

On 24 October 2022, the directors of Linde plc declared a quarterly dividend of $1.17 per share for the fourth quarter of 2022 (the "Q4 Dividend"). The dividend was paid on 16 December 2022 to shareholders of record on 2 December 2022.

Noncontrolling interests

The total noncontrolling interest ("NCI") as of 31 December 2022 and 2021 was $1,667 million and $1,769 million, respectively. The NCI reduction as of 31 December 2022 includes the impact of impairing the company's Russian gas and engineering business (see Note 7).

The NCI reduction as of 31 December 2021 primarily related to the deconsolidation of a joint venture with operations in APAC (see Note 2).

In general the voting rights of noncontrolling shareholders correspond to their share of the equity in the companies concerned. Detailed information about other individual subsidiaries which have noncontrolling shareholders is not disclosed due to the individual figures not being material.

Capital structure management

The aim of Linde’s capital structure management is to obtain unrestricted low-cost access to the capital markets and to maintain A/A2 credit ratings while consistently growing dividends. Linde follows a disciplined investment strategy and targets value enhancing investment opportunities that offer growth rates above the company’s cost of capital. The company also anticipates regularly repurchasing shares while maintaining its target credit ratings.

Linde has a $5.0 and a $1.5 billion syndicated revolving credit line at its disposal, which are available until 2027 and 2023, respectively (see Note 19).

[17] Provisions for pensions and similar obligations

Provisions For Pensions And Similar Obligations

Millions of dollars	31/12/2022	31/12/2021
Provisions for pension plans	$ 581	$ 1,683
Provisions for similar obligations	108	157
TOTAL PROVISIONS	**$ 689**	**$ 1,840**
Prepaid pension costs	$ 633	$ 141

Different countries have different pension systems, due to the variety of legal, economic and fiscal conditions applicable in each country. These are generally based on the remuneration and length of service of the employees.

The provisions for similar obligations include bridging allowances as well as other obligations. Occupational pension schemes can be either defined contribution or defined benefit schemes. In the case of defined benefit plans, the company's obligation is to meet the defined benefit commitments to current and former employees. Two different methods can be distinguished: the recognition of provisions for pensions and the use of externally financed pension schemes.

Defined Contribution Plans

Linde's U.S. employees are eligible to participate in defined contribution savings plans offered by their applicable business. Employee contribution percentages vary by plan and are subject to the maximum allowable by IRS regulations. The cost for these defined contribution plans was $56 million in 2022 and $51 million in 2021 (these costs are not included in the tables that follow).

The defined contribution plans include an investment option in a non-leveraged employee stock ownership plan ("ESOP") which covers all employees participating in this plan. The collective number of shares of Linde ordinary shares in the ESOP totaled 1,733,281 at 31 December 2022.

Certain non-U.S. subsidiaries of the company also sponsor defined contribution plans where contributions are determined under various formulas. The expense for these plans was $80 million in 2022 and $101 million in 2021 (these expenses are not included in the tables that follow).

Defined Benefit Pension Plans

The Linde retirement plans are non-contributory defined benefit plans covering eligible employees and its participating affiliates. Effective 1 July 2002, the Linde U.S. Pension Plan was amended to give participating employees a one-time irrevocable choice between a traditional benefit (the "Traditional Design") and an account-based benefit (the "Account-Based Design"). The Traditional Design pays a monthly benefit based on years of service and average pay during the last years of the participant's career with Linde. The Account-Based Design gives participants annual pay credits equal to 4% of eligible compensation, plus interest credits based on long-term treasury rates on the accumulated account balance. This new formula applies to all new employees hired after 30 April 2002 into businesses adopting this plan. The plan participants have the option to take a lump-sum payment or annual pension payments. Legal and regulatory minimum funding requirements are in place.

In addition to the U.S. retirement plans Linde has other global defined benefit commitments, primarily in Germany and the United Kingdom ("UK"). The defined benefit commitments in Germany relate to old age pensions, invalidity pensions and surviving dependents pensions. These commitments also take into account vested rights for periods of service prior to 1 January 2002 based on earlier final salary pension plan rules. In addition, there are direct commitments in respect of the salary conversion scheme for the form of cash balance plans. The resulting pension payments are calculated on the basis of an interest guarantee and the performance of the corresponding investment. There are no minimum funding requirements. The pension obligations in Germany are partly funded by a Contractual Trust Agreement ("CTA"). Defined benefit commitments in the U.K. prior to 1 July 2003 are earnings-related and dependent on the period of service. Such commitments relate to old age pensions, invalidity pensions and surviving dependents pensions. Beginning in 1 April 2011, the amount of future increases in inflation-linked pensions and of increases in pensionable emoluments was restricted. Legal, regulatory and contractual minimum funding requirements are in place.

The U.S. and non-U.S. pension plan assets are comprised of a diversified mix of investments, including domestic and international corporate equities, government securities and corporate debt securities. Linde has several plans that provide supplementary retirement benefits primarily to higher level employees that are unfunded and are nonqualified for federal tax purposes. Pension coverage for employees of certain of Linde's non-U.S. subsidiaries generally is provided by those companies through separate plans. Obligations under such plans are primarily provided for through diversified investment portfolios, with some smaller plans provided for under insurance policies or by book reserves.

Multi-employer Pension Plans

In the United States Linde participates in eight multi-employer defined benefit pension plans ("MEPs"), pursuant to the terms of collective bargaining agreements, covering approximately 200 union-represented employees. The collective bargaining agreements expire on different dates through 2026. In connection with such agreements, the company is required to make periodic contributions to the MEPs in accordance with the terms of the respective collective bargaining agreements. Linde's participation in these plans is not material either at the plan level or in the aggregate. For all MEPs, Linde's contributions were significantly less than 1% of the total contributions to each plan for 2021 and 2020. Total 2022 contributions were not yet available from the MEPs.

Linde has obtained the most recently available Pension Protection Act ("PPA") annual funding notices from the Trustees of the MEPs. As of 31 December 2022, there were three Red Zone plans, deemed to be in "critical" or "critical and declining" status that have implemented financial improvement or rehabilitation plans. Linde does not currently anticipate significant future obligations due to the funding status of these plans and such obligation would be immaterial. If Linde determined it was probable that it would withdraw from an MEP, the company would record a liability for its portion of the MEP's unfunded pension obligations, as calculated at that time. Historically, such withdrawal payments have not been significant.

Assumptions Used To Calculate The Provisions For Pensions

The amount of the pension obligation (actuarial present value of the defined benefit obligation, or DBO) was calculated using actuarial valuation methods, which require the use of estimates. In addition to assumptions about mortality and disability, the following assumptions, which depend on the economic situation in that particular country, are also relevant; for countries classed as "All Other", weighted average figures based on the obligation are given:

In percent	Germany		UK		U.S.		All Other	
Year ended 31 December	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Discount rate	3.65 %	1.18 %	5.00 %	1.90 %	5.35 %	2.78 %	4.78 %	2.61 %
Growth in future benefits	2.50 %	2.50 %	2.52 %	2.52 %	3.25 %	3.25 %	2.98 %	2.79 %
Growth in pensions	1.98 %	1.59 %	3.20 %	3.79 %	2.50 %	2.10 %	1.76 %	1.41 %

The growth in future benefits comprises expected future increases in salaries, which are estimated annually, taking inflation and the economic situation into account.

The sensitivity analysis below demonstrates the extent to which the present value of the defined benefit obligation changes when, in each case, just one of the actuarial assumptions changes while the other actuarial assumptions remain the same.

For the pension plans in Germany, an increase of one year in life expectancy would result in an increase in the defined benefit obligation of 4.3 percent (2021: 5.0 percent). The sensitivity analysis of life expectancy in Germany is based on pension funds held at 31 December 2022. For the pension plans in the UK, an increase of one year in life expectancy would result in an increase in the DBO of 3.9 percent (2021: 4.0 percent). For the pension plans in the US, an increase of one year in life expectancy would result in an increase in the DBO of 2.4 percent (2021: 2.6 percent).

In Germany, life expectancy is calculated on the basis of the "2018 G mortality tables" produced by Professor Dr Klaus Heubeck. Pension plans in the UK use their own mortality tables and biometric assumptions. These are determined on the basis of actual experience in a pool of comparable pension plans. The life expectancy in the US is calculated using the Pri-2012 (no collar adjustment) mortality table, with the most recent improvement scale of MP-2021 applied.

The weighted average duration of the defined benefit obligations as of 31 December 2022 is 11 years (2021: 15 years).

Sensitivity Analysis

(Millions of dollars)	Change	Discount rate +50 bp	Discount rate –50 bp	Growth in future benefits +50 bp	Growth in future benefits –50 bp	Growth in pensions +50 bp	Growth in pensions –50 bp
Germany	31/12/2022	$ (89)	$ 102	$ 6	$ (6)	$ 52	$ (48)
	31/12/2021	(182)	213	12	(12)	85	(78)
UK	31/12/2022	(182)	203	5	(4)	147	(135)
	31/12/2021	(434)	492	10	(9)	352	(317)
U.S.	31/12/2022	(89)	96	10	(9)	—	—
	31/12/2021	(137)	151	18	(17)	—	—
All other	31/12/2022	(58)	61	7	(13)	25	(33)
	31/12/2021	(87)	95	15	(17)	42	(45)
TOTAL	**31/12/2022**	**$ (418)**	**$ 462**	**$ 28**	**$ (32)**	**$ 224**	**$ (216)**
	31/12/2021	**$ (840)**	**$ 951**	**$ 55**	**$ (55)**	**$ 479**	**$ (440)**

Reconciliation Of The Defined Benefit Obligation And Of The Plan Assets

(Millions of dollars)	Germany		UK		U.S.		All other		Total	
	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets	Defined benefit obligation	Plan assets
Year beginning 1 January 2021	**$ 2,582**	**$ (1,258)**	**$ 6,012**	**$ (5,355)**	**$ 2,746**	**$ (2,310)**	**$ 1,566**	**$ (1,041)**	**$ 12,906**	**$ (9,964)**
Service cost	53	—	30	—	37	—	37	—	157	—
Current service cost	53	—	30	—	37	—	37	—	157	—
Past service cost / (credit)	—	—	—	—	—	—	—	—	—	—
Effects of plan curtailments	—	—	—	—	—	—	—	—	—	—
Interest expense (+)/ interest income (–)	12	(6)	68	(60)	46	(39)	26	(21)	152	(126)
Remeasurements	(180)	(178)	33	(406)	(94)	(246)	(86)	(46)	(327)	(876)
Return on plan assets (excluding amounts included in interest expenses and income)	—	(178)	—	(406)	—	(246)	—	(46)	—	(876)
Actuarial gains (–)/losses (+)	(180)	—	33	—	(94)	—	(86)	—	(327)	—
Effects from changes in demographic assumptions	—	—	1	—	6	—	2	—	9	—
Effects from changes in financial assumptions	(192)	—	37	—	(120)	—	(74)	—	(349)	—
Effects from changes in experience assumptions	12	—	(5)	—	20	—	(14)	—	13	—
Employers' contributions	—	(4)	—	(22)	—	—	—	(16)	—	(42)
Employees' contributions	14	(14)	—	—	—	—	5	(5)	19	(19)
Pension payments made	(69)	6	(204)	204	(152)	142	(83)	61	(508)	413
Settlement payments	—	—	—	—	—	—	—	—	—	—
Effects of changes in exchange rates	(172)	95	(60)	59	—	—	(54)	33	(286)	187

Reconciliation Of The Defined Benefit Obligation And Of The Plan Assets										
Changes in Group structure/other changes	—	—	—	3	—	5	2	3	2	11
Year ended 31 December 2021	**$ 2,240**	**$ (1,359)**	**$ 5,879**	**$ (5,577)**	**$ 2,583**	**$ (2,448)**	**$ 1,413**	**$ (1,032)**	**$ 12,115**	**$ (10,416)**
Service cost	39	—	25	—	32	—	31	—	127	—
Current service cost	39	—	25	—	32	—	31	—	127	—
Past service cost / (credit)	—	—	—	—	—	—	—	—	—	—
Effects of plan curtailments	—	—	—	—	—	—	—	—	—	—
Interest expense (+)/ interest income (–)	18	(11)	93	(85)	56	(53)	33	(26)	200	(175)
Remeasurements	(623)	18	(2,131)	1,306	(488)	468	(251)	133	(3,493)	1,925
7	—	18	—	1,306	—	468	—	133	—	1,925
Actuarial gains (–)/ losses (+)	(623)	—	(2,131)	—	(488)	—	(251)	—	(3,493)	—
Effects from changes in demographic assumptions	—	—	—	—	0	—	4	—	4	—
Effects from changes in financial assumptions	(605)	—	(2,331)	—	(554)	—	(253)	—	(3,743)	—
Effects from changes in experience assumptions	(18)	—	200	—	66	—	(2)	—	246	—
Employers' contributions	—	(4)	—	(20)	—	—	—	(27)	—	(51)
Employees' contributions	13	(13)	—	—	—	—	5	(5)	18	(18)
Pension payments made	(60)	4	(180)	180	(148)	136	(75)	56	(463)	376
Settlement payments	—	—	—	—	—	—	—	—	—	—
Effects of changes in exchange rates	(142)	80	(586)	571	—	—	(61)	43	(789)	694
Changes in Group structure/other changes	—	—	—	—	—	6		0	—	6
Year ended 31 December 2022	**$ 1,485**	**$ (1,285)**	**$ 3,100**	**$ (3,625)**	**$ 2,035**	**$ (1,891)**	**$ 1,095**	**$ (858)**	**$ 7,715**	**$ (7,659)**

Contributions

At a minimum, Linde contributes to its pension plans to comply with local regulatory requirements (e.g., ERISA in the United States). Discretionary contributions in excess of the local minimum requirements are made based on many factors, including long-term projections of the plans' funded status, the economic environment, potential risk of overfunding, pension insurance costs and alternative uses of the cash. Changes to these factors can impact the timing of discretionary contributions from year to year. Pension contributions were $51 million in 2022 and $42 million in 2021 . Estimated required contributions for 2023 are currently expected to be in the range of $40 million to $50 million.

The expense for newly acquired pension entitlements in the financial year and the net interest cost for each respective financial year are determined each year on the basis of the prior year's net obligation at the reporting date.

Pension Expense Relating To Defined Benefit Plans

(Millions of dollars)	Germany 2022	Germany 2021	UK 2022	UK 2021	U.S. 2022	U.S. 2021	All other 2022	All other 2021	Total 2022	Total 2021
Service cost	$ 39	$ 53	$ 25	$ 30	$ 32	$ 37	$ 31	$ 37	$ 127	$ 157
Current service cost	39	53	25	30	32	37	31	37	127	157
Past service cost	—	—	—	—	—	—	—	—	—	—
Gains (–)/losses (+) from plan curtailments	—	—	—	—	—	—	—	—	—	—
Net interest expense (+)/ income (–)	7	6	8	8	3	7	7	5	25	26
Interest expense from DBO	18	12	93	68	56	46	33	26	200	152
Interest income from plan assets	(11)	(6)	(85)	(60)	(53)	(39)	(26)	(21)	(175)	(126)
Other effects recognised in the statement of profit and loss	—	—	—	3	—	5	0	3	0	11
Total net pension cost	$ 46	$ 59	$ 33	$ 41	$ 35	$ 49	$ 38	$ 45	$ 152	$ 194

For the external financing of defined benefit obligations, the company uses standard international models for the transfer of pension assets (e.g. pension funds and Contractual Trust Arrangements). Pension plans financed via external pension funds exist principally in Australia, Canada, Germany, Ireland, South Africa, Switzerland, the UK and the U.S.

In some countries, Linde is obliged to make contributions to plan assets as a result of legal requirements or contractual agreements. In certain countries, however, these increases in plan assets will not lead to the recognition of an asset because of the asset ceiling described in IAS 19.64 (IFRIC 14). In 2022, an asset ceiling of $26 million was recognized for the Switzerland plan. There was no asset ceiling recorded in 2021.

Funding Status Of The Defined Benefit Obligation

(Millions of dollars) **For the years ended 31 December**	Germany 2022	Germany 2021	UK 2022	UK 2021	U.S. 2022	U.S. 2021	All other 2022	All other 2021	Total 2022	Total 2021
Actuarial present value of pension obligations (defined benefit obligation)	$ 1,485	$ 2,240	$ 3,100	$ 5,879	$ 2,035	$ 2,583	$ 1,095	$ 1,413	$ 7,715	$12,115
of which unfunded pension obligations	37	53	—	—	74	74	242	346	353	473
of which funded pension obligations	1,448	2,187	3,100	5,879	1,961	2,509	853	1,067	7,362	11,642
Fair value of plan assets	(1,285)	(1,359)	(3,625)	(5,577)	(1,891)	(2,448)	(858)	(1,032)	(7,659)	(10,416)
NET OBLIGATION	200	881	(525)	302	144	135	237	381	56	1,699
Year ended 31 December	$ 200	$ 881	$ (525)	$ 302	$ 144	$ 135	$ 237	$ 381	$ 56	$ 1,699
of which pension provision (+)	200	881	0	340	157	151	332	468	689	1,840
of which pension asset (–)	—	—	(525)	(38)	(13)	(16)	(95)	(87)	(633)	(141)

Linde is exposed to various actuarial risks in relation to its defined benefit pension schemes, including:

- Interest rate risk – the risk that the valuation of the pension obligation will materially fluctuate based on changes in the discount rate. The discount rate is highly sensitive to interest rate movements as its determination is based on high quality fixed-interest corporate bonds.
- Inflation risk – the risk that the valuation of the pension obligation will materially fluctuate based on changes in the inflation rate. Certain plans may offer inflation-indexed annuities, placing the risk associated with such fluctuations on the Company.
- Longevity risks – the risk that pensioners will live longer, and therefore require higher benefit payments, than what is reflected in current demographic assumptions.
- Investment risk – includes concentration risk, which is the risk that plan assets are too exposed to particular asset classes, and the risk of lower-than-expected actual asset returns.

Plan assets and the defined benefit obligation may fluctuate over time. To compensate for such fluctuations, potential fluctuations in the defined benefit obligation are taken into account in the course of the investment management of the plan assets. In ideal circumstances, plan assets and pension obligations are influenced in the same way by external factors, which provides a natural protection against such factors. Moreover, the broadly-based portfolio structure of plan assets in the company results in diversification of investment risk.

Portfolio Structure Of Pension Assets

(Millions of dollars)	Germany		UK		U.S.		All other		Total			
	2022	2021	2022	2021	2022	2021	2022	2021	2022	in %	2021	in %
Shares	$ 317	$ 397	$ 511	$ 1,325	$ 1,143	$ 1,621	$ 298	$ 401	$ 2,269	29.6 %	$ 3,744	36.0 %
Fixed-interest securities	291	253	1,386	2,354	574	649	358	425	2,609	34.1 %	3,681	35.3 %
Property	103	104	4	11	174	178	72	67	353	4.6 %	360	3.5 %
Insurance	—	—	—	—	—	—	46	12	46	0.6 %	12	0.1 %
Others	574	605	1,724	1,887	—	—	84	127	2,382	31.1 %	2,619	25.1 %
TOTAL	**$ 1,285**	**$ 1,359**	**$ 3,625**	**$ 5,577**	**$ 1,891**	**$ 2,448**	**$ 858**	**$ 1,032**	**$ 7,659**	**100 %**	**$10,416**	**100 %**

Plan assets are comprised mainly of shares and fixed-interest securities. Prices quoted in an active market are not available in the case of property, insurance, and other. Around half of the fixed-interest securities relate to government bonds issued by first-rate debtors. In certain geographies, primarily the UK and Germany, the corresponding pension plans pursue liability-driven investment ("LDI") strategies to invest in assets that mitigate the impacts of interest rate and inflation risk. Such asset holdings include, but are not limited to, inflation swaps, index-linked fixed income, and fixed income repurchase agreements. The remainder of fixed-interest securities relate to broadly diversified portfolios of bonds issued by companies and emerging markets, as well as loans to finance companies and property. Plan assets categorized as other primarily consist of Liquid Alternatives and Private Debt.

Financial instruments issued by the company are not included in plan assets to any significant extent. The plan assets do not include any real estate used by the company.

[18] Miscellaneous provisions

Miscellaneous Provisions

	Current		Non-current		Total	
	31 December		31 December		31 December	
(Millions of dollars)	2022	2021	2022	2021	2022	2021
Warranty obligations and risks from transactions in course of completion	$ 113	$ 47	$ 37	$ 38	$ 150	$ 85
Provisions for legal disputes	153	111	29	43	182	154
Obligations relating to personnel	96	125	106	111	202	236
Dismantling obligations	9	8	306	306	315	314
Restructuring provisions	8	17	—	—	8	17
Cost reduction programs	190	190	118	232	308	422
Environmental provisions	13	12	54	27	67	39
Insurance provisions	19	19	52	56	71	75
Other obligations	231	224	9	7	240	231
TOTAL	**$ 832**	**$ 753**	**$ 711**	**$ 820**	**$ 1,543**	**$ 1,573**

The warranty obligations and risks from transactions in course of completion consist principally of provisions for onerous contracts, guarantees and warranties. The provisions for warranties relate mainly to the Engineering business and are generally utilized within three years.

The provisions for obligations relating to personnel comprise mainly provisions for profit-sharing and other variable compensation.

The provisions for dismantling obligations are stated at a discounted settlement amount. A corresponding item is recognised in tangible assets and is subject to depreciation. The provision is compounded over the duration of the underlying contracts. Due to the wide range of residual terms of the contracts, the residual term of the provision falls mainly in a range of between one and twenty years.

The restructuring provisions include provisions for restructuring actions and efficiency programs.

Cost reduction programs include severance and other charges related to the execution of the company's synergistic actions including location consolidations and business rationalization projects and software and process harmonization. Total cost reduction program related charges were not significant for the year ended 31 December 2022.

The unwinding of interest applied to miscellaneous long-term provisions was not material.

Movements In Miscellaneous Provisions

(Millions of dollars)	1/1/2022	Utilization	Release	Addition	Currency and Other	31/12/2022
Warranty obligations and risks from transactions in course of completion	$ 85	$ (14)	$ (32)	$ 117	$ (6)	$ 150
Provisions for legal disputes	154	(34)	(32)	100	(6)	182
Obligations relating to personnel	236	(202)	(79)	268	(21)	202
Dismantling obligations	314	(1)	(4)	25	(19)	315
Restructuring provisions	17	(9)	—	—	—	8
Cost reduction programs	422	(146)	—	58	(26)	308
Environmental provisions	39	(5)	(1)	32	2	67
Insurance provisions	75	(6)	(1)	8	(5)	71
Other obligations	231	(17)	(87)	123	(10)	240
TOTAL	**$ 1,573**	**$ (434)**	**$ (236)**	**$ 731**	**$ (91)**	**$ 1,543**

[19] Financial debt

The following is a summary of Linde's outstanding debt at 31 December 2022 and 2021.

(Millions of dollars)	31/12/2022	31/12/2021
Current (a)		
Current notes	$ 1,567	$ 1,637
Commercial paper	3,926	278
Other borrowings (primarily non-U.S.)	182	885
Total current debt	**$ 5,675**	**$ 2,800**
Non-current (a)		
Non-current notes	$ 12,068	$ 11,154
Other	10	10
Non-U.S. borrowings	193	252
Total non-current debt	**$ 12,271**	**$ 11,416**
Total Debt	**$ 17,946**	**$ 14,216**
Note carrying values (a)		
0.250% Euro denominated notes due 2022 (b) (d)	—	1,137
2.20% Notes due 2022 (e)	—	500
2.70% Notes due 2023	501	500
2.00% Euro denominated notes due 2023 (b)	699	759
5.875% GBP denominated notes due 2023 (b)	367	432
1.20% Euro denominated notes due 2024	588	625
1.875% Euro denominated notes due 2024 (b)	324	356
4.800% Notes due 2024 (f)	299	—
4.700% Notes due 2024 (f)	598	—
2.65% Notes due 2025	400	399
1.625% Euro denominated notes due 2025	533	565
0.00% Euro denominated notes due 2026	751	799
3.20% Notes due 2026	724	725
3.434% Notes due 2026	198	197
1.652% Euro denominated notes due 2027	88	94
0.250% Euro denominated notes due 2027	802	850
1.00% Euro denominated notes due 2027 (c)	536	—
1.00% Euro denominated notes due 2028 (b)	749	879
1.10% Notes due 2030	696	696
1.90% Euro denominated notes due 2030	111	118
1.375% Euro denominated notes due 2031 (c)	803	—
0.550% Euro denominated notes due 2032	798	847
0.375% Euro denominated notes due 2033	529	565
1.625% Euro denominated notes due 2035 (c)	849	—
3.55% Notes due 2042	665	664
2.00% Notes due 2050	296	296
1.00% Euro denominated notes due 2051	731	788

(a) Amounts are net of unamortized discounts, premiums and/or debt issuance costs as applicable.

(b) 31 December 2022 and 2021 included a cumulative $56 million and $42 million adjustment to carrying value, respectively, related to hedge accounting of interest rate swaps.

(c) In March 2022, Linde issued €500 million of 1.000% notes due 2027, €750 million of 1.375% notes due 2031, and €800 million of 1.625% notes due 2035.

(d) In January 2022, Linde repaid €1.0 billion of 0.250% notes that became due.

(e) In May 2022, Linde repaid $500 million of 2.20% notes that were due in August 2022. There was no impact to interest within the consolidated statements of income.

(f) In November 2022, Linde issued $300 million of 4.800% notes due in 2024 and $600 million of 4.700% notes due in 2025.

Credit Facilities

On 7 December 2022, Linde plc and certain of its subsidiaries entered into an unsecured revolving credit agreement (the "Five Year Credit Agreement") with Bank of America, N.A., as administrative agent and a syndicate of banking institutions as lenders. The Credit Agreement became effective on 7 December 2022 and provides for total commitments of $5.0 billion which may be increased to up to $6.5 billion subject to receipt of additional commitments and satisfaction of customary conditions. The Credit Agreement does not contain a financial maintenance covenant. The commitments will expire on 7 December 2027, however, the company has the option to request two one-year extensions of the expiration date. Any such extension will be subject to approval by the extending lenders. As of the date of this Report, the Credit Agreement has no usage outstanding.

In addition, on 7 December 2022, the company and certain of its subsidiaries entered into an unsecured 364-day revolving credit agreement (the "364-Day Credit Agreement" and, together with the Five Year Credit Agreement, the "Credit Agreements") with a syndicate of banking institutions. The 364-Day Credit Agreement provides for total commitments of $1.5 billion. There are no financial maintenance covenants contained within the Credit Agreement. The revolving credit facility expires on 7 December 2023 with the option to elect to have the entire principal balance outstanding under the Credit Agreement converted into non-revolving term loans, which will be due and payable one year after the commitment termination date.

Other Debt Information

As of 31 December 2022 and 2021, the weighted-average interest rate of current debt was 3.0% and 0.5%, respectively.

[20] Leases

IFRS 16 requires lessees to recognize a right-of-use asset and lease liability for all leases, except those that meet certain scope exceptions. In the normal course of its business, Linde enters into various leases as the lessee, primarily involving distribution equipment and real estate. Right-of-use assets ("ROU") are generally depreciated over the shorter of the asset's useful life or the lease term on a straight-line basis. If the group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life. Total lease and rental expenses related to lease right of use assets for the twelve months ended 31 December 2022 and 2021 included $301 million and $304 million of depreciation ($147 million and $149 million related to Buildings, $127 million and $130 million related to vehicles, $13 million and $12 million related to land, $14 million and $13 million related to other) and $27 million of interest for 2022 and 2021, respectively. The related lease right of use assets are reported as a separate line in non-current assets, and liabilities are included in current and non-current liabilities from leases in the consolidated statement of financial position. Right of use assets and liabilities are measured on a present value basis. Linde includes renewal options that are reasonably certain to be exercised as part of the lease term.

As most leases do not provide an implicit rate, Linde uses the applicable incremental borrowing rate at lease commencement to measure lease liabilities and right-of-use assets. Linde determines incremental borrowing rates through market sources.

The lease population relates mainly to two classes of assets, vehicles and real estate. Lease terms for vehicles typically range from 3 to 6 years. Lease terms for real estate typically range from 10 to 15 years. Lease terms are determined at the individual lease level based on the contractual lease term considering lease options which are reasonably certain to be exercised. To determine if the probability of exercising an option is considered reasonably certain, various factors which would economically compel an extension or termination are considered. These factors could include options at below market rates, consideration of relocation costs or the condition of leasehold improvements. The impact of favorable renewal options is the primary consideration in determining if an equipment lease option will be exercised. The impact of favorable renewal terms, relocation costs and leasehold improvements are the primary considerations in the determination if a real estate lease option will be exercised.

The company has elected to apply the short-term lease exception. Short-term leases are leases that, at the commencement date, have a lease term of twelve months or less and do not include a purchase option that the lessee is reasonably certain to exercise. Leases that meet the short-term lease definition are not recognized on the statement of financial position, but rather expensed in profit and loss on a straight-line basis over the lease term. Short term lease expense and low-value leases for the twelve months ended 31 December 2022 and 2021 were immaterial.

Some leasing arrangements require variable payments that are dependent on usage, output, or may vary for other reasons. Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The company does not have material variable lease payments.

Gains and losses on sale and leaseback transactions were immaterial. Cash outflows related to ROU lease liabilities for the twelve months ended 31 December 2022 and 2021 were $321 million and $330 million, respectively. Cash outflows from short term and low value leases were immaterial.

Based on the finance lease right-of use asset and liability balance as of 1 January 2022 and 2021, the reconciliation to the closing balance for as of 31 December 2022 and 2021, was as follows:

		Right-of-Use Assets
1 January 2021	**$**	**1,117**
Additions		215
Adjustments/currency		6
Depreciation		(304)
1 January 2022	**$**	**1,034**
Additions		217
Adjustments/currency		(63)
Depreciation		(301)
31 December 2022	**$**	**887**

Supplemental statement of financial position information related to leases is as follows:

(Millions of dollars)

Lease right-of-use assets		**31 December 2022**		**31 December 2021**
Buildings	$	436	$	506
Vehicles		221		288
Land		185		200
Other*		45		40
Total	**$**	**887**	**$**	**1,034**
Current liabilities from leases		225		274
Non-current liabilities from leases		679		768
Total lease liabilities	**$**	**904**	**$**	**1,042**

*Other consists of all other categories

Future lease payments as of 31 December 2022 are as follows (millions of dollars):

Period		
2023	$	246
2024		178
2025		134
2026		97
2027		68
Thereafter		282
Total future undiscounted lease payments	**$**	**1,005**
Less imputed interest		(101)
Total reported lease liability	**$**	**904**

In limited instances Linde acts as a lessor, primarily for assets to provide industrial gas to specific customers. These leases are not significant to the consolidated statement of financial position or consolidated statement of profit and loss.

[21] Trade payables, miscellaneous liabilities, liabilities from income taxes

	Current		Non-current		Total	
	31 December		31 December		31 December	
(Millions of dollars)	2022	2021	2022	2021	2022	2021
Trade payables	$ 4,559	$ 4,790	$ —	$ —	$ 4,559	$ 4,790
Contract liabilities	3,083	2,946	923	769	4,006	3,715
Income tax liabilities	981	770	139	178	1,120	948
Miscellaneous liabilities	1,408	1,578	335	279	1,743	1,857
Other taxes	263	303	52	73	315	376
Derivatives with negative fair values	23	27	73	8	96	35
Obligations relating to personnel	661	756	11	15	672	771
Other liabilities	461	492	199	183	660	675
Total	**$ 10,031**	**$ 10,084**	**$ 1,397**	**$ 1,226**	**$ 11,428**	**$ 11,310**

Income tax liabilities disclosed as current are due with immediate effect and generally Linde has no option to defer them. Included in the non-current income tax liabilities disclosed are amounts which may not fall due until more than twelve months after the reporting date.

Also included in current income tax liabilities are liabilities relating to prior periods arising from external tax audits in various countries.

[22] Share option schemes

Share-based compensation expense was $107 million in 2022 ($128 million in 2021). The related income tax benefit recognized was $23 million in 2022 ($15 million in 2021). The expense was primarily recorded in marketing & selling and administration expenses and no share-based compensation expense was capitalized.

Summary of Plans

The 2021 Linde plc Long Term Incentive Plan (the "2021 Plan") was adopted by the Board of Directors and shareholders of Linde plc on 26 July 2021. Upon adoption of the 2021 Plan, any authorized shares that remained available for grant for new awards under the Amended and Restated 2009 Linde Long Term Incentive Plan (the "2009 Plan") were cancelled. The 2021 Plan permits awards of share options, share appreciation rights, restricted share and restricted share units, performance-based share units and other equity awards to eligible officer and non-officer employees and non-employee directors of the company and its affiliates. As of 31 December 2022, 8,271,252 shares remained available for equity grants under the 2021 Plan, of which 2,726,282 shares may be granted as awards other than options or share appreciation rights.

Exercise prices for options granted under the 2021 Plan may not be less than the closing market price of the company's ordinary shares on the date of grant and granted options may not be re-priced or exchanged without shareholder approval. Options granted under the 2021 Plan subject only to time vesting requirements may become partially exercisable after a minimum of one year after the date of grant but may not become fully exercisable until at least three years have elapsed from the date of grant, and all options have a maximum duration of ten years.

In order to satisfy option exercises and other equity grants, the company may issue authorized but previously unissued shares or it may issue treasury shares.

Share Option Fair Value

The company utilizes the Black-Scholes Options-Pricing Model to determine the fair value of share options consistent with that used in prior years. Management is required to make certain assumptions with respect to selected model inputs, including anticipated changes in the underlying share price (i.e., expected volatility) and option exercise activity (i.e., expected life). Expected volatility is based on the historical volatility of the company's shares over the most recent period commensurate with the estimated expected life of the company's share options and other factors. The expected life of options granted, which represents the period of time that the options are expected to be outstanding, is based primarily on historical exercise experience. The expected dividend yield is based on the company's most recent history and expectation of dividend payouts. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for a period commensurate with the estimated expected life. If factors change and result in different assumptions in future periods, the share option expense that the company records for future grants may differ significantly from what the company has recorded in the current period.

The weighted-average fair value of options granted during 2022 was $45.07 ($37.80 in 2021) based on the Black-Scholes Options-Pricing model. The increase in grant date fair value year-over-year is primarily attributable to the increase in the share price.

The following weighted-average assumptions were used to value the grants in 2022 and 2021:

Year Ended 31 December	**2022**	**2021**
Dividend yield	1.7 %	1.7 %
Volatility	20.6 %	18.4 %
Risk-free interest rate	1.70 %	1.10 %
Expected term years	5	6

The following table summarizes option activity under the plans as of 31 December 2022 and 2021 and changes during the periods then ended (averages are calculated on a weighted basis; life in years; intrinsic value expressed in millions):

Activity	Number of Options (000's)	Average Exercise Price	Average Remaining Life	Aggregate Intrinsic Value
Outstanding at 1 January 2021	8,067	$ 136.05		
Granted	831	253.68		
Exercised	(1,672)	121.40		
Cancelled or expired	(60)	207.35		
Outstanding at 31 December 2021	7,166	$ 152.56	6	$ 1,389
Exercisable at 31 December 2021	5,297	$ 132.84	5	$ 1,131
Granted	476	270.99		
Exercised	(880)	125.03		
Cancelled or expired	(42)	239.21		
Outstanding at 31 December 2022	6,720	$ 164.03	5	$ 1,090
Exercisable at 31 December 2022	5,383	$ 145.71	5	$ 971

The aggregate intrinsic value represents the difference between the company's closing share price of $326.18 as of 31 December 2022 and the exercise price multiplied by the number of in the money options outstanding as of that date. The total intrinsic value of share options exercised during 2022 was $176 million ($294 million in 2021.)

Cash received from option exercises under all share-based payment arrangements for 2022 was $36 million ($50 million in 2021). The cash tax benefit realized from share-based compensation totaled $61 million for 2022 ($64 million in 2021).

As of 31 December 2022, $15 million of unrecognized compensation cost related to non-vested share options is expected to be recognized over a weighted-average period of approximately 1 year.

Performance-Based and Restricted Share Awards

In 2022, Linde granted 368,600 performance-based share awards under the 2021 Plan to senior management that vest, subject to the attainment of pre-established minimum performance criteria, principally on the third anniversary of their date of grant. These awards are tied to either after tax return on capital ("ROC") performance or relative total shareholder return ("TSR") performance versus that of the S&P 500 (weighted 67%) and Eurofirst 300 (weighted 33%). The actual number of shares issued in settlement of a vested award can range from zero to 200 percent of the target number of shares granted based upon the company's attainment of specified performance targets at the end of a three-year period. Compensation expense related to these awards is recognized over the three-year performance period based on the fair value of the closing market price of the company's ordinary shares on the date of the grant and the estimated performance that will be achieved. Compensation expense for ROC awards will be adjusted during the three-year performance period based upon the estimated performance levels that will be achieved. TSR awards are measured at their grant date fair value and not subsequently re-measured. The number of performance-based stock unit awards granted in 2022 includes an increase of 226,690 stock units to the target number of performance-based awards originally granted in 2019, as these awards achieved a higher payout factor upon completion of the three-year performance period.

The weighted-average fair value of ROC performance-based share awards granted in 2022 was $257.63, and during 2021 was $241.10. These fair values are based on the closing market price of Linde's ordinary shares on the grant date adjusted for dividends that will not be paid during the vesting period.

The weighted-average fair value of performance-based shares tied to relative TSR performance granted during 2022 was $301.42, and during 2021 was $301.04, and was estimated using a Monte Carlo simulation performed as of the grant date.

There were 139,512 restricted share units granted to employees in 2022 (175,597 in 2021). The weighted-average fair value of restricted share units granted during 2022 was $260.27 ($242.60 in 2021). These fair values are based on the closing market price of Linde's ordinary shares on the grant date adjusted for dividends that will not be paid during the vesting period. Compensation expense related to the restricted share units is recognized over the vesting period.

The following table summarizes non-vested performance-based and restricted share award activity as of 31 December 2022 and 2021, and changes during the period then ended (shares based on target amounts, averages are calculated on a weighted basis):

	Performance-Based		Restricted Shares	
	Number of Shares (000's)	Average Grant Date Fair Value	Number of Shares (000's)	Average Grant Date Fair Value
Non-vested at 1 January 2021	437	$ 179.76	688	$ 148.56
Granted	188	262.56	176	242.60
Vested	—	—	(213)	147.84
Cancelled and Forfeited	(15)	221.70	(15)	206.65
Non-vested at 1 January 2022	610	$ 204.39	636	$ 172.90
Granted	369	275.31	140	260.27
Vested	(383)	184.32	(113)	168.33
Cancelled and Forfeited	(13)	250.01	(17)	232.51
Non-vested 31 December 2022	583	$ 226.04	646	$ 190.33

There are approximately 12 thousand performance-based shares and 18 thousand restricted shares that are non-vested at 31 December 2022 which will be settled in cash due to foreign regulatory limitations (14 thousand and 15 thousand, respectively, in 2021). The liability related to these grants reflects the current estimate of performance that will be achieved and the current ordinary share price.

As of 31 December 2022, $42 million of unrecognized compensation cost related to performance based awards and $32 million of unrecognized compensation cost related to the restricted share awards is expected to be recognized primarily through the first quarter of 2025.

[23] Financial instruments

Accounting standard IFRS 9, *Financial Instruments* sets out the rules on the classification and measurement of financial assets and contains rules on impairment losses on financial instruments as well as on hedge accounting.

Financial Assets

	Carrying amount	
(Millions of dollars)	**31/12/2022**	**31/12/2021**
At fair value through other comprehensive income (debt instruments) ("FVtOCI")		
Investments and securities	$ 1	$ 1
At fair value through profit and loss		
Freestanding derivatives	22	49
Derivatives designated as hedging instruments	6	87
Investments and securities	33	61
At amortized cost		
Cash and cash equivalents	5,555	2,935
Trade receivables	4,506	4,400
Other receivables and assets	1,863	1,406
Investments and securities	10	15
Total	**$ 11,996**	**$ 8,954**

Financial Liabilities

	Carrying Amount	
(Millions of dollars)	**31/12/2022**	**31/12/2021**
Financial liabilities at amortised cost		
Financial liabilities (1)	17,946	$ 14,216
Trade payables	4,559	4,790
Miscellaneous liabilities	1,644	1,822
Derivatives with negative fair values		
Freestanding derivatives	17	32
Derivatives designated as hedging instruments	79	3
Liabilities from finance leases	904	1,043
Total	**$ 25,149**	**$ 21,906**

(1) The fair value of financial liabilities at 31 December 2022 and 31 December 2021 was $16,147 and $14,392, respectively

The fair value of cash and cash equivalents, short-term debt, trade receivables-net, and trade payables approximate carrying value because of the short-term maturities of these instruments.

The fair value of financial instruments is generally determined using stock exchange prices. If stock exchange prices are not available, the fair value is determined using measurement methods customary in the market, based on market parameters specific to the instrument.

The fair value of derivative financial instruments is determined as follows: Options are valued using the Black-Scholes option pricing model. Futures are measured with recourse to the quoted market price in the relevant market. All other derivative financial instruments are measured by discounting expected future cash flows using the net present value method. As far as possible, the entry parameters used in these models are relevant observable market prices and interest rates at the reporting date.

The following table shows the financial instruments in Linde plc which are measured at fair value. Linde plc uses the following hierarchy to determine and disclose fair values based on the method used to ascertain their fair values:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets and liabilities.
- Level 2: Inputs other than quoted market prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Inputs for the asset or liability that are not based on observable market data.

Financial Assets And Liabilities Measured At Fair Value

	Level 1		Level 2		Level 3	
(Millions of dollars)	31/12/2022	31/12/2021	31/12/2022	31/12/2021	31/12/2022	31/12/2021
Investments and securities	$ 20	$ 42	$ —	$ —	$ 13	$ 20
Thereof debt instruments at FVtOCI	1	1	—	—	—	—
Thereof at FVtPL	19	41	—	—	13	20
Freestanding derivatives with positive fair values	—	—	22	49	—	—
Derivatives designated as hedging instruments with positive fair values	—	—	6	87	—	—
Freestanding derivatives with negative fair values	—	—	17	32	—	—
Derivatives designated as hedging instruments with negative fair values	—	—	79	3	—	—
Cash and cash equivalents	—	—	—	—	—	—

During the reporting year, there were no transfers between Levels 1, 2 and 3 of the fair value hierarchy.

The fair value of financial instruments in the “financial assets at amortised cost”, and “financial liabilities at amortised cost” categories is determined by discounting the expected cash flows. The interest rates applied are the same as those that would apply to new financial instruments with a similar risk structure, currency and maturity. Level 1 investments and securities are traded on an exchange. Fair value of level 2 investments is determined using the discounted cash flow method, taking into account individual credit ratings and other market circumstances in the form of credit and liquidity spreads generally applied in the market. The fair value of these instruments is determined using the current stock exchange price. In cases involving short-term financial instruments in the “financial assets at amortised cost”, and “financial liabilities at amortised cost” categories, it is assumed that the fair value corresponds to the carrying amount.

Level 3 investments and securities contain a venture fund. For the valuation, Linde uses the net asset value received as part of the fund's quarterly reporting, which for the most part is not based on quoted prices in active markets. In order to reflect current market conditions, Linde proportionally adjusts these by observable market data (stock exchange prices) or current transaction prices.

Changes in level 3 investments and securities were immaterial.

Net Financial Gains And Losses

(Millions of dollars)	2022	2021
From freestanding derivatives	$ 20	$ 38
From financial assets at amortized cost	64	75
From financial assets at fair value		
of which reported in the income statement	$ (2)	$ 10
of which reported in other reserves	—	—
From financial liabilities at amortized cost	235	(105)
Total	**$ 317**	**$ 18**

The net financial gains and losses on financial instruments arise from changes in fair value, the recognition and reversal of impairment losses, and exchange rate fluctuations.

The net financial gains and losses correspond to the valuation gains and losses of the financial instruments but exclude interest and dividends.

Free-standing derivatives comprise all those derivatives which are not designated as hedging instruments. They include those derivatives in economic hedging relationships not designated as hedges in respect of which gains and losses arising from the underlying transaction and the hedged item are recognised at the same time in the statement of profit and loss.

The financial result includes fees and other costs of capital of $8 million (2021: $7 million) relating to financial instruments not at fair value through profit and loss.

No interest income has been accrued which relates to impaired financial instruments, especially receivables.

The following table provides information about the exposure to credit risk for financial assets.

Impairment Loss At 31 December

	2022				2021			
(Millions of dollars)	**Carrying amount before impairment**	**Cumulative impairment loss**	**Carrying amount after impairment**	**Of which impairment loss for 2022 financial year**	**Carrying amount before impairment**	**Cumulative impairment loss**	**Carrying amount after impairment**	**Of which impairment loss for 2021 financial year**
Investments and securities at fair value	$ 34	$ —	$ 34	$ —	$ 62	$ —	$ 62	$ —
Investments and securities at amortised cost	44	—	44	—	21	(6)	15	—
Receivables from finance leases	28	—	28	—	37	—	37	—
Trade receivables	4,912	(406)	4,506		4,806	(406)	4,400	(59)
Contract assets	124		124		132	(2)	130	(4)
Derivatives with positive fair values	28	—	28	—	49	—	49	—
Other receivables and assets	1,863		1,863	—	1,406		1,406	—
Cash and cash equivalents	5,555	—	5,555	—	2,935	—	2,935	—

For cash and cash equivalents and other receivables, Linde determines the 12-month expected credit loss as a basis for impairment losses. In the reporting period these impairment losses were not significant.

Financial assets which are initially measured at amortized cost are subsequently measured using the effective interest rate (EIR) method and are subject to impairment. Linde's financial assets at amortized cost includes trade receivables, receivables from finance lease, loan receivables and other financial assets included under other assets. Trade receivables are measured at the transaction price, the face value less impairment, if the receivables do not contain a significant financing component. Management has considered factors such as the difference between the cash price for assets and transaction prices within its agreements, terms of its agreements and market interest rates. Management has reviewed its current portfolio noting that its receivables do not contain significant financing components.

For trade receivables, Linde applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables. The expected loss rates are based on an analysis of the actual historical default rates over 2 years for each business and product area, taking regional circumstances into account. If necessary, these historical default rates are adjusted to reflect the impact of current changes in the macroeconomic environment using forward-looking information. The default rates are also critically evaluated based on the expectations of the responsible management team regarding the collectability of the receivables. Gross receivables aged less than one year were $4,596 million and $4,479 million at 31 December 2022 and 2021 respectively and gross receivables aged greater than one year were $316 million and $327 million at 31 December 2022 and 2021. Average loss rates on receivables aged less than one year were approximately 2.6% and 3.3% at 31 December 2022 and 2021 respectively. Receivables aged greater than one year are generally fully reserved unless specific circumstances warrant exceptions, such as those backed by federal governments..

Trade receivables net of reserves were $4,506 million at 31 December 2022 and $4,400 million at 31 December 2021. Allowances for expected credit losses were $406 million at 31 December 2022 and $406 million at 31 December 2021. Provisions for expected credit losses were $163 million and $129 million in 2022 and 2021, respectively. The allowance activity in each period related primarily to write-offs of uncollectible amounts, net of recoveries and currency movements.

Interest Income/Expense From Financial Instruments Not Measured At Fair Value[1]		
(Millions of dollars)	**2022**	**2021**
Interest income	$ 48	$ 29
Interest expense	(18)	(9)
Total	**$ 66**	**$ 38**

[1]Income and expenses are shown as positive figures where the line item designation is clear. In the "total" line item, net expenses are shown as negative figures.

Not included here are the interest income and interest expense from derivatives or the interest income and interest expense from assets and liabilities outside the scope of IFRS 7.

Risk positions and risk management

Linde plc is exposed to a variety of financial risks. These include in particular: counterparty risk, liquidity risk, interest rate risk, exchange rate risk and other market price risks. These are described below. For further information about risk management at Linde, please refer to the disclosures in the management report.

Counterparty risk

Counterparties to Linde's derivatives are major banking institutions with credit ratings of investment grade or better. The company has Credit Support Annexes ("CSAs") in place for certain entities with their principal counterparties to minimize potential default risk and to mitigate counterparty risk. Under the CSAs, the fair values of derivatives for the purpose of interest rate and currency management are collateralized with cash on a regular basis. As of 31 December 2022, the impact of such collateral posting arrangements on the fair value of derivatives was insignificant. Management believes the risk of incurring losses on derivative contracts related to credit risk is remote and any resulting losses would be immaterial.

Financial Assets/Liabilities Subject To Offsetting Or Enforceable Master Agreements For Financial Derivative Transactions

31 December 2022, *(Millions of dollars)*	**Gross amount of recognised financial assets/ liabilities**	**Gross amount of recognised financial assets/ liabilities set off in the statement of financial position**	**Net amount of financial assets/ liabilities presented in the statement of financial position**	**Financial instruments that qualify for netting**	**Net amount before CSAs**	**Collaterals received from collateral agreements**[1]	**Collaterals due to pledged collateral agreements**[1]	**Net amount**
Derivatives with positive fair values	$ 16	$ —	$ 16	$ (15)	$ 1	$ 28	$ —	$ 29
Derivatives with negative fair values	$ 90	$ —	$ 90	$ 15	$ 105	$ (28)	$ 58	$ 135
Trade receivables	$ 13	$ (2)	$ 11	$ —	$ 11	$ —	$ —	$ 11
Trade payables	$ (13)	$ 2	$ (11)	$ —	$ (11)	$ —	$ —	$ (11)
Total	**$ 106**	**$ —**	**$ 106**	**$ —**	**$ 106**	**$ —**	**$ 58**	**$ 164**

Financial Assets/Liabilities Subject To Offsetting Or Enforceable Master Agreements For Financial Derivative Transactions

31 December 2021, *(Millions of dollars)*	Gross amount of recognised financial assets/ liabilities	Gross amount of recognised financial assets/ liabilities set off in the statement of financial position	Net amount of financial assets/ liabilities presented in the statement of financial position	Financial instruments that qualify for netting	Net amount before CSAs	Collaterals received from collateral agreements [1]	Collaterals due to pledged collateral agreements [1]	Net amount
Derivatives with positive fair values	$ 141	$ —	$ 141	$ (18)	$ 123	$ (45)	$ —	$ 78
Derivatives with negative fair values	12	—	12	18	30	(30)	—	—
Trade receivables	$ 18	(2)	$ 16	—	$ 16	—	—	$ 16
Trade payables	$ (18)	2	$ (16)	—	$ (16)	—	—	$ (16)
Total	**$ 153**	**$ —**	**$ 153**	**$ —**	**$ 153**	**$ (75)**	**$ —**	**$ 78**

[1]The terms governing CSAs may result in the net fair value position per counterparty being over-secured.

Liquidity Risk

Liquidity risk is the risk that the company will no longer be able to meet its financial payment obligations. Contractual undiscounted expected future cash flows from financial liabilities are shown in the table below:

Future Cash Flows From Financial Liabilities

	Due within one year		Due in one to five years		Due in more than five years	
(Millions of dollars)	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Cash outflows from non-derivative financial liabilities	$11,844	$ 9,326	$ 7,193	$ 5,860	$ 6,061	$ 6,348
Cash outflows from derivative financial liabilities	$ 40	$ 41	$ —	$ 47	$ —	$ —

Within this context, it is important to note that the cash outflows from derivative financial liabilities in the amount of $34 million (2021: $76 million) are offset by cash inflows from derivatives with gross settlement in the amount of $33 million (2021: $69 million).

Linde's financing strategy is to secure long-term committed funding by issuing public notes and debentures and commercial paper backed by a long-term bank credit agreement. Linde's international operations are funded through a combination of local borrowing and intercompany funding to minimize the total cost of funds and to manage and centralize currency exchange exposures. As deemed necessary, Linde manages its exposure to interest-rate changes through the use of financial derivatives.

Interest rate risks

Interest rate risks arise from market fluctuations in interest rates. As a result of its financing activities, Linde plc is exposed to a risk from interest rate changes. At 31 December 2022, Linde plc held interest-bearing instruments (net, including interest rate derivatives/ hedges) totaling $17.9 billion (2021: $14.2 billion). Of these, $13.0 billion (2021: $12.5 billion) related to instruments bearing interest at fixed interest rates and $4.9 billion (2021: $1.7 billion) to instruments bearing interest at variable rates. This is equivalent to a company-wide fixed-rate ratio of 73 percent (2021: 88 percent).

Linde plc has used forward payer swaps and treasury rate locks to provide an element of hedging against exposure to rising interest rates with regard to future bond issues.

Based on instruments bearing interest at variable rates and financial instruments hedging interest rate risks which Linde plc holds or has issued, a hypothetical change in the interest rates applicable to the respective instruments would have had the following effects (if exchange rates remained constant):

Effect Of Changes In Interest Rates

(Millions of dollars)	Change	Recognised in profit and loss 2022	Recognised in profit and loss 2021
EUR	+ 100 bp	(24)	(39)
	– 100 bp	24	39
GBP	+ 100 bp	(3)	0
	– 100 bp	3	0
Other currencies	+ 100 bp	2	6
	– 100 bp	(2)	(6)

Effect of interest changes in equity were not material.

Exchange rate risks

Due to its activities as an international group, Linde is exposed to exchange rate risks. Its broad spread of activities over many different currency areas and its local business model result in a low concentration of risk for the company.

Linde monitors and manages its exchange rate risk, a risk which has an impact on its operations. The gross exchange rate risk encompasses all the operating activities of the company. This gross exchange rate risk is reduced by around 57 percent (2021: 64 percent). Therefore, Linde is exposed at the reporting date to a net exchange rate risk from operating activities involving foreign currency corresponding to 43 percent (2021: 36 percent) of the original unsecured risk.

The risk of exchange rate movements is monitored for internal management purposes on the basis of a value-at-risk, which relates to positions in currencies other than the relevant functional currency.

The value-at-risk is calculated on the basis of historical data (250 working days) in accordance with international banking standards. The value-at-risk presents the maximum potential loss based on a probability of 97.5 percent for a holding period of twelve months. The calculation takes into account correlations between the transactions being considered; the risk of a portfolio is generally lower than the total of the respective individual risks.

At 31 December 2022, the value-at-risk was $554 million (2021: $351 million). This is primarily driven by unhedged exposures relating to intercompany loan facilities including €2.6 billion ($3.0 billion) intercompany Euro-denominated credit facilities that do not qualify for net investment hedge treatment under international accounting standards.

Other market price risks

As a result of its energy purchases, Linde is exposed to risks arising from changes in commodity prices. Linde plc monitors and manages these commodity price risks arising from the purchase of electricity, natural gas and propane for use in production. These hedging operations are governed by risk management guidelines, compliance with which is monitored. Commodity price risks are hedged in the main by long-term supply contracts or limited by the form and structure of sales contracts. Derivatives are also used to a much lesser extent to hedge against the exposure to changes in the price of electricity, natural gas and propane gas. The commodity price risk from financial instruments is therefore not material.

Hedge Accounting

Cash flow hedges

Linde hedges cash flows at both consolidated and company levels, based on agreed minimum hedging rates. At the company level, future transactions which are highly probable are hedged against foreign exchange risks.

In general, these hedges are accounted for as cash flow hedges in accordance with IFRS 9, *Financial Instruments*. The effective portion of the gain or loss on the hedging instruments is recognized directly in equity and released to the statement of profit and loss when the hedged cash flows are also recognised in the statement of profit and loss or if a hedged future transaction is no longer expected to occur. In addition, the risks associated with changes in interest rates relating to certain financial liabilities or future financing measures are hedged by derivative financial instruments and accounted for as cash flow hedges.

Linde also hedges the exposure to commodity price risks which arise in the normal course of business from its procurement transactions and result in open risk positions. Commodity price fluctuations are largely covered through contractual pass through to customers. To reduce the extent of the remaining risk, Linde enters into a small number of electricity, natural gas and propane gas derivatives. Usually, hedging relationships of this type are also designated as cash flow hedging relationships, if this accords with the facts.

If the hedged future transactions (forecast transactions as defined by IFRS 9) result in the recognition of a non-financial asset or liability, the initial carrying amounts of these are adjusted for the amount recorded in equity. This is usually the case for non-current assets and inventories.

The following table presents a reconciliation of the reserve for cash flow hedges:

Reserve For Cash Flow Hedges

(Millions of dollars)	2022	2021
Opening balance at 1 January	$ 75	$ 4
Additions	40	120
Transfers to the statement of profit and loss	(129)	(49)
of which relating to revenue	—	—
of which relating to cost of sales	(129)	(49)
of which relating to financial income and expenses	—	—
Closing balance at 31 December	**$ (14)**	**$ 75**

In the 2022 and 2021 financial years, no amounts were recognized in the financial result as a result of ineffectiveness in cash flow hedges.

Cash Flow Hedge Accounting

	Exchange rate risk		Interest rate risk		Commodity risk	
(Millions of dollars)	2022	2021	2022	2021	2022	2021
In a cash flow hedge designated hedging instruments						
Fair value	$ 2	$ 11	$ —	$ —	$ 4	$ 49
Nominal value	323	758	—	—	98	83
Cash flow hedge reserve for continuing hedge relationships	6	6	—	—	55	69
Cash flow hedge reserve for discontinued hedge relationships	—	—	—	—	—	—

Cash Flow Hedge Accounting

	Within one year		In one to five years		In more than five years		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
FX risk INR/EUR								
Exposure (nominal volume) - in m EUR	—	52	12	33			12	85
Average hedged rate	—	.0111	0.1139	.0106				
Cash flows from hedging instrument	—	4,732	1,094	3,121			1,094	7,853
FX risk EUR/CHF								
Exposure (nominal volume) - in m CHF	—	—	74	—	—	—	74	—
Average hedged rate	—	—	1.0241	—	—	—		
Cash flows from hedging instrument	—	—	63	—	—	—	63	—
FX risk EUR/ILS								
Exposure (nominal volume) - in m ILS	224	—	—	—	—	—	224	—
Average hedged rate	0.2793	—	—	—	—	—		
Cash flows from hedging instrument	(58)	—	—	—	—	—	(58)	—

Fair value hedges

Linde uses interest rate swaps to hedge the exposure to changes in the fair value of financial assets and financial liabilities as a result of interest rate changes. If the hedge is deemed to be effective, the carrying amount of the hedged item is adjusted for changes in the fair value attributable to the hedged risk.

The following table shows the changes in underlying transactions and hedging instruments in fair value hedging relationships recognised in profit and loss.

Fair Value Hedge Accounting		
(Millions of dollars)	2022	2021
Fair value changes of hedged items and hedging instruments		
From hedged items	$ 87	$ 35
From hedging instruments (interest rate swaps)	(86)	(32)
Ineffectiveness recognized in the financial result	$ 1	$ 3
In Fair value hedge accounting designated hedging instruments		
Fair Value	$ (70)	$ 24
Nominal value	$ 856	$ 1,251

Hedges of a net investment in a foreign operation

As of 31 December 2022, Linde has €3.7 billion ($3.9 billion) Euro-denominated notes that are designated as hedges of the net investment positions in foreign operations. The deferred gain recorded within cumulative translation adjustment component of AOCI in the consolidated statement of financial position and the consolidated statement of comprehensive income is $181 million for the year ended December 31, 2022.

As of 31 December 2022 exchange rate movements of $206 million relating to previously designated hedges remain in AOCI. These movements will remain in AOCI, until appropriate, such as upon sale or liquidation of the related foreign operations at which time amounts will be reclassified to the consolidated statement of income.

No amounts were recognised in 2022 or 2021 as a result of ineffectiveness in net investment hedges.

[24] Consolidated statement of cash flows

The statement of cash flows shows the source and application of funds. In accordance with IAS 7, *Cash Flow Statements*, cash flows from operating activities are distinguished from cash flows from investing and financing activities.

The cash and cash equivalents disclosed in the statement of cash flows comprise all cash and cash equivalents disclosed in the statement of financial position: i.e. cash in hand, bank balances and money market funds with a maturity of three months or less. The balance included in cash equivalents for bilateral Credit Support Annexes ("CSAs") was $58 million in 2022 (nil in 2021). Explanatory information on CSAs can be found in Note 23.

Cash flows for investing and financing activities are calculated on the basis of payments, while cash flow from operating activities is derived indirectly from profit for the year from continuing operations.

When the cash flow from operating activities is calculated, the changes in assets and liabilities are adjusted for certain effects, such as foreign currency translation. As a result, it is not possible to reconcile the figures to the differences between the headings in the published consolidated statement of financial position.

Distributions received and income taxes paid included in cash flow from operating activities are disclosed separately. Cash flows from associates and joint ventures are disclosed in cash flow from operating activities. Finance income from embedded finance leases according to IFRS 16 has been included in cash flow from operating activities, due to the fact that such income is clearly related to the operating business of Linde plc, while capitalized borrowing costs of $62 million (2021: $58 million) are disclosed in cash flow from investing activities. All other interest payments are disclosed in cash flow from operating activities.

Cash flows from disposal of tangible and intangible assets included in cash flows from investing activities totaled $195 million in 2022 compared to $167 million in 2021. Disposal proceeds for the year relate primarily to cash received from the sale of the company's GIST business of $184 million, net of cash divested of $75 million, for net proceeds of $109 million.

Financing

Investing activities comprise additions to and disposals of tangible assets, financial assets, intangible assets and consolidated companies. Additions and disposals in foreign currencies have been translated at average rates.

Reconciliation Of Liabilities From Financing Activities

			Non-cash changes			
(Millions of dollars)	Opening balance at 01/01/2022	Cash flows	Exchange rate effects[1]	Changes in fair value	Other changes[2]	Closing balance at 31/12/2022
Non-current financial liabilities	$ 11,416	$ 3,172	$ (537)	$ 0	$ (1,780)	$ 12,271
Current financial liabilities	2,800	1,272	(110)	(90)	1,803	5,675
Liabilities from leases	1,042	(322)	(31)	—	215	904
LIABILITIES FROM FINANCING ACTIVITIES	**$ 15,258**	**$ 4,122**	**$ (678)**	**$ (90)**	**$ 238**	**$ 18,850**

1 Financial debt includes adjustments due to hedging transactions.
2 Financial debt includes impacts of reclassifications from non-current to current financial debt. Liabilities from finance leases primarily includes the addition of new leases.

[25] Segment information

Linde's operations consist of two major product lines: industrial gases and engineering. As further described in the following paragraph, Linde's industrial gases operations are managed on a geographic basis, which represents three of the company's operating segments - Americas, EMEA (Europe/Middle East/Africa), and APAC (Asia/South Pacific); a fourth operating segment which represents the company's Engineering business, designs and manufactures equipment for air separation and other industrial gas applications specifically for end customers and is managed on a worldwide basis operating in all geographic segments. Each of these operating segments is a separate reporting segment for financial reporting purposes. Other consists of corporate costs and a few smaller businesses which individually do not meet the quantitative thresholds for separate presentation.

The industrial gases product line centers on the manufacturing and distribution of atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). Many of these products are co-products of the same manufacturing process. Linde manufactures and distributes nearly all of its products and manages its customer relationships on a regional basis. Linde's industrial gases are distributed to various end-markets within a regional segment through one of three basic distribution methods: on-site or tonnage; merchant or bulk; and packaged or cylinder gases. The distribution methods are generally integrated in order to best meet the customer's needs and very few of its products can be economically transported outside of a region. Therefore, the distribution economics are specific to the various geographies in which the company operates and are consistent with how management assesses performance.

The company's Chief Operating Decision Maker assesses the performance of the operating segments based on operating profit, excluding items not indicative of ongoing business trends as determined in accordance with US GAAP ("Segment operating profit"). A reconciliation to IFRS as adopted by the European Union is disclosed below. The same accounting policies as those set out in Note 5 apply to the segments.

The tables below present information about reportable segments in accordance with US GAAP for the years ended 31 December 2022 and 2021 for the combined business. Also, each table includes a reconciliation of US GAAP to IFRS amounts along with an explanation of the major differences.

	Year ended 31 December	
(Millions of dollars)	2022	2021
Sales (a)		
Americas	$ 13,874	$ 12,103
EMEA	8,443	7,643
APAC	6,480	6,133
Engineering	2,762	2,867
Other	1,805	2,047
Total US GAAP sales	$ 33,364	$ 30,793
GAAP adjustments [1]	535	466
Total IFRS sales	**$ 33,899**	**$ 31,259**

(1) Related to consolidation of certain entities for IFRS that are not consolidated for US GAAP.

	Year ended 31 December	
(Millions of dollars)	2022	2021
Operating Profit		
Americas	$ 3,732	$ 3,368
EMEA	2,013	1,889
APAC	1,670	1,502
Engineering	555	473
Other	(66)	(56)
US GAAP segment operating profit	$ 7,904	$ 7,176
Russia-Ukraine conflict and other charges [1]	(1,029)	(273)
Purchase accounting impacts - Linde AG [2]	(1,506)	(1,919)
US GAAP operating profit from continuing operations	$ 5,369	$ 4,984
GAAP adjustments [3]	174	120
IFRS operating profit from continuing operations	**$ 5,543**	**$ 5,104**

(1) The 2022 period primarily related to the Russia-Ukraine conflict and other charges of $1,029 million which are not included in management's view of segment profitability (see Note 7). Linde recorded cost reduction and other charges of $273 million in 2021, primarily related to merger and synergy-related costs.
(2) Related to the impacts of the required purchase accounting related to the merger transaction under US GAAP.
(3) Related to consolidation of certain entities for IFRS that are not consolidated for US GAAP.

(Millions of dollars)	Year ended 31 December 2022	2021
Depreciation and Amortization		
Americas	$ 1,320	$ 1,243
EMEA	661	752
APAC	593	611
Engineering	33	39
Other	116	127
US GAAP segment depreciation and amortization	$ 2,723	$ 2,772
Purchase accounting impacts - Linde AG [1]	1,481	1,863
Total US GAAP depreciation and amortization	$ 4,204	$ 4,635
GAAP adjustments [2]	376	437
Total IFRS depreciation and amortization	**$ 4,580**	**$ 5,072**

(1) Related to the impacts of the required purchase accounting related to the merger transaction under US GAAP.

(2) Related to consolidation of certain entities for IFRS that are not consolidated for US GAAP.

(Millions of dollars)	Year ended 31 December 2022	2021
Expenditures on Long-lived Assets		
Americas	$ 1,698	$ 1,354
EMEA	550	669
APAC	889	995
Engineering	28	25
Other	118	131
Total US GAAP expenditures on long-lived assets	$ 3,283	$ 3,174
GAAP adjustments [1]	65	78
Total IFRS expenditures on long-lived assets	**$ 3,348**	**$ 3,252**

(1) Related to consolidation of certain entities for IFRS that are not consolidated for US GAAP.

(Millions of dollars)	Year ended 31 December 2022	2021
Sales by Major Country (b)		
United States	$ 10,553	$ 9,123
Germany	3,662	3,601
China	3,139	2,971
United Kingdom	1,954	2,060
Australia	1,372	1,307
Brazil	1,158	1,065
Other- non U.S.	12,061	11,132
Total sales	**$ 33,899**	**$ 31,259**

(Millions of dollars)	31 December 2022	2021
Long-lived Assets by Major Country (b, c)		
United States	$ 16,382	$ 16,414
Germany	8,422	9,295
China	5,614	6,258
United Kingdom	4,348	5,275
Australia	3,414	3,830
Brazil	831	798
Other- non U.S.	24,763	27,451
Total long-lived Assets	**$ 63,774**	**$ 69,321**

(a) Sales reflect external sales only. Intersegment sales, primarily from Engineering to the industrial gases segments, were $1,035 million and $896 million for the year ended 31 December 2022 and 2021, respectively. There is no significant concentration of sales with any single customer.

(b) Sales and long-lived assets for Ireland, the company's country of domicile, are not significant for separate presentation.

(c) Long-lived assets in both periods include tangible assets, goodwill, other intangible assets and right of use assets.

[26] Employees

In 2022, the average number of employees was 70,291 (2021: 71,929). As of 31 December 2022, the total number of employees of Linde plc was 65,010 (72,327 in 2021) of which 1,090 (1,072 in 2021) are designated as senior management based upon their level within the overall organization. The decrease for the total number of employees from 2021 to 2022 was primarily driven by cost reduction actions and divestitures.

In 2022, the average number of employees in the joint operations included in the consolidated financial statements was 129 (2021: 151). Part-time employees have been included on a pro-rata basis.

All in all, personnel expenses in 2022 totaled $5.7 billion (2021: $5.9 billion), of which $3.7 billion (2021: $3.8 billion) related to salaries (including social security contributions of approximately $529 million in 2022 and $560 million in 2021), $152 million (2021: $194 million) to pensions, and share-based compensation expense of $107 million in 2022 ($128 million in 2021). In 2022, approximately $211 million ($219 million in 2021) of personnel costs were capitalized within fixed assets.

[27] Related party transactions

In addition to the subsidiaries included in the consolidated financial statements, Linde plc is related, directly or indirectly, while carrying out its normal business activities, to other investments, joint ventures and associates. The business relationships with these companies are conducted under the same conditions as for non-related third parties. Related companies which are controlled by Linde plc or over which Linde plc may exercise significant influence are disclosed in the list of shareholdings, arranged by division.

The information about the remuneration of the Board of Directors and the Key Management Personnel is set out in Note 28.

Revenue With Related Parties

(Millions of dollars)	2022				2021			
	Other investments	Associates or joint ventures	Other related parties	Total	Other investments	Associates or joint ventures	Other related parties	Total
Revenue	$57	$214	$—	$271	$12	$183	$46	$241

Purchased Goods And Services From Related Parties

(Millions of dollars)	2022				2021			
	Other investments	Associates or joint ventures	Other related parties	Total	Other investments	Associates or joint ventures	Other related parties	Total
Goods and services purchased from related parties	$3	$582	$1	$586	$3	$316	$9	$328

Related persons are mainly the members of the Board of Directors. In 2022 and 2021, there were no material transactions between Linde plc and members of the Board of Directors or their family members which were outside the bounds of existing employment, service or appointment agreements or remuneration contracts.

Some members of Linde's Board of Directors hold similar positions in other companies. Linde has normal business relationships with virtually all of these companies. The sale and purchase of goods and services to and from these companies take place under the usual market conditions.

Receivables From And Payables To Related Parties

(Millions of dollars)	31 December 2022				31 December 2021			
	Other investments	Associates or joint ventures	Other related parties	Total	Other investments	Associates or joint ventures	Other related parties	Total
Receivables from related parties	$ 30	$81	–	$111	$10	$94	–	$104
Payables to related parties	$ 49	$42	–	$91	$14	$49	–	$63

There were no material charge-free guarantee agreements in place for associates or joint ventures on the reporting date, nor any material open purchase orders relating to joint ventures.

[28] Directors' Remuneration and Key Management Personnel Compensation

Directors Remuneration under Irish Companies Act

The following table discloses the remuneration for members of the Board of Directors of Linde plc for the current and preceding year as required under Irish Companies Act 2014.

(Millions of dollars)	2022	2021
Emoluments in respect of qualifying services [1]	$8	$4
Long-term incentive plans [2]	33	9
Gain on exercise of share options [3]	47	52
TOTAL EMOLUMENTS	**$88**	**$65**

(1) Represents the aggregate emoluments (including salary, fees, bonuses, expenses and estimated money value of other benefits received) for the period.
(2) Represents non-equity incentive plans and stock awards that have vested in the year.
(3) Represents gain on exercise of share options.

Key Management Personnel Compensation under IFRS

Key Management Personnel ("KMP") are defined as members of the Board of Directors of Linde plc and those persons who have the authority and responsibility for planning, directing, and controlling the activities, either directly or indirectly, of the company.

The following table discloses the compensation in relation to the KMP for the current and prior year.

(Millions of dollars)	**2022**	**2021**
Short-term employee benefits [1]	$23	$21
Post-employment benefits [2]	—	14
Other long-term benefits [3]	1	5
Share based compensation benefits [4]	28	28
Total benefits	**$52**	**$68**

(1) Primarily includes short-term cash compensation, including salary and bonuses, which were not deferred by the participant.
(2) Represents the increase in pension obligation to the plan participant. Reductions in obligations are not reflected within the table above.
(3) Primarily relates to short-term compensation which was elected to be deferred by the participant.
(4) Represents share-based compensation benefits accrued during the respective periods.

[29] Contingent liabilities and other financial commitments

Contingent Liabilities

(Millions of dollars)	**31/12/2022**	**31/12/2021**
Guarantees	$451	$359
Other contingent liabilities	31	35
TOTAL	**$482**	**$394**

Guarantee agreements

Contingent liabilities arise at Linde from guarantees, among other things.

Other contingencies

The Engineering business regularly enters into contracts with consortium partners to build turnkey industrial plants, under which the consortium partners assume joint and several liability to the customer for the total volume of the contract. There are clear rules as to how the liability should be split between the partners. There were no significant contingent liabilities associated with such contracts as of 31 December 2022 or 2021.

Litigation

Linde is subject to various lawsuits and government investigations that arise from time to time in the ordinary course of business. These actions are based upon alleged environmental, tax, antitrust and personal injury claims, among others. Linde has strong defenses in these cases and intends to defend itself vigorously. It is possible that the company may incur losses in connection with some of these actions in excess of accrued liabilities. Management does not anticipate that in the aggregate such losses would have a material adverse effect on the company's consolidated financial position or liquidity; however, it is possible that the final outcomes could have a significant impact on the company's reported results of operations in any given period. Significant matters are:

- During 2009, the Brazilian government published Law 11941/2009 instituting a new voluntary amnesty program ("Refis Program") which allowed Brazilian companies to settle certain federal tax disputes at reduced amounts. During 2009, the company decided that it was economically beneficial to settle many of its outstanding federal tax disputes and such disputes were enrolled in the Refis Program, subject to final calculation and review by the Brazilian federal government. The company recorded estimated liabilities based on the terms of the Refis Program. Since 2009, Linde has been unable to reach final agreement on the calculations and initiated litigation against the government in an attempt to resolve certain items. Open issues relate to the following matters: (i) application of cash deposits and net operating loss carryforwards to satisfy obligations and (ii) the amount of tax reductions available under the Refis Program. It is difficult to estimate the timing of resolution of legal matters in Brazil.

- At 31 December 2022, the most significant non-income and income tax claims in Brazil, after enrollment in the Refis Program, relate to state VAT tax matters. The total estimated exposure relating to such claims, including interest and penalties, as appropriate, is approximately $155 million. Linde has not recorded any liabilities related to such claims based on management judgments and opinions of outside counsel.

During 2023, the Brazilian Supreme Court issued a decision related to a federal tax matter that the company previously disclosed as a contingency. As a result of this decision, the company recorded a reserve for the year ended 31 December 2022 based on its best estimate of potential settlement (see Note 9). Because litigation in Brazil historically takes many years to resolve, it is very difficult to estimate the timing of resolution of these matters; however, it is possible that certain of these matters may be resolved within the near term. The company is vigorously defending against the proceedings.

- On 1 September 2010, CADE (Brazilian Administrative Council for Economic Defense) announced alleged anticompetitive activity on the part of five industrial gas companies in Brazil and imposed fines. Originally, CADE imposed a civil fine of R$2.2 billion Brazilian reais ($417 million) on White Martins, the Brazil-based subsidiary of Linde Inc. The fine was reduced to R$1.7 billion Brazilian reais ($322 million) due to a calculation error made by CADE. The fine against White Martins was overturned by the Ninth Federal Court of Brasilia. CADE appealed this decision, and the Federal Court of Appeals rejected CADE's appeal and confirmed the decision of the Ninth Federal Court of Brasilia. CADE has filed an appeal with the Superior Court of Justice and a decision is pending.

  Similarly, on 1 September 2010, CADE imposed a civil fine of R$237 million Brazilian reais ($45 million) on Linde Gases Ltda., the former Brazil-based subsidiary of Linde AG, which was divested to MG Industries GmbH on 1 March 2019 and with respect to which Linde provided a contractual indemnity. The fine was reduced to R$188 million Brazilian reais ($36 million) due to a calculation error made by CADE. The fine against Linde Gases Ltda. was overturned by the Seventh Federal Court in Brasilia. CADE appealed this decision, and the Federal Court of Appeals rejected CADE's appeal and confirmed the decision of the Seventh Federal Court of Brasilia. CADE filed an appeal with the Superior Court of Justice, and a final decision is pending.

  Linde has strong defenses and is confident that it will prevail on appeal and have the fines overturned. Linde strongly believes that the allegations of anticompetitive activity against our current and former Brazilian subsidiaries are not supported by valid and sufficient evidence. Linde believes that this decision will not stand up to judicial review and deems the possibility of cash outflows to be extremely unlikely. As a result, no reserves have been recorded as management does not believe that a loss from this case is probable.

- On and after 23 April 2019 former shareholders of Linde AG filed appraisal proceedings at the District Court (Landgericht) Munich I (Germany), seeking an increase of the cash consideration paid in connection with the previously completed cash merger squeeze-out of all of Linde AG's minority shareholders for €189.46 per share. Any such increase would apply to all 14,763,113 Linde AG shares that were outstanding on April 8, 2019, when the cash merger squeeze-out was completed. The period for plaintiffs to file claims expired on July 9, 2019. The company believes the consideration paid was fair and that the claims lack merit, and no reserve has been established. We cannot estimate the timing of resolution.

- On 30 December 2022, the Russian Arbitration Court of the St. Petersburg and Leningrad Region issued an injunction preventing (i) the sale of any shares in Linde's subsidiaries and joint ventures in Russia, and (ii) the disposal of any of assets in those entities exceeding 5% of the relevant company's overall asset value. The injunction is not expected to have any impact on the operations of Linde's Russian businesses. The injunction was requested by RusChemAlliance (RCA) as a preliminary measure to secure payment of an eventual award under an arbitration proceeding RCA intends to file against Linde Engineering for alleged breach of contract under the agreement to build a gas processing plant in Ust Luga, Russia entered into between a consortium of Linde Engineering and Renaissance Heavy Industries LLC, and RCA on 7 July 2021. Performance of the agreement was lawfully suspended by Linde Engineering on 27 May 2022 in compliance with applicable sanctions and in accordance with a decision by the sanctions authority in Germany. On 1 March 2023, RCA filed a claim in St. Petersburg against Linde GmbH for recovery of advance payments under the agreement ("Russian Claim"). On 4 March 2023, in accordance with the dispute resolution provisions of the agreement, Linde GmbH filed a notice of arbitration with the Hong Kong International Arbitration Centre ("HKIAC") against RCA to claim that (i) RCA has no entitlement to payment, (ii) RCA's Russian claim is in breach of the arbitration agreement, and (iii) RCA must compensate Linde for the losses and damages caused by the injunction. Additionally, Linde GmbH filed for and on 17 March 2023 obtained an anti-suit injunction from a Hong Kong court against RCA directing RCA to seek a stay of the Russian Claim and ordering it to resolve any disputes in accordance with HKIAC arbitration.

  As of 31 December 2022, Linde had approximately $1.2 billion of advance payments recorded in contract liabilities related to engineering projects with RCA which are subject to sanctions and have been suspended accordingly as of 27 May 2022. Contract liabilities are typically recognized as revenue as performance obligations are satisfied under contract terms. Linde impaired its Russian gas and engineering business entities as of 30 June 2022 (see Note 7), and the remaining investment value of its Russia subsidiaries is immaterial. As such, the obligation to satisfy any residual contract liabilities is not expected to have an adverse impact on earnings, but may result in net cash outflows.

It is difficult to estimate the timing of resolution of this matter. The company intends to vigorously defend its interests in both the injunction and arbitration proceedings.

[30] Auditors' fees and services

	2022			2021		
(Millions of dollars)	**PwC Ireland**	**Other PwC network firms**	**Total**	**PwC Ireland**	**Other PwC network firms**	**Total**
Audit (including expenses)	$ 0.6	$ 18.3	$ 18.9	$ 0.6	$ 19.0	$ 19.6
Other assurance services	0.1	—	0.1	0.1	0.3	0.4
Tax advisory services	—	0.1	0.1	—	0.1	0.1
Other services	—	—	—	—	—	—
TOTAL	**$ 0.7**	**$ 18.4**	**$ 19.1**	**$ 0.7**	**$ 19.4**	**$ 20.1**

[31] Interest in other entities

The information below contains information on the principal subsidiaries, associates and joint ventures in which the company has an interest at 31 December 2022. A full list of subsidiaries, associates and joint ventures will be annexed to the Annual Return to be filed with the Irish Registrar of Companies.

Principal subsidiaries included in the consolidated financial statements in accordance with IFRS 10:

Company Name	Registered Office	Country	Business Activity	Participating Interest in Percent	Share Class
Commercium Immobilien- und Beteiligungs-GmbH	Dr.-Carl-von-Linde-Strasse 6-14, 82049 Pullach, Germany	Germany	Holding Company	100	Ordinary shares
Linde GmbH	Dr.-Carl-von-Linde-Strasse 6-14, 82049 Pullach, Germany	Germany	Gases and Engineering Company	100	Ordinary shares
Linde Finance B.V.	43 Fitzwilliam Square, Dublin 2, IE D02 K792, Ireland	Netherlands	Financial Services	100	Ordinary shares
Linde Holdings Netherlands B.V.	Havenstraat 1, Schiedam, 3115HC, Netherlands	Netherlands	Holding Company	100	Ordinary shares
LindeGas Holding Sweden AB	Agavägen 1, Lidingö, 181 81, Sweden	Sweden	Holding Company	100	Ordinary shares
BOC HELEX	Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom	United Kingdom	Finance and Administrative Services	100	Ordinary shares
LINDE INVESTMENTS No.1 LIMITED	Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom	United Kingdom	Holding Company	100	Ordinary shares

LINDE UK HOLDINGS LIMITED	Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom	United Kingdom	Holding Company	100	Ordinary shares
The BOC GROUP LIMITED	Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom	United Kingdom	Holding Company	100	Ordinary shares
LINDE NORTH AMERICA HOLDINGS LIMITED	Forge, 43 Church Street West, Woking, Surrey, GU21 6HT, United Kingdom	United Kingdom	Holding Company	100	Ordinary shares
LINDE GAS & EQUIPMENT INC.	251 Little Falls Drive, Wilmington, Delaware 19808	United States	Industrial and specialty gases	100	Ordinary shares
Linde Inc.	251 Little Falls Drive, Wilmington, Delaware 19808	United States	Industrial and specialty gases	100	Ordinary shares
White Martins Gases Industriais Ltda.	Avenida Pastor Martin Luther King jr., nº 126,Bloco 10, Ala C, Sala 602, Del Castilho, Rio De Janeiro, 20.760-005	Brazil	Industrial and specialty gases	100	Ordinary shares
Linde Korea Co., Ltd.	6F, M Tower, 8 Gumi-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea	South Korea	Industrial and specialty gases	100	Ordinary shares

Noncontrolling Interests

The total noncontrolling interest as at 31 December 2022 and 31 December 2021 was $1,667 million and $1,769 million, respectively.

Principal investments accounted for using the equity method in accordance with IAS 28

See Note 13 for investments accounted for using the equity method in accordance with IAS 28 that require disclosure.

[32] Events after the reporting date

Acquisition of nexAir, LLC

On 5 January 2023, Linde completed the acquisition of nexAir, LLC, a gas distribution and welding supply company in the United States, in order to further expand the company's geographic footprint into different regions. Prior to completion of the acquisition, Linde held a 23% interest in nexAir, LLC. Pursuant to a signed purchase agreement between Linde and nexAir, LLC, Linde purchased the remaining 77% ownership interest in an all cash transaction with a total purchase price of $859 million, or $804 million net of cash acquired. nexAir, LLC, had annual sales of approximately $400 million in 2022.

Intercompany Reorganization

On 18 January 2023, shareholders approved the company's proposal for an intercompany reorganization that resulted in the delisting of its ordinary shares from the Frankfurt Stock Exchange. Following the completion of legal and regulatory approvals, Linde completed the intercompany reorganization and delisting process, and its ordinary shares were delisted from the Frankfurt Stock Exchange on 1 March 2023.

On 1 March 2023, in connection with the shareholder approved intercompany reorganization that resulted in the delisting of old Linde plc from the New York Stock Exchange (NYSE) and the Frankfurt Stock Exchange (FSE), and the subsequent relisting of new Linde plc to the NYSE, Linde shareholders automatically received one share of the new holding company, listed on the NYSE in exchange for each share of Linde plc that was previously owned. The company issued 490,766,972 new Linde shares. Linde plc's historical treasury shares were immediately canceled which resulted in an approximately $15 billion decrease in treasury shares and retained earnings in equity attributable to shareholders.

Dividends After Year End

On 28 February 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the first quarter of 2023 (the “Q1 Dividend”). The Q1 Dividend was payable on 28 March 2023 to shareholders of record on 14 March 2023.

On 24 April 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the second quarter of 2023 (the “Q2 Dividend”). The Q2 Dividend was payable on 16 June 2023 to shareholders of record on 2 June 2023.

On 24 July 2023, the directors of Linde plc declared an interim dividend of $1.275 per share for the third quarter of 2022 (the “Q3 Dividend”). The Q3 Dividend is payable on 19 September 2023 to shareholders of record on 5 September 2023.

Own Shares

From the period 1 January 2023 through 30 June 2023, an additional 5,221 thousand ordinary shares were purchased by the company for total consideration of $1,802 million, or an average price of $345.06 per share.

Other Developments

In February 2023, Linde repaid $500 million of 2.70% notes that became due.

In April 2023, Linde repaid €650 million of 2.00% notes and £300 million of 5.875% notes that became due.

In June 2023, Linde issued €500 million of 3.625% notes due in 2025, €750 million of 3.375% notes due in 2029 and €650 million of 3.625% notes due in 2034.

[33] Date of approval of the financial statements

The financial statements of Linde plc for the year ended 31 December 2022 were authorized for issue by the Board of Directors on 28 July 2023.