UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 001-35370

Luxfer Holdings PLC

(Exact Name of Registrant as Specified in Its Charter)

England and Wales	**98-1024030**
State or Other Jurisdiction of Incorporation or Organization	I.R.S. Employer Identification No.

8989 North Port Washington Road, Suite 211,
Milwaukee, WI, 53217

(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code: +1 **414-269-2419**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Symbol	Name of each exchange on which registered
Ordinary Shares, nominal value £0.50 each	LXFR	New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to section 13 or 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Form 10-K or any amendment to the Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See definition of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.:

Large accelerated filer	☐	Accelerated filer	☒	Emerging growth company	☐
Non accelerated filer	☐	Smaller reporting company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of ordinary shares held by non-affiliates of the Registrant was approximately $383,104,927 based on the last reported sale price of such securities as of July 2, 2023, the last business day of the Registrant's most recently completed second quarter.

The number of shares outstanding of Registrant's only class of ordinary stock on December 31, 2023, was 26,834,628.

DOCUMENTS INCORPORATED BY REFERENCE

Parts of the Registrant's definitive proxy statement for its annual general meeting to be held on June 6, 2024, to be filed no later than 120 days after the end of the fiscal year covered by this annual report, are incorporated by reference in this Form 10-K in response to Part III, Items 10, 11, 12, 13 and 14.

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PART I

Item 1. Business

Background and business overview

Luxfer Holdings PLC ("Luxfer," "the Company," "we," "our") is a global industrial company innovating niche applications in materials engineering. Luxfer focuses on value creation by using its broad array of technical know-how and proprietary technologies to help create a safe, clean and energy-efficient world. Luxfer's high-performance materials, components and high-pressure gas containment devices are used in defense, first response and healthcare, transportation and general industrial applications.

We focus primarily on product lines related to magnesium alloys, zirconium chemicals and carbon composites. We have a long history of innovation derived from our strong technical expertise, and we work closely with customers to apply solutions to their most demanding product needs. Our proprietary technologies and technical expertise, coupled with strong customer service and global presence, provide competitive advantages and have established us as leaders in the global markets we serve. We believe that we have leading positions in key product areas, including magnesium alloys and powders for aerospace, military, and commercial applications, zirconium chemicals for automotive catalytic converters and industrial catalysis, high-pressure composite cylinders for self-contained breathing apparatus, as well as transport and storage of compressed natural gas ("CNG") and hydrogen, photo-engraving plates, and a wide variety of other uses.

We have a global presence, operating 12 manufacturing plants in the U.S., the U.K., Canada and China, one of which relates to discontinued operations, and we also have a joint venture in Japan. We employ approximately 1,400 people, including temporary staff, of which fewer than 50 support our discontinued operations. In 2023, our net sales from continuing operations were $405.0 million (2022: $423.4 million, 2021: $374.1 million), and our net loss from continuing operations was $2.6 million (2022: $32.0 million income, 2021: $30.0 million income).

Luxfer operates in three business segments - Elektron, Gas Cylinders and Graphic Arts.

Elektron Segment

Our Elektron Segment focuses on specialty materials based primarily on magnesium and zirconium. In 2023, sales from our Elektron Segment represented approximately 46% (2022: 47%, 2021: 42%) of our consolidated net sales from continuing operations. Our top ten customers represented 50% of segment sales. No singular customer represented 10% or more of our Elektron Segment sales.

Key product lines include:

- Advanced lightweight, corrosion-resistant and heat- and flame-resistant magnesium alloys for use in aerospace, healthcare and oil and gas applications.
- Magnesium powders used in countermeasure flares that protect aircraft from heat-seeking missiles and also for heating pads for self-heating meals used by the military and emergency-relief agencies.
- High-performance zirconium-based materials and oxides used as catalysts and in the manufacture of advanced ceramics, fiber-optic fuel cells, pharmaceuticals and many other performance products.

Gas Cylinders Segment

Our Gas Cylinders Segment manufactures and markets specialized, highly-engineered cylinders using carbon composites and aluminum alloys. In 2023, sales from our Gas Cylinders Segment represented approximately 46% (2022: 43%, 2021: 48%) of our consolidated net sales. Our top ten customers represented 59% of segment sales. Three customers represented 16%, 15% and 11% respectively, of our Gas Cylinders Segment sales. No other singular customer represented greater than 10% of Gas Cylinders Segment sales.

Key product lines include:

- Carbon fiber composite cylinders for self-contained breathing apparatus (SCBA), used by firefighters and other emergency-responders. Our products are also used by scuba divers and personnel in potentially hazardous environments, such as mines.
- Carbon fiber composite cylinders for compressed natural gas (CNG) and hydrogen containment in alternative fuel (AF) vehicles.
- Cylinders used for the containment of oxygen and other medical gases used by patients, healthcare facilities and laboratories.

Our U.S. aluminum gas cylinder business was sold in March 2021, our Superform U.K. business was sold in September 2021, and we expect our Superform U.S. business to be sold within the next twelve months. As a result, only our Superform U.S. business remains on the balance sheet as held-for-sale at December 31, 2023 and December 31, 2022. Results from the three operations were disclosed as discontinued in the income statement for the corresponding years' of ownership.

Graphic Arts Segment

Our Graphic Arts Segment is a global leader in magnesium photo-engraving plates, engraving metals and etching chemicals. In 2023, sales from our Graphic Arts Segment represented approximately 8% (2022: 9%, 2021: 11%) of our consolidated net sales. Our top ten customers represented 38% of segment sales. No singular customer represented 10% or more of our Graphic Arts Segment sales.

Key product lines include:

- Magnesium, copper, and zinc photo-engraving plates for graphic arts and luxury packaging.
- Developer solutions to aide the engraving process.
- Solid wrought magnesium slab and sheet.

We are currently in the process of executing an accelerated and expanded strategic review process, the initial conclusions of which have determined that the Graphic Arts business no longer aligns with Luxfer's value proposition, hence we are initiating a sales process with the intention of divesting this business in 2024.

All information included within this section relates to continuing operations, unless otherwise stated.

Financial Information about Segments and Geographic Areas

See Note 17 ("Segment Information") to our consolidated financial statements for further information regarding our operating segments and our geographic areas.

Suppliers and raw materials

Margin pressure resulting from supply chain challenges easing

We have been experiencing supply chain challenges, which has resulted in higher cost of certain raw materials. In our supply chain, previously described challenges caused by the disruption in our U.S. domestic magnesium supply continued, and overall competitive cost pressures persisted. These issues have been particularly acute in our Graphic Arts segment, where the ability to pass through higher costs to our customers has proved to be constrained. In recent months however, the purchase price of Magnesium has been falling, which will result in lower input cost in 2024. We have implemented elements of our strategic review in Graphic Arts to reduce costs, including a headcount reduction program. We are also pursuing further actions to improve margins and maintain strong cash flow across the business.

In the majority of cases we are able to pass through inflationary costs to our customers, although we are still constrained by a small number of contracts, particularly in the Gas Cylinders segment, the longest running of which is not subject to renewal until mid-2024. Currently, our expectation is that the adverse impact of material availability / inflation, energy cost inflation and labor and transport constraints will lessen in 2024 and when costs fall we will in some cases need to reduce prices to customers. However the outlook remains highly uncertain with both the size and timing of future costs difficult to predict.

Elektron Segment

Key raw materials used by our Elektron Segment are magnesium, zircon sand and rare earths.

The world demand for magnesium is around one and a half million metric tons per year. China provides about 80% of the world supply. Production outside of China, however, is significant, including, Dead Sea Magnesium in Israel, RIMA Industrial in Brazil, and smaller producers in Turkey and Russia. We historically used only U.S.-sourced materials for our products sold to the U.S. military, for which U.S. sourcing is mandatory. However, given the current force majeure declared by our U.S. supplier of magnesium, we have qualified non-U.S.-sourced material for sale to the U.S. military.

Given the current force majeure declared by U.S. Magnesium LLC, we do not know when or if we will be able to recommence the magnesium ingot purchases with this supplier. We generally purchase raw materials from suppliers on a spot basis under previously contracted terms and conditions and have been able to source magnesium from alternate suppliers.

We purchase and process zircon sand, which is found in heavy-minerals sand, titanium dioxide and other products. Global production of zircon sand is estimated at approximately 1.5 million metric tons. We source premium-grade zircon sand from suppliers in South Africa, Senegal, Indonesia and Australia. We also purchase intermediate zirconium chemicals from suppliers in China. The level of these purchases is based on a number of factors, including required properties and relative market prices.

There are 17 rare earth metals that are commonly found in nature. Usually mixed together with other mineral deposits, these rare earths exhibit magnetic and light-emitting properties that make them invaluable to high-technology manufacturers. These rare earth metals are used as ingredients in our zirconium chemical and magnesium alloy products. Our largest rare earth requirement is cerium, which we use in automotive catalysis compounds because of its unique oxygen-storage capabilities.

Gas Cylinders Segment

Key raw materials used in the Gas Cylinders Segment include high-strength carbon fiber and aluminum. Our main carbon fiber suppliers include Toray and Mitsubishi. In recent years, the carbon fiber has experienced periods of tight supply conditions due to increased demand for commercial aerospace, military and clean energy applications. Over time, we have built relationships with our suppliers, providing them predictable requirements and annual contracts that help to ensure procurement of our required volume of carbon fiber.

In 2023, we purchased approximately 45% of our aluminum from Rio Tinto Alcan and its associated companies. Aluminum represented approximately 30% of Gas Cylinders Segment's raw material costs in 2023. The price of aluminum, and carbon fiber, has been volatile in the past and increased substantially in 2022 and continued through 2023. While we generally have passed through changes in input costs to our customers, some of our Gas Cylinders Segment contracts contain look-back provisions that result in a lag to our ability to adjust pricing for changes in input costs.

Graphic Arts Segment

The key raw material used in the Graphic Arts segment is magnesium. Magnesium purchases in the last two years have been impacted by a sharp rise in prices, as detailed above, which has contributed to the loss in market share outside of the U.S. and reduced performance of the segment. Consistent with our Elektron segment, magnesium used in U.S. production was previously purchased exclusively from the U.S. but since the force majeure declared by our U.S. supplier, purchases have been sourced from a number of non-U.S. sources. Magnesium prices for U.S. production peaked in 2022 at approximately four times the historical price before falling back to around one-and-a-half times in recent months. Due to the nature of the production process, the purchase price of magnesium can take up to 12 months to be fully recognized in the income statement and the business is expected to benefit from these lower costs throughout 2024.

Our end-markets

Key end-markets for Luxfer products fall into three categories:

Transportation (29% of 2023 sales): Many Luxfer products serve a growing need to improve and safeguard the environment in the field of transportation, including our (i) lightweight, high-pressure carbon composite cylinders that contain compressed natural gas and hydrogen; (ii) zirconium-based products that reduce automotive and other emissions; and (iii) lightweight magnesium alloys used in fuel-efficient aerospace and automotive designs.

Area of Focus	Product	End-market drivers
Alternative fuels	• AF cylinders and systems • Bulk gas storage transportation cylinders and systems	• Clean energy initiatives • Availability and pricing of natural gas and hydrogen • Increasing adoption of hydrogen as fuel source for public transport, particularly in Europe • Growing availability of CNG filling infrastructure
Environmental catalysis (cleaning of exhaust emissions)	• Zirconium compounds used in automotive catalytic converters	• Legislation and regulation aimed at reducing emissions from internal combustion engines, including gasoline particulate filtration • Pricing of zirconium compounds compared to the use of precious metals • Increasing demand for gasoline-electric hybrid vehicles
Civil and military aerospace	• Elektron® aerospace alloys in cast, extruded, and sheet form	• Growth in the global aircraft market • Emphasis on reducing the weight of aircraft components to increase fuel efficiency

Defense, First Response & Healthcare (41% of 2023 sales): Luxfer offers many products that help to protect people, equipment and property in hazardous conditions, conflicts and emergencies. These products include magnesium powders used for countermeasure flares that defend aircraft against heat-seeking missiles, flameless ration heaters used in meals Ready-to-Eat, cylinders used in SCBA equipment for firefighters and other emergency service personnel, and chemical detection and decontamination products. Other products include lightweight gas cylinders for containment of medical and laboratory gases, zirconium powders for pharmaceutical products, magnesium materials for lightweight orthopedic devices, specialized magnesium alloys for the automotive industry, and zirconium materials for biomedical applications and dental implants.

Area of Focus	Product	End-market drivers
Life-support breathing apparatus	• Composite cylinders used in self-contained breathing apparatus ("SCBA")	• Increased awareness of importance of properly equipping firefighting services • Demand for lightweight products to upgrade from heavy all-metal cylinders • Periodic upgrade of new U.S. National Institute for Occupational Safety and Health (NIOSH) standards and natural replacement cycles • Asian and European fire services looking to adopt more modern SCBA equipment
Military countermeasure flares	• Ultra-fine magnesium powders for flares used to protect aircraft from attack by heat-seeking missiles	• Military combat and training exercises • Maintenance of countermeasures reserves (shelf-life restrictions)
Support of personnel in hazardous conditons	• Self-heating meals used by military personnel and emergency-relief agencies • Chemical detection and chemical decontamination kits	• Ensuring protection and well-being for military personnel and victims of natural disasters • Military combat and training
Medical gases	• Portable aluminum and composite cylinders	• Demand for lightweight products to upgrade from heavy all-metal cylinders • Growing trend to provide oxygen therapy in the home and to keep patients mobile
Orthopedics	• Magnesium sheets	• Improved mobility through use of easy-to-wear, lightweight braces and trusses
Pharmaceuticals	• MELsorb® material used in dialysis equipment and enterosorbents • Zirconium compounds as a base material for pharmaceutical applications	• New technologies to remove noxious elements from the body

General industrial (29% of 2023 sales): Our core technologies serve various industrial markets and applications. These products include zirconium-based compounds to purify drinking water and clean industrial exhausts; magnesium alloys shaped for use in various general engineering applications; and high-pressure gas cylinders used for high-purity specialty gases, beverage dispensing, scuba diving and performance racing. Our metal foil-stamping and embossing dies are used primarily for luxury packaging, labels and greeting cards. Our high-quality magnesium, copper, brass and zinc plates are ideal for these and other graphic applications.

Area of Focus	Product	End-market drivers
General engineering	• Magnesium billets, sheets, coil, tooling plates • Zirconium ceramic compounds for hard working components	• Need for components to operate in more extreme environments for longer periods, such as underground or in the ocean
Hydraulic fracturing or "fracking"	• Dissolvable SoluMag® magnesium alloy	• Onshore oil and gas exploration
Paper	• Bacote™ and Zirmel™, both formaldehyde-free insolubilizers that aid high-quality printing	• Elimination of toxic chemicals
Specialty gases	• Cylinders for transportation and / or storage of gases requiring high stability or purity	• Demand for electronics and semiconductors
Graphic arts	• Photo-engraving plates	• Luxury packaging as part of marketing high-end products

Our competitive advantages

Focus on innovation and product development for growing specialized end-markets. We continue to produce a steady stream of new products, including those developed in close collaboration with our customers.

Strong technical expertise and know-how. Using our expertise in metallurgy and material science, we specialize in advanced materials, developing products with superior performance to satisfy the most demanding requirements in the most extreme environments. Further, we benefit from the growth in the number of our patented products, including many of our alloys and compounds.

Diversified customer base with long-standing relationships. We put the customer at the heart of our strategy, and we have long-standing relationships with many of our customers, including global leaders in our key markets.

Luxfer Business System. The Luxfer Business System serves as a tool to realize growth potential embedded in our business. The system places emphasis on serving the customer and profitable growth, consisting of the following key themes:

- Commercial Excellence
- Lean Operations
- Innovation
- Sustainability
- People Excellence
- Strategy Deployment

Seasonality

Historically, we have shutdown periods at most of our manufacturing sites, during which we carry out maintenance work. Shutdowns typically last two weeks in the summer and one to two weeks around the year-end holidays, resulting in reduced levels of activity in the second half of the year compared to the first half. Third quarter and fourth quarter sales and operating profit can be affected by our own manufacturing site shutdowns and by shutdowns of various industrial customers. We also operate in various geographic areas that are susceptible to bad weather during winter months, such as Calgary, Canada, and various U.S. states. Bad weather can unexpectedly disrupt production and shipments from our manufacturing facilities, which can lead to reduced revenue and operating profit. Additionally, we manufacture products that are used in graphic arts and premium packaging, seasonal demand for which increases ahead of the year-end holidays.

Research and Development

Luxfer recognizes the importance of research in materials science and the need to develop innovative new products to meet future needs of customers and to grow sales and operating profit. Each year, we invest in the development of new products and processes directed towards our end-markets. Our product development projects also include utilizing skills of our wider commercial technical sales staff, manufacturing engineers and general management, many of whom are highly qualified scientists and engineers. A large proportion of senior sales and management time is spent overseeing development of products and working with customers on integrating our products and solutions into their product designs.

To provide customers with improving products and services, we invest in new technology and research and employ some of the world's leading specialists in materials science and metallurgy. Our engineers and metallurgists collaborate closely with our customers to design, develop and manufacture our products. We also co-sponsor ongoing research programs at major universities in the U.S., Canada and Europe. Thanks to the ingenuity of our own research and development teams, Luxfer has developed a steady stream of new products, most recently including:

- Soluble magnesium alloys, branded SoluMag®, for down-well oil and gas applications;
- Ultra-lightweight large composite cylinders, branded G-Stor™, for containment of CNG, hydrogen, helium and other gases;
- AF systems solutions for buses, trucks and bulk gas transportation;
- Zirconium catalysts for automotive end-use, including advances in gasoline particulate filtration used in hybrid vehicles;
- L7X® high-strength aluminum alloy and carbon composite gas cylinders;
- Luxfer ECLIPSE, a new carbon composite cylinders for firefighter self-contained breathing apparatus (SCBA);
- Unitized Group Ration - Express (UGR-E) heater meals developed to deliver hot meals to multiple soldiers in a combat or training environment; and
- Improved performance magnesium photoengraving plates including the recently-launched OptiMag®

We believe that our commitment to research and new product development, through dedicated resources and significant use of management's time, forms the core of Luxfer's growth potential. This commitment reflects our strategy of focusing on high-performance, value-added products and markets as well as leveraging our collaboration with universities. We invest in developing products for end-markets that we believe hold long-term growth potential.

Intellectual Property

Luxfer relies on a combination of patents, trade secrets, copyrights, trademarks, and proprietary manufacturing processes and design rights, together with non-disclosure agreements and technical measures, to establish and protect proprietary rights in our products. Our Elektron Segment holds key patents related to protected applications, including numerous aerospace alloys and magnesium-gadolinium alloys, as well as patents related to environmental applications, including water-treatment products and our specialized G4 process used to manufacture zirconium-cerium oxides for emissions-control catalysts. The Elektron Segment also has patented technology for magnesium-based flameless heater pads used to heat meals and beverages. Key patents held by our Gas Cylinders Segment relate to composites and alloys for pressurized hollow bodies. No individual patent or such intellectual property is considered material to any of our reporting segments.

In certain areas, we rely more heavily upon trade secrets and unpatented proprietary know-how than patent protection in order to establish and maintain our competitive advantage. We generally enter into non-disclosure and invention assignment agreements with our employees and subcontractors, as well as our customers and vendors.

Human Capital Management

The Company employed approximately 1,400 people as of December 31, 2023, fewer than 50 of whom relate to discontinued operations. Of the approximately 1,300 employees associated with continuing operations, approximately 700 are employed in the United States and 600 are employed internationally.

Attracting and retaining talent remains a challenge in the post-COVID landscape. To succeed in today's competitive labor market, Luxfer takes a proactive approach to human capital management by pursuing several priorities that we believe are critical in recruiting, retaining, motivating, and developing top talent. Such priorities include: (i) ensuring occupational health and safety; (ii) providing opportunities for professional growth and development; (iii) maintaining diverse and inclusive workplaces; and (iv) promoting financial, physical, and emotional well-being while trying to enhance the employee experience.

Our Board of Directors and Executive Leadership Team play a key role in setting our human capital management strategy and driving accountability for meaningful progress. Informed by data, our human capital management initiatives are supported by local leadership, with significant functional oversight by our local human resource teams. All Luxfer facilities collect data on employee retention, talent acquisition, training, and safety. Metrics are recorded quarterly on our internal scorecard and are reported to executive management regularly.

Occupational Health and Safety

Luxfer is committed to safeguarding the health and safety of our employees at work. We have well-defined health and safety policies and procedures that are reinforced by ongoing employee training. We conduct annual on-site audits to identify and mitigate environmental health and safety risks, as well as evaluate for compliance with all regulatory requirements and Luxfer policies. All functional business units report a mixture of leading and lagging metrics to assess health and safety performance, which are reviewed regularly by executive leadership and management. In fiscal year 2023, the Company had 4 Lost Time Accidents and an Incident Frequency Rate of 2.46 with no work-related fatalities.

Professional Growth and Development

Providing opportunities for professional growth and development is key to Luxfer's retention strategy. Luxfer proactively maintains talent and succession planning processes, including regular review by the Executive Leadership Team and reports to the Board of Directors. We operate leadership and management development programs, which provide a consistent approach to the development to the Company's future leaders and managers. With a multi-faceted curriculum, these programs assist with developing core competencies which include critical problem-solving, communication, management, and leadership skills. Luxfer also maintains training and development programs for employees at the workforce level, in addition to regular coaching and support from their supervisor and performance evaluations. To further support their career aspirations, employees can access Luxfer's online learning platform which offers over 180,000 courses, videos, and books designed to strengthen critical business, leadership, productivity, and computer software skills.

Diverse and Inclusive Workplaces

The professional conduct of our employees furthers the Company’s mission, promotes productivity, minimizes disputes, and enhances our reputation. As such, the Company is committed to creating and maintaining a diverse, global workforce that provides fair and equitable opportunities, thereby advancing Luxfer’s innovation culture and customer first values. With continued focus on diversity and equity, Luxfer’s diversity initiatives include, but are not limited to, practices and policies on recruitment and selection, including targeted sourcing of personnel from diverse backgrounds; compensation and benefits; professional development and training; advancement opportunities; and the ongoing development of a diverse and inclusive work environment. All Luxfer personnel are required to complete a variety of anti-harassment, non-discrimination, diversity, and unconscious bias trainings annually. Luxfer’s talent acquisition teams and hiring managers undergo additional training to ensure that a diverse slate of candidates is considered for all job openings. Further, Luxfer monitors the composition of its current workforce for diversity, age, and gender demographics. This data is used to enhance employment and recruitment practices and is continually improved to ensure that a diverse and talented workforce is maintained.

Financial, Physical, and Emotional Well-Being

Fair Wages and Competitive Benefits: Luxfer offers competitive base pay and, depending on position, variable incentive pay associated with both individual and Company performance. Full-time employees and, in some cases, part-time employees who have met the minimum hours of service requirement are eligible to participate in various retirement savings plans, such as the Company’s 401(k) defined contribution plan in the U.S. and various pension plans available to U.K. employees. We also offer paid time off, group medical, dental, and vision plans, in addition to various life, disability and paid family and sick leave options, which vary by jurisdiction.

Employee Share Plans: Luxfer encourages participation in its U.S. Employee Stock Purchase Plan (ESPP) and U.K. Share Incentive Plan (SIP), which provide employees an opportunity to become Luxfer shareholders at a reduced price. Under the ESPP, U.S. employees can purchase Company stock at a 15% discount through payroll deductions. Under the SIP, U.K. employees can purchase company stock through payroll deductions, and, in turn, the Company matches one free share per every two shares purchased.

Fitness and Wellness Programs: Luxfer is proud to offer several optional fitness and wellness programs and healthy living incentives to our employees. Our Employee Healthy Lifestyle Program is available to U.S. employees and offers partial reimbursement for certain gym and fitness center memberships, weight loss programs, and group exercise classes. U.S. employees are also eligible to participate in a smoking cessation program through which employees who complete a 90-day program are rewarded with lower insurance rates.

Emotional Well-Being: We support the social and emotional health of our employees by providing access to wellness clinics and funded mental health counseling services. As a part of Luxfer’s group medical insurance plan, U.S. employees have convenient access to live video visits with a board-certified doctors or licensed therapists. Luxfer also offers access to the Employee Assistance Program, which connects employees and their families with credentialed counselors, free of charge, to provide a variety of work-life services and resources for family matters, including legal assistance, financial budgeting, and more.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q , Current Reports on Form 8-K and any exhibits or amendments to such are made available, free of charge, on our website at http://www.luxfer.com as soon as reasonably practicable after we electronically file such reports with, or furnish them to, the Securities and Exchange Commission ("SEC"). Information on our website is not incorporated by reference herein and is not made a part of this report.

Financial and other material information regarding the Company is routinely posted and accessible on our website at http://www.luxfer.com/investors.

Item 1A. Risk Factors

The risks described below are not the only risks facing us. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial may also materially and adversely affect our business, financial condition or results of operations. See also "Information Regarding Forward-Looking Statements" for certain warnings regarding forward-looking information contained in this document.

Economic and Industry risks

We depend on certain end-markets, including automotive, alternative fuels, self-contained breathing apparatus ("SCBA"), aerospace, defense, healthcare, oil and gas and printing and paper. An economic downturn, or regulatory changes, in any of those end-markets, could reduce sales and profit margins on those end-markets.

We have significant exposures to certain end-markets, including some end-markets that are cyclical in nature or subject to high levels of regulatory control, including automotive, SCBA, aerospace and defense. Dependence of either of our segments on certain end-markets is even more pronounced.

To the extent that any of these cyclical end-markets are in decline, at a low point in their economic cycle, or subject to regulatory change, sales and margins on those sales may be adversely affected. It is possible that all or most of these end-markets could be in decline at the same time, i.e. during an economic downturn. Any significant reduction in sales could have a material adverse impact on our results of operations, financial position and cash flows.

Our global operations expose us to economic conditions, potential tax costs, political risks and specific regulations or restrictions in the countries in which we operate, which could have a material adverse impact on our results of operations, financial position and cash flows.

We derive our sales and earnings from operations in many countries and are subject to risks associated with doing business internationally. We have wholly-owned operations in the U.S., the U.K., Canada and China, as well as a joint venture in Japan. Doing business in different countries has risks, including the potential for adverse changes in the local, social, political, financial or regulatory climate, difficulty in staffing and managing geographically diverse operations, and the costs of complying with a variety of laws and regulations. For example, the Russian invasion of Ukraine and ongoing military conflict which commenced on February 24, 2022, has resulted in massive displacement of the Ukrainian population and huge disruption to its economy. Wide ranging sanctions have been imposed on the Russian Federation by the international community, targeting individuals, banks, businesses, funds transfers and imports and exports and are having a significant impact on Russia's economy as well as on international businesses active in the region. The impact on Luxfer in 2022 and 2023 was not significant as we have no direct operations in the region, and our sales to Russia and Ukraine combined typically represent less than one percent of total revenue by destination. Furthermore, neither country is a critical supplier of our raw material needs, and whilst we continue to source magnesium from Russia, a major global exporter, we are also able to source the metal from various alternative locations, including China, Israel, Turkey and the United States. This is also evident in the current war in the Middle East that is causing macro-economic disruption which could affect the Company and/or our supply chain, business partners or customers.

Due to the fact we have operations in many countries, we are also liable to pay taxes in many fiscal jurisdictions. Our tax burden depends on the interpretation of local tax regulations, bilateral or multilateral international tax treaties and the administrative doctrines in each jurisdiction. Changes in these tax regulations may increase our tax burden, or otherwise affect our accounting for taxes. For example, in March 2021, the U.K. government announced an increase in the statutory rate of Corporation tax from the current 19% to 25%, which became effective in April 2023, and is expected to increase the future tax burden on earnings from our U.K. operations.

The principal markets for our products are located in North America, Europe and Asia, and any financial difficulties experienced in these markets may have a material adverse impact on our businesses. For example, the maturity of some of our markets, could require us to increase sales in developing regions, which may involve greater economic and political risks. We cannot provide any assurances that we will be able to expand sales in these regions. Any of these factors could have a material adverse impact on our results of operations, financial position and cash flows.

Our operations rely on a number of large customers in certain areas of our business, and the loss of any of our major customers could negatively impact our results of operations.

If we fail to maintain our relationships with our major customers, or fail to replace lost customers, or if there is reduced demand from our customers or for products produced by our customers, such failures or reduced demand could materially reduce our sales. In addition, we could experience a reduction in sales if any of our customers fail to perform or default on any payment pursuant to our contracts with them. Long-term relationships with customers are especially important for suppliers of intermediate materials and components such as ourselves. We often work closely with customers to develop products that meet particular specifications as part of the design of a product intended for an end-user market. The bespoke nature of many of our products could make it difficult to replace lost customers. Our top 10 customers accounted for approximately 39% of our net sales in 2023. Any significant reduction in sales or customer payment default could have an adverse material impact on our results of operations, financial position and cash flows.

We depend upon our larger suppliers for a significant portion of our raw materials, and a loss of one of these suppliers, or a significant supply interruption could negatively impact our financial performance.

We rely, to varying degrees, on major suppliers for some of the principal raw materials of our engineered products, including aluminum, zirconium and carbon fiber.

We generally purchase raw materials from suppliers on a spot basis under standard terms and conditions. We also enter into supply contracts with Rio Tinto Alcan for a substantial portion of our aluminum requirements. In addition, we have supply contracts in place with U.S. Magnesium for raw material purchases of magnesium ingot for both military and commercial applications, although since entering force majeure in 2021, deliveries reduced up until late 2022, when they ceased completely. The current expectation is that they will not recommence until the end of 2024. We successfully secured and qualified magnesium from alternative sources to meet requirements for both military and commercial applications for 2023 and into 2024.

An interruption in the supply of essential raw materials used in our production processes or an increase in the costs of raw materials due to market shortages, supplier financial difficulties, government quotas or natural disturbances, could significantly affect our ability to provide competitively priced products to customers in a timely manner. For example, the significant increase in demand for materials and energy has resulted in significant constraints on availability of key inputs such as magnesium, aluminum and energy supplies with a consequent spike in prices. In the event of a significant interruption in the supply of any materials used in our production processes, or a significant increase in their prices, we may have to purchase these materials from alternative sources, build additional inventory of raw materials, increase our prices, reduce our margins or possibly fail to fill customer orders by deadlines required in contracts, which could result in, amongst other things, contractual penalties. We can provide no assurance that we would be able to obtain replacement materials quickly on similar terms or at all. Failure to maintain relationships with key suppliers or to develop relationships with alternative suppliers could have a material adverse effect on our results of operations, financial position and cash flows.

In 2021 we were faced with two critical suppliers of magnesium and zirconium respectively declaring force majeure, of which the former remains in place. We have been successful in securing alternative sources of supply for key material inputs affected by force majeure, although typically at an increased cost.

We are exposed to fluctuations in the costs of the raw materials that are used to manufacture our products, and such fluctuations could lead us to incur unexpected costs and could affect our margins and / or working capital requirements.

Fluctuations in the costs of raw materials could affect margins and working capital requirements in the businesses in which we use them, see ITEM 7A. We cannot always pass on cost increases or increase our prices to offset these cost increases immediately or at all, whether because of fixed-price agreements with customers, competitive pressures that restrict our ability to pass on cost increases or increase prices, or other factors. It can be particularly difficult to pass on cost increases or increase prices in product areas such as gas cylinders, where competitors offer similar products made from alternative materials, such as steel, if those materials are not subject to the same cost increases. Higher prices necessitated by large increases in raw material costs could make our current or future products unattractive compared to competing products made from alternative materials that have not been so affected by raw material cost increases, or compared to products produced by competitors who have not incurred such large increases in their raw material costs.

If, for example, the cost of aluminum or carbon fiber were to rise, we may not be able pass those cost increases on to our customers or manage the exposure effectively through hedging instruments. From time to time we use derivative financial instruments to hedge our exposures to fluctuations in aluminum costs. Although it is our treasury policy to enter into these transactions only for hedging and not for speculative purposes, we are exposed to market risk and credit risk with respect to the use of these derivative financial instruments, see ITEM 7A.

We are not dependent on any one supplier for our primary raw materials, but the business could be impacted by supply constraints. If, in the future, we are unable to obtain sufficient amounts of material on a timely basis, we may not be able to obtain raw materials from alternate sources at competitive prices. In addition, interruptions or reductions in our supply of raw materials could make it difficult to satisfy our customers' delivery requirements, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Changes in foreign exchange rates could reduce profit margins on our sales and reduce the reported sales of our non-U.S. operations and have a material adverse effect on our results of operations.

We conduct a large portion of our commercial transactions, purchases of raw materials and sales of goods in various countries and regions, including the U.S., the U.K., continental Europe, Australia and Asia. Our manufacturing operations based in the U.S. and Asia usually purchase raw materials and sell goods denominated in their local currency, but our manufacturing operations in the U.K. often purchase raw materials and sell products in different currencies. Changes in the relative values of currencies can decrease the profits of our subsidiaries when they incur costs in currencies that are different from the currencies in which they generate all or part of their revenue. These transaction risks principally arise as a result of purchases of raw materials in U.S. dollars, coupled with sales of products to customers in euros. This impact is most pronounced in our exports to continental Europe from the U.K. In 2023, our U.K. operations sold approximately €50 million of goods into the Eurozone. Our policy is to hedge a portion of our net exposure to fluctuations in exchange rates with forward foreign currency exchange contracts. Therefore, we are exposed to market risk and credit risk through the use of derivative financial instruments. Moreover, any failure of hedging policies could negatively impact our profits, and thus damage our ability to fund our operations and to service our indebtedness.

In addition to subsidiaries in the U.S., we have operating subsidiaries located in the U.K., Canada, China and Australia, as well as a joint venture in Japan, each of whose revenue, costs, assets and liabilities are denominated in local currencies. As our consolidated financial statements are reported in U.S. dollars, we are exposed to fluctuations in those currencies when those amounts are translated to U.S. dollars for purposes of reporting our consolidated financial statements, which may cause declines in results of operations. The largest risk is from our operations in the U.K., which, in 2023, generated an operating profit of $8.4 million and sales of $158.9 million. Fluctuations in exchange rates, particularly between the U.S. dollar and GBP sterling (which has been subject to significant fluctuations, as described above), can have a material effect on our consolidated income statement and consolidated balance sheet. In 2023, movements in the average U.S. dollar exchange rate had a positive impact impact on net sales of $2.8 million. In 2022 movements in the average U.S. dollar exchange rate had a negative impact on net sales of $15.6 million. Changes in translation exchange rates increased net assets by $7.3 million in 2023, compared to a decrease of $13.2 million in 2022.

These foreign exchange risks could have a material adverse effect on our results of operations, financial position and cash flows. For additional information on these risks, and the historical impact on our results, see ITEM 7A.

Our defined benefit pension plans have historically fluctuated between funding deficits and surpluses and are exposed to market forces that could require us to make increased ongoing cash contributions in response to changes in market conditions, actuarial assumptions and investment decisions These market forces could expose us to significant short-term liabilities if a wind-up trigger occurred in relation to such plans, each of which could have a material adverse impact on our results of operations and financial position.

We have defined benefit pension arrangements in the U.K. and in the U.S., see ITEM 8, Note 14. Our largest defined benefit plan, the Luxfer Group Pension Plan, ('the Plan') which closed to new members in 1998, remained open for accrual of future benefits based on career-average salary until April 5, 2016. However, following a consultation, it was agreed with the Trustees and plan members to close the Luxfer Group Pension Plan in the U.K. to future accrual of benefits, effective from April 5, 2016. Moreover, when increasing pension benefit payments, it was agreed to use the CPI as the reference index, in place of the RPI where applicable. The Luxfer Group Pension Plan is funded according to the regulations in effect in the U.K. and, as of December 31, 2023, and December 31, 2022, had an accounting surplus of $40.3 million and $27.0 million, respectively. There is no guarantee that the surplus funding position will be maintained and adverse market movements could result in a reversion to a deficit funding position. According to the latest triennial actuarial valuation of the Luxfer Group Pension Plan as of April 5, 2021, the Luxfer Group Pension Plan had a deficit of £12.2 million on a plan-specific basis (reduced from £26.5 million at the previous valuation in April 2018). This valuation was carried out prior to a one-off deficit reduction contribution of £9.6 million made in December 2021. Should a wind-up trigger occur in relation to the Luxfer Group Pension Plan, the buy-out deficit of that plan will become due and payable by the employers. The aggregate deficit of the Luxfer Group Pension Plan on a buy-out basis was estimated at £86 million as of April 5, 2021 (reduced from £145 million in April 2018). The Trustee has the power to wind-up the Luxfer Group Pension Plan if it determines that in the best interests of members, there is no reasonable purpose in continuing the Luxfer Group Pension Plan.

Following the actuarial valuation as of April 5, 2021, we agreed with the Trustee to make a one-off cash contribution in December 2021 of £9.6 million in addition to the £4.1 million annual payment agreed as a result of the previous valuation. While there is an expectation that no further contributions will be required until at least after the next valuation in 2024, there is no guarantee that this will be the case; and no contributions were made during 2023 and 2022. The Trustee can request additional contributions, and the U.K. Pensions Regulator ("TPR") has the power to order further funding in the current three-year window should increasingly stringent regulation require it (*see Environmental and regulatory risks: The Pensions Regulator in the U.K. has the power in certain circumstances to issue contribution notices or financial support directions that, if issued, could result in significant liabilities arising for us*). We remain legally responsible and committed to ensuring that the Luxfer Group Pension Plan has the funding required to meet its liabilities as they fall due. Future funding requirements will likely be reassessed and revised following the next triennial actuarial valuation in April 2024. Regulatory burdens have also proved to be a significant risk, such as the U.K.'s Pension Protection Fund Levy, which was £0.2 million in 2023.

The Company completed a buyout of the U.S. BA Holdings, Inc. Pension Plan in the first quarter of 2023. The Company's other arrangements are less significant than the Plan and, as of December 31, 2023, and December 31, 2022, had aggregate accounting deficits of $0.1 million and $4.5 million, respectively.

We are exposed to various risks related to our defined benefit plans, including the risk of loss of market value of the plan assets, the risk of actual investment returns being less than assumed rates of return, the Trustees of the Luxfer Group Pension Plan switching investment strategy (which requires consultation with the employer), and the risk of actual experience deviating from actuarial assumptions for such things as mortality of plan participants. In addition, fluctuations in interest rates cause changes in the annual cost and benefit obligations, and increasingly stringent regulation can further increase the financial burden. Any of these risks could have a material adverse impact on our results of operations, financial position and cash flows.

Environmental and regulatory risks

The Pensions Regulator in the U.K. has the power in certain circumstances to issue contribution notices or financial support directions that, if issued, could result in significant liabilities arising for us.

The Pensions Regulator may issue a contribution notice to the employers that participate in the Luxfer Group Pension Plan, or any person who is connected with, or is an associate of, these employers where the Pensions Regulator is of the opinion that the relevant person has been a party to an act, or a deliberate failure to act, which had as its main purpose (or one of its main purposes) the avoidance of pension liabilities or where such act has a materially detrimental effect on the likelihood of payment of accrued benefits under the Luxfer Group Pension Plan being received. A person holding alone or together with his or her associates, directly or indirectly, one-third or more of our voting power, could be the subject of a contribution notice. The terms "associate" and "connected person," which are taken from the Insolvency Act 1986, are widely defined and could cover our significant shareholders and others deemed to be shadow directors. If the Pensions Regulator considers that a plan employer is "insufficiently resourced" or a "service company" (which terms have statutory definitions), it may impose a financial support direction requiring such plan's employer or any member of the Group, or any person associated or connected with an employer, to put in place financial support in relation to the Luxfer Group Pension Plan. Liabilities imposed under a contribution notice or financial support direction may be up to the difference between the value of the assets of the Luxfer Group Pension Plan and the cost of buying out the benefits of members and other beneficiaries of the Luxfer Group Pension Plan. The Pension Schemes Act 2021 further strengthened regulation in this area and includes new criminal and civil penalties for breaches in pensions law (including unlimited fines) and new notifiable events that apply to certain corporate transactions which have the potential to adversely affect the security of the pension plan and therefore increase the likelihood of a contribution notice. In practice, the risk of a contribution notice being imposed may restrict our ability to restructure or undertake certain corporate activities. Additional security may also need to be provided to the Trustee of the Luxfer Group Pension Plan before certain corporate activities can be undertaken (such as the payment of an unusual dividend), and any additional funding of the Luxfer Group Pension Plan may have a material adverse effect on our financial position and cash flows.

Our operations may prove harmful to the environment resulting in reputational damage and clean-up or other related costs.

We are exposed to substantial environmental costs and liabilities, including liabilities associated with divested assets and prior activities performed on sites before we acquired an interest in them. Our operations, including the production and delivery of our products, are subject to a broad range of continually changing environmental laws and regulations in each of the jurisdictions in which we operate. These laws and regulations increasingly impose more stringent environmental protection standards on us with respect to, among other things, air emissions, wastewater discharges, the use and handling of hazardous materials, noise levels, waste disposal practices, soil and groundwater contamination and environmental clean-up. Complying with these regulations involves significant and recurring costs.

We cannot predict our future environmental liabilities and cannot assure investors that our management is aware of every fact or circumstance regarding potential liabilities, or that the amounts provided and budgeted to address such liabilities will be adequate for all purposes. In addition, future developments, such as changes in regulations, laws or environmental conditions, may result in reputational damage or increase environmental costs and liabilities that could have a material adverse effect on our results of operations, financial position and cash flows.

The health and safety of our employees and the safe operation of our business is subject to various health and safety regulations in each of the jurisdictions in which we operate. These regulations impose various obligations on us, including the provision of safe working environments and employee training on health and safety matters. Complying with these regulations involves recurring costs.

Certain aspects of our operations are highly regulated by different agencies that require products to comply with their rules and procedures and can subject our operations to penalties or adversely affect production.

Certain aspects of our operations are in highly regulated industries that require us to maintain regulatory approvals and, from time to time, obtain new regulatory approvals from various countries. This can involve substantial time and expense. In turn, higher costs of compliance reduce our cash flows from operations. For example, manufacturers of gas cylinders throughout the world must comply with high local safety and health standards and obtain regulatory approvals in the markets in which they sell their products. Furthermore, military organizations require us to comply with applicable government regulations and specifications when providing products or services to them directly or as subcontractors. In addition, we are required to comply with U.S. and other export regulations with respect to certain products and materials. The E.U. has also passed legislation governing the registration, evaluation and authorization of chemicals, known as REACH, pursuant to which we are required to register chemicals and gain authorization for the use of certain substances. Following the U.K.'s withdrawal from the E.U. and the subsequent transition period, the E.U. REACH Regulation has been brought into U.K. law, and REACH, and related legislation, have therefore been replicated in the U.K. In the U.S., there is similar legislation under the Toxic Substance Control Act 1976 ("TSCA") which was substantially amended in 2016. Although we make reasonable efforts to obtain all licenses and certifications that are required by countries in which we operate, there is always a risk that we may be found not to comply with certain required procedures. This risk grows with increased complexity and variance in regulations across the globe. As regulatory plans vary by country, we may also be subject to regulations of which we are not presently aware and could be subject to sanctions by a foreign government that could materially and adversely affect our operations in the relevant country.

Governments and their agencies have considerable discretion to determine whether regulations have been satisfied. They may also revoke or limit existing licenses and certifications or change the laws and regulations to which we are subject at any time. If our operations fail to obtain, experience delays in obtaining, or lose a needed certification or approval, we may not be able to sell products to our customers, expand into new geographic markets or expand into new product lines. In addition, new or more stringent regulations, if imposed, could result in us incurring significant costs in connection with compliance. Non-compliance with these regulations could result in administrative, civil, financial, criminal or other sanctions against us, which could have negative consequences on our business and financial position. Furthermore, if we begin to operate in new countries, we may need to obtain new licenses, certifications and approvals.

Our customers are also often subject to similar regulations and risks. We therefore face the risk that our customers may have the demand for their products reduced as a result of regulatory matters that fall outside our direct control. This would in turn reduce demand for our products and have a negative financial impact on our operating results.

Any of these factors could have a material adverse impact on our results of operations, financial position and cash flows.

We are subject to legislation and regulations to reduce carbon dioxide and other greenhouse gas emissions.

Whilst we are working to improve our energy efficiency, our manufacturing processes and the manufacturing processes of many of our suppliers and customers are energy-intensive and use or generate, directly or indirectly, greenhouse gases ("GHGs"). In recent years, current regulatory programs impacting GHG emissions from large industrial plants and other sources include the E.U. Emissions Trading Scheme, the CRC Energy Efficiency Scheme in the U.K. and certain federal and state programs in the U.S., including GHG reporting and permitting rules issued by the U.S.E.P.A and the California Cap and Trade Program. There are potential additional costs in order to comply with these increased regulations.

Moreover, in December 2015, 195 countries participating in the United Nations Framework Convention on Climate Change, at its 21st Conference of the Parties meeting held in Paris, adopted a new global agreement on the reduction of climate change (the "Paris Agreement"). The Paris Agreement set a goal of holding the increase in global average temperature to below 2 degrees Celsius and pursuing efforts to limit the increase to 1.5 degrees Celsius, to be achieved by commitments by the participating countries to set emissions reduction targets, referred to as "nationally determined contributions." The Paris Agreement came into effect on November 4, 2016, after it was ratified the previous month, with implementation efforts beginning from 2018 with reassessment every five years.

In November 2021, 197 countries joined together at the 26th Conference "COP26" in Glasgow, U.K., resulting in the Glasgow Climate Pact, which contains all necessary guidelines for fully implementing the Paris Agreement. The package of decisions within the Pact consists of a range of agreed items, including strengthened efforts to build resilience to climate change, to curb greenhouse gas emissions and to provide the necessary finance for both. Nations collectively agreed to work to reduce the gap between existing emission reduction plans and what is required to reduce emissions, so that the rise in the global average temperature can be limited to 1.5 degrees Celsius.

Increased costs of compliance with climate change regulations and the potential impact on energy costs could have a material adverse effect on our results of operations, financial position and cash flows.

Due to the nature and use of the products that we manufacture, we may in the future face large liability claims.

We are subject to litigation in the ordinary course of our business, which could be costly to us and which may arise in the future. We are exposed to possible claims for personal injury, death or property damage, which could result from a failure of a product manufactured by us or of a product integrating one of our products. For example, improperly manufactured gas cylinders could explode at high pressure, which can cause substantial personal and property damage. This risk may be increased through the use of new technologies, materials and innovations. We also supply many components into aerospace applications in which the potential for significant liability exposures necessitates additional insurance costs.

Many factors beyond our control could lead to liability claims, including:

- the failure of a product manufactured by a third party that incorporated components manufactured by us;
- the reliability and skills of persons using our products or the products of our customers; and
- the use by customers of materials or products that we produced for applications for which the material or product was not designed.

If we cannot successfully defend ourselves against claims, we may incur substantial liabilities. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our products;
- reputational injury;
- initiation of investigation by regulators;
- costs to defend related litigation;
- diversion of management time and resources;
- compensatory damages and fines;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources; and
- a decline in our stock price.

We could be required to pay a material amount if a claim is made against us that is not covered by insurance or otherwise subject to indemnification or that exceeds the insurance coverage that we maintain. Moreover, we do not currently carry insurance to cover the expense of product recalls, and litigation involving significant product recalls or product liability could have a material adverse effect on our results of operations, financial position and cash flows.

We are exposed to risks related to cybersecurity threats and general information security incidents which may also expose us to liability under data protection laws, including the GDPR.

In the conduct of our business, we increasingly collect, use, transmit and store data on information technology systems. This data includes confidential information belonging to us, our customers and other business partners, as well as personally identifiable information of individuals, including our employees. Like other global companies, we have experienced, and expect to continue to be subject to, cybersecurity threats and incidents, ranging from employee error or misuse, individual attempts to gain unauthorized access to information technology systems, and to sophisticated and targeted measures known as advanced persistent threats, none of which have been material to the Company to date.

Although we devote significant resources to network security, data encryption and other measures to protect our information technology systems and data from unauthorized access or misuse, including those measures necessary to meet certain information security standards that may be required by our customers, there can be no assurance that these measures will be successful in preventing a cybersecurity or general information security incident. We also rely in part on the reliability of certain tested third parties' cybersecurity measures, including firewalls, virus solutions and backup solutions, and our business may be affected if these third-party resources are compromised.

Cybersecurity incidents may result in business disruption, the misappropriation, corruption or loss of confidential information (including personally identifiable information) and critical data (ours or that of third parties), reputational damage, litigation with third parties, regulatory fines, diminution in the value of our investment in research and development and data privacy issues and increased information security protection and remediation costs. As these cybersecurity threats, and government and regulatory oversight of associated risks, continue to evolve, we may be required to expend additional resources to remediate, enhance or expand upon the cybersecurity protection and security measures we currently maintain. For example, we are subject to the European Union’s General Data Protection Regulation ("GDPR"), which became enforceable from May 25, 2018, and, following the U.K.'s exit from the E.U. on January 31, 2020, our U.K. based businesses are subject to U.K.-GDPR, which enshrines equivalent requirements in U.K. law. The GDPR introduced a number of new obligations for subject companies, resulting in the need to continue dedicating financial resources and management time to GDPR compliance. Among other things, the GDPR places subject companies under obligations relating to the security of the personally identifiable information they process. While we have taken steps to ensure compliance with the GDPR, there can be no assurance that the measures we have taken will be successful in preventing an incident, including a cybersecurity incident or other data breach, which results in a breach of the GDPR. Fines for non-compliance with the GDPR may be levied up to a maximum of €20,000,000 or 4% of the subject company’s annual, group-wide turnover (whichever is higher). Individuals who have suffered damage as a result of a subject company’s non-compliance with the GDPR also have the right to seek compensation from such a company.

Future cybersecurity breaches, general information security incidents, further increases in data protection costs or failure to comply with relevant legal obligations regarding protection of data could therefore have a material adverse effect on our results of operations, financial position and cash flows. See ITEM 1C for further information regarding disclosed our Cybersecurity procedures.

We could incur future liability claims arising from previous businesses now closed or sold.

We have sold or closed a number of businesses over the years, but the products or services provided when the businesses were open and under our ownership could still result in potential liabilities, which could have a material adverse effect on our operations, financial position and cash flows.

Risks associated to new and existing products

Our ability to remain profitable depends on our ability to protect and enforce our intellectual property, and any failure to protect and enforce such intellectual property could have a material adverse impact on our results of operations and financial position.

We cannot ensure that we will always have the ability to protect proprietary information and our intellectual property rights. We protect our intellectual property rights (within the U.S., Europe and other countries) through various means, including patents and trade secrets. Due to the difference in foreign trademark, patent and other laws concerning proprietary rights, our intellectual property rights may not receive the same degree of protection in other countries as they would in the U.S. or the U.K. The patents we own could be challenged, invalidated or circumvented by others and may not be of sufficient scope or strength to provide us with any meaningful protection or commercial advantage. Further, competitors may infringe our patents and the costs of protecting our patents could be significant. We cannot assure that we will have adequate resources to enforce our patents. Our patents will only be protected for the duration of the patent. Some of our older key patents have expired, and others will expire over the next few years. As a result, our competitors may introduce products using the technology previously protected, and these products may have lower prices than our products, which may negatively affect our market share. To compete, we may need to reduce our prices for those products. Additionally, the expiry of certain of those patents has reduced, or will reduce, barriers to entry to possible competitors for certain products and end-markets. With respect to our unpatented proprietary technology, it is possible that others will independently develop the same or similar technology or obtain access to our unpatented technology. To protect our trade secrets and other proprietary information, we require employees, consultants, advisors and collaborators to enter into confidentiality agreements. Nevertheless, we cannot assure that these agreements will provide meaningful protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use, misappropriation or disclosure of such trade secrets, know-how or other proprietary information. We rely on our trademarks, trade names and brand names to distinguish our products from the products of our competitors, and we have registered or applied to register many of these trademarks. Third parties may also oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Further, we cannot assure that competitors will not infringe our trademarks or that we will have adequate resources to enforce our trademarks.

Any failure to maintain, protect and enforce our intellectual property or the expiry of patent protection could have a material adverse impact on our results of operations, financial position and cash flows.

Expiration or termination of our right to use certain intellectual property granted by third parties, the right of those third parties to grant the right to use the same intellectual property to our competitors, and the right of certain third parties to use certain intellectual property used as part of our business, could have a material adverse impact on our results of operations, financial position and cash flows.

We have negotiated, and may from time to time in the future negotiate, licenses with third parties with respect to third party proprietary technologies used in certain of our manufacturing processes and products. If any of these licenses expire or terminate, we will no longer retain the rights to use the relevant third party proprietary technologies in our manufacturing processes and products, which could have a material adverse effect on our results of operations, financial position and cash flows. Further, the rights granted to us might be non-exclusive, which could result in our competitors gaining access to the same intellectual property.

Some of our patents may cover inventions that were conceived or first reduced to practice under, or in connection with, government contracts or other government funding agreements or grants. With respect to inventions conceived or first reduced to practice under such government funding agreements, a government may retain a non-exclusive, irrevocable, royalty-free license to practice, or have practiced for or on behalf of the relevant country, the invention throughout the world. In addition, if we fail to comply with our reporting obligations, or to adequately exploit the developed intellectual property under these government funding agreements, the relevant country may obtain additional rights to the developed intellectual property, including the right to take title to any patents related to government funded inventions or to license the same to our competitors. Furthermore, our ability to exclusively license or assign the intellectual property developed under these government funding agreements to third parties may be limited or subject to the relevant government's approval or oversight. These limitations could have a significant impact on the commercial value of the developed intellectual property.

We often enter into research and development agreements with academic institutions whereby they generally retain certain rights to the developed intellectual property. The academic institutions generally retain rights over the technology for use in non-commercial academic and research fields, including in some cases the right to license the technology to third parties for use in those fields. It is difficult to monitor and enforce such non-commercial academic and research uses, and we cannot predict whether the third party licensees would comply with the use restrictions of these licenses. We could incur substantial expenses to enforce our rights against such licensees. In addition, even though the rights that academic institutions obtain are generally limited to the non-commercial academic and research fields, they may obtain rights to commercially exploit developed intellectual property in certain instances. Under research and development agreements with academic institutions, our rights to intellectual property developed thereunder are not always certain, but instead may be in the form of an option to obtain license rights to such intellectual property. If we fail to exercise our option rights in a timely way and / or we are unable to negotiate a license agreement, the academic institution may offer a license to the developed intellectual property to third parties for commercial purposes. Any such commercial exploitation could adversely affect our competitive position and have a material adverse effect on our business.

If third parties claim that intellectual property used by us infringes upon their intellectual property, our operating profits could be adversely affected.

We may, from time to time, be notified of claims that we are infringing upon patents, copyrights, or other intellectual property rights owned by third parties, and we cannot provide assurances that other companies will not in the future pursue such infringement claims against us or any third party proprietary technologies we have licensed. If we were found to infringe upon a patent or other intellectual property right, or if we failed to obtain or renew a license under a patent or other intellectual property right from a third party, or if a third party from whom we are licensing technologies was found to infringe upon a patent or other intellectual property rights of another third party, we may be required to pay damages, suspend the manufacture of certain products or re-engineer or rebrand our products, if feasible, or we may be unable to enter certain new product markets. Any such claims could also be expensive and time consuming to defend and could divert management's attention and resources. In addition, if we have omitted to enter into a valid non-disclosure or assignment agreement for any reason, we may not own the invention or our intellectual property and may not be adequately protected. Our competitive position could suffer as a result of any of these events and have a material adverse impact on our results of operations, financial position and cash flows.

Any failure of our research and development activity to improve our existing products and develop new products could cause us to lose market share.

Our products are highly technical in nature, and in order to maintain and improve our market position, we depend on successful research and development activity to continue to improve our existing products and develop new products. We cannot be certain that we will have sufficient research and development capability to respond to changes in the industries in which we operate. These changes could include changes in the technological environment in which we currently operate, increased demand for new products or the development of alternatives to our products. For example, the development of lighter weight steel alloys has made the use of steel in gas cylinders a more competitive alternative to aluminum than it had been previously. We may also experience delays in completing development of, enhancements to or new versions of our products, and product innovations may not achieve the market penetration or price stability necessary for profitability. In addition to benefiting from our research collaboration with universities, we spent $4.6 million, $4.9 million and $3.9 million in 2023, 2022 and 2021, respectively, on our own research and development activities. We expect to fund our future research and development expenditure requirements through operating cash flows and restricted levels of indebtedness, but if operating profit decreases, we may not be able to invest in research and development or continue to develop new products or enhancements.

Without the timely introduction of new products or enhancements to existing products, our products could become obsolete over time, in which case our results of operations, financial position and cash flows could be adversely affected.

Increased climate control regulation could negatively impact sales of our products.

As previously mentioned, in November 2021, 197 countries joined together at COP26 in Glasgow, U.K., resulting in the Glasgow Climate Pact (*see Environmental and Regulatory risks: We are subject to legislation and regulations to reduce carbon dioxide and other greenhouse gas emissions).* Participants at COP26 made specific industrial commitments in order to contribute to overall climate goals. For example, the automotive sector will be required to ensure that all new car sales are to become net-zero by 2040 and in core markets by 2035. This will ultimately curtail demand for products linked to internal combustion engine vehicles, such as our zirconium automotive catalysis products.

While climate change regulation presents opportunities for Luxfer to develop new product lines and increase sales of climate-friendly products such as alternative fuel hydrogen cylinders and lightweight magnesium alloys, the impact on our existing product portfolio could have a material adverse effect on our results of operations, financial position and cash flows.

Operational Risks

We may not be able to consummate, finance or successfully integrate future acquisitions into our business, which could hinder our strategy or result in unanticipated expenses, losses or charges.

As part of our strategy, we have supplemented and may continue to supplement organic growth by acquiring companies or operations engaged in similar or complementary businesses. If the consummation of future acquisitions, together with integration of acquired companies and businesses, excessively diverts management's attention from the operations of our existing businesses, operating results could suffer. Any acquisition made could be subject to a number of risks, including:

- failing to discover liabilities of the acquired company or business for which we may be responsible as a successor owner or operator, including litigation or environmental costs and liabilities;
- difficulties associated with the assimilation of operations and personnel of the acquired company or business, creating uncertainty for employees, customers and suppliers;
- increased debt service requirements as a result of increased indebtedness to complete acquisitions;
- the loss of key personnel in the acquired company or business;
- a negative effect on our financial results resulting from an impairment of acquired intangible assets, the creation of provisions, or write downs; and / or
- potential adverse effects on our stock price and dividend amount due to the issuance of additional stock.

We cannot ensure that every acquisition will ultimately provide the benefits originally anticipated, which could ultimately have a material adverse impact on our results of operations, financial position and cash flows.

Our failure to perform under purchase or sale contracts could result in the payment of penalties to customers or suppliers, which could have a negative impact on our results of operations, financial position or cash flows.

A failure to perform under purchase or sale contracts could result in the payment of penalties to suppliers and / or customers, which could have a negative impact on our results of operations, financial position or cash flows. Certain contracts with suppliers could obligate us to purchase a minimum product volume (clauses known as "take or pay"), and contracts with customers may impose firm commitments for the delivery of certain quantities of products within certain time periods. The risk of incurring liability under a take or pay supply contract would increase during an economic crisis, which in turn would increase the likelihood of a sharp drop in demand for our products, resulting in a potential material adverse effect on our results of operations, financial position and cash flows.

Our businesses could suffer if we lose certain employees or cannot attract and retain qualified employees.

We rely upon a number of key executives and employees, particularly members of the Executive Leadership Team. If these and certain other employees ceased to work for us, we would lose valuable expertise and industry experience and could become less profitable. We do not carry key person insurance covering the loss of any of our executives or employees.

In addition, future operating results depend in part upon our ability to attract and retain qualified engineering and technical personnel. As a result of intense competition for talent in the market, we cannot ensure that we will be able to continue to attract and retain such personnel. While our key employees are generally subject to non-competition agreements for a limited period of time following the end of their employment, if we were to lose the services of key executives or employees, it could adversely impact our ability to maintain our technological position, and / or have a material adverse effect on our results of operations, financial position and cash flows.

We could suffer a material interruption in our operations as a result of unforeseen events or operating hazards, including severe weather events linked to climate change.

Our production facilities are located in a number of different locations around the world. Any of our facilities could suffer an interruption in production, either at separate times or at the same time, because of various and unavoidable occurrences. These include severe weather events that may become more frequent or extreme due to the effects of climate change (for example, hurricanes and floods), or other adverse events such as earthquakes, casualty events (for example, explosions, fires or material equipment breakdowns), acts of terrorism, pandemic disease, labor disruptions or other events (for example, required maintenance shutdowns). For instance, our operations in California are subject to risks related to earthquakes. In addition, some of our products are highly flammable, and there is a risk of fire inherent in their production process. Such hazards could cause personal injury or death, serious damage to, or destruction of, property and equipment, suspension of operations, substantial damage to the environment and / or reputational harm. The risk is particularly high in the production and handling of ultra-fine magnesium powders, which are highly flammable and potentially explosive in certain situations or if mishandled. Similar disruptions in the operations of our suppliers and / or customers could materially affect our business and operations. Although we carry certain levels of business interruption insurance, the coverage on certain catastrophic events or natural disasters, a failure of energy supplies and certain other events, is limited, and it is possible that the occurrence of such events may have a significant adverse impact on our results of operations, financial position and cash flows.

Employee strikes and other labor-related disruptions may adversely affect our operations.

Several of our production facilities depend on employees who are members of various trade union organizations. Strikes by, or labor disputes with, our employees may adversely affect our ability to conduct business. We cannot assure you that there will not be any strike, lock-out or material labor dispute in the future. Work interruptions or stoppages could have a material adverse effect on our results of operations, financial position and cash flows.

As a holding company, Luxfer Holdings PLC's main source of cash is distributions from our operating subsidiaries.

Our ultimate parent company, Luxfer Holdings PLC, conducts all of its operations through its subsidiaries. Accordingly, its main cash source is dividends from these subsidiaries. The ability of each subsidiary to make distributions depends on the funds that a subsidiary receives from its operations in excess of the funds necessary for its operations, obligations or other business plans. Since the subsidiaries are wholly-owned, claims of Luxfer Holdings PLC will generally rank junior to all other obligations of the subsidiaries. If Luxfer's operating subsidiaries are unable to make distributions, Luxfer's growth may slow, unless we are able to obtain additional debt or equity financing. In the event of a subsidiary's liquidation, there may not be assets sufficient for us to recoup our investment in the subsidiary.

We have a level of indebtedness which has reduced over time, but could adversely affect our cash flows and our ability to operate our business, remain in compliance with debt covenants, make payments on our indebtedness, pay dividends and respond to changes in our business or take certain actions.

As of December 31, 2023, we had $25.0 million of indebtedness under our senior notes (the "Loan Notes") due in 2026. There was also a $43.1 million and $4.6 million balance on the revolving credit facility ("RCF") and bank overdraft, respectively, as of December 31, 2023.

Our indebtedness could have important consequences. For example, it could make it more difficult for us to satisfy obligations with respect to indebtedness, and any failure to comply with the obligations of any of our debt instruments, including financial and other restrictive covenants, could result in an event of default under agreements governing our indebtedness. Further, our indebtedness could require us to dedicate a substantial portion of available cash flows to pay principal and interest on our outstanding debt, which would reduce the funds available for working capital, capital expenditures, dividends, acquisitions and other general corporate purposes. Our indebtedness could also limit our ability to operate our business, including the ability to engage in strategic transactions or implement business strategies. Factors related to our indebtedness could materially and adversely affect our business and our results of operations. Furthermore, our interest expense could increase if interest rates rise, because certain portions of our debt facilities bear interest at floating rates. If we do not have sufficient cash flows to service our debt, we may be required to refinance all or part of our existing debt, sell assets, incur further indebtedness or sell securities, none of which we can guarantee we will be able to do.

In addition, the agreements that govern the terms of our indebtedness contain, and any future indebtedness would likely contain, a number of restrictive covenants imposing significant operating and financial restrictions on us, including restrictions that may limit our ability to engage in acts that may be in our long-term best interests, including:

- incurring or guaranteeing additional indebtedness;
- capital expenditures;
- paying dividends (including to fund cash interest payments at different entity levels) or making redemptions, repurchases or distributions with respect to ordinary shares or capital stock;
- creating or incurring certain security interests;
- making certain loans or investments;
- engaging in mergers, acquisitions, investment in joint ventures, amalgamations, asset sales and sale and leaseback transactions; and
- engaging in transactions with affiliates.

These restrictive covenants are subject to a number of qualifications and exceptions. The operating and financial restrictions and covenants in our existing debt agreements and any future financing agreements may adversely affect our ability to finance future operations or capital needs or to engage in other business activities.

We may be able to incur significant additional indebtedness in the future. Although the agreements governing our indebtedness contain restrictions on the incurrence of certain additional indebtedness, these restrictions are subject to a number of important qualifications and exceptions, and the indebtedness incurred in compliance with these restrictions could be substantial. If we incur new indebtedness, the related risks, including those described above, could intensify.

Any of these factors could have a material adverse impact on our results of operations, financial position and cash flows.

General risks

Our ability to pay regular dividends on our ordinary shares is subject to the discretion of our Board of Directors and will depend on many factors, including our results of operations, cash requirements, financial position, contractual restrictions, applicable laws and other factors, and may be limited by our structure and statutory restrictions and restrictions imposed by the Revolving Credit Facility and the Loan Notes, as well as any future debt facilities.

We may declare cash dividends on our ordinary shares as described in ITEM 8. However, the payment of future dividends will be at the discretion of our Board of Directors. Any recommendation by our Board to pay dividends will depend on many factors, including our results of operations, cash requirements, financial position, contractual restrictions, applicable laws and other factors, including availability of future debt facilities. Under English law, any payment of dividends would be subject to the Companies Act 2006 of England and Wales (the "Companies Act"), which requires, among other things, that we can only pay dividends on ordinary shares out of profits available for distribution determined in accordance with the Companies Act. Additionally, any change in the level of our dividends or the suspension of the payment thereof could adversely affect the market price of our ordinary shares.

We identified a material weakness in our internal control over financial reporting which, if not remediated appropriately or timely, we may be unable to accurately report our financial results or prevent fraud, and could result in the loss of investor confidence and adversely impact our business operations and our stock price.

We are subject to reporting obligations under U.S. securities laws. Our reporting obligations as a public company place a significant strain on our management, operational and financial resources and systems for the foreseeable future. Management are required to report on the effectiveness of our internal control over financial reporting, as required annually by Section 404(a), and quarterly by Section 302 of the Sarbanes-Oxley Act, for which we perform system and process evaluation and testing of our internal control over financial reporting.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. As disclosed in Item 9A, "Controls and Procedures" of this 2023 Annual Report on Form 10-K, management identified a material weakness in our internal control over financial reporting. Management identified a lack of controls related to the Company’s accounting for inventory in transit. As a result, management concluded it did not properly design or maintain effective risk assessment control activities to allow for timely reassessment of the risks of financial reporting. This material weakness could result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected. However, this material weakness did not result in a misstatement to the annual or interim consolidated financial statements previously filed or included in this Annual Report on Form 10-K.

We are actively engaged in remediation activities designed to address the material weakness, but our remediation efforts are not complete and are ongoing. If our remedial measures are insufficient to address the material weakness, or if additional material weaknesses or significant deficiencies in our internal control are discovered or occur in the future, it may materially adversely affect our ability to report our financial condition and results of operations in a timely and accurate manner. If we are unable to report our results in a timely and accurate manner, we may not be able to comply with the applicable covenants in our financing arrangements, and may be required to seek additional waivers or repay amounts under these financing arrangements earlier than anticipated, which could adversely impact our liquidity and financial condition. Although we continually review and evaluate internal control systems to allow management to report on the sufficiency of our internal controls, we cannot assure you that we will not discover additional weaknesses in our internal control over financial reporting. The next time we evaluate our internal control over financial reporting, if we identify one or more new material weaknesses or are unable to timely remediate our existing weakness, we may be unable to assert that our internal controls are effective. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would have a material adverse effect on the price of our common stock and possibly impact our ability to obtain future financing on acceptable terms. We may also lose assets if we do not maintain adequate internal controls.

It may be difficult to effect service of U.S. process and enforce U.S. legal processes against the directors of Luxfer.

Luxfer is a public limited company incorporated under the laws of England and Wales. Some of our directors and officers reside outside of the U.S., principally in the U.K. A substantial portion of our assets, and the assets of such persons, are located outside of the U.S. Therefore, it may not be possible to effect service of process within the U.S. upon Luxfer or these persons in order to enforce judgments of U.S. courts against Luxfer or these persons based on the civil liability provisions of the U.S. federal securities laws. There is doubt as to the enforceability in England and Wales, in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities solely based on the U.S. federal securities laws.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Overview

As customer preferences and business-efficiency demands lead to a more connected and digitized world, cybersecurity and privacy risks have become critical business issues. Luxfer understands the systemic nature of cybersecurity threats to the safety and security of our Company, customers, and employees. As such, Luxfer is committed to safeguarding and protecting our information technology ("IT") network, equipment, and systems against cybersecurity threats to ensure our future security and reduce risk.

Accordingly, we will continue to review and update our existing governance, policies, and practices to address the following objectives:

- Ensure business continuity by protecting Luxfer's technology, data, intellectual property, and information assets;
- Increase cyber-resiliency and enhance controls for detecting and mitigating cybersecurity incidents;
- Safeguard the availability and reliability of Luxfer's network infrastructure, systems, and services;
- Ensure compliance with all applicable regulations and Luxfer policies, controls, standards and guidelines; and,
- Comply with requirements for confidentiality and privacy for Luxfer's customers and employees.

As of the date of the filing of this Form 10-K, we are not aware of attempts by third parties to gain access to our systems and networks and do not believe that any such attempts have had a material effect, or are reasonably likely to have a material effect, on our business, operations, or financial condition.

Governance

The Board's Role - As a part of its regular risk oversight, Luxfer's Board of Directors is responsible for overseeing cybersecurity, information security, and technology risk. The Board is comprised of independent Non-Executive Directors, and one Executive Director. Luxfer's Senior Leadership team provides regular reports on information security matters at least quarterly to the Board, as it is their responsibility to oversee Management's actions to identify, access, mitigate and remediate material risk.

Management's Role - Luxfer's cybersecurity program is managed by our IT Steering Committee. Comprised of IT Managers from across the company and chaired by a member of Luxfer's executive leadership team, the IT Steering Committee maintains the vision, strategy, and operation of Luxfer's cybersecurity program. IT Managers, who have operational responsibility for the actions of the Committee, ensure the effective implementation of the Company IT policies and also manage the local IT teams to ensure they are appropriately supported. Local IT teams have the day-to-day responsibility for implementing and monitoring the operation of Company IT policies within their respective business units. IT personnel within the Company are qualified within their respective roles and are provided with the resource to carry out their responsibilities effectively.

Cybersecurity risk management - We devote significant resources to network security, data encryption, employee training, monitoring of networks and systems, patching, maintenance and backup of systems and data. We also follow best practices for IT and data security as our IT controls are aligned with DFARS / NIST 800-171 IT Security Standard for US Government Contractors. Although there have been no cybersecurity incidents have been material to the Company to date, cyber-attacks are continually becoming more sophisticated, and our IT network is still potentially vulnerable to threats and incidents in the future.

To assure long-term success, Luxfer is committed to discovering and preparing for all potential cybersecurity threats. We set out below certain mitigating actions that we believe help us manage our principal cybersecurity risks.

Risk	Risk Description	Management of Risk
Network and Systems	*Luxfer's operations are increasingly dependent on IT systems and management of information, and a cyber-attack could inhibit our business operations including disruption to sales, production and cash flows.*	*Luxfer has a wide breadth of controls in place to protect against cyber-attacks including firewalls, threat monitoring systems, protected cloud architecture, and more frequent security patching. We have phased out vulnerable operating systems and updated legacy servers with advanced security. Applications that run and manage our core operating data are fully backed up.*
Employee Error or Misuse	*As cyber-attacks and phishing scams are becoming more advanced, employees may fail to recognize the signs of a cyber-attack or rely solely on the Company's IT defenses.*	*We have global policies covering IT security standards, annual training modules for employees. We also train our employees on cybersecurity through phishing simulations.*
Third-Party Cybersecurity Measures	*In part, we depend on the reliability of certain tested third parties' cybersecurity measures, including firewalls, virus solutions and backup solutions. Our business may be affected if these third-party resources are compromised.*	*Our IT Steering Committee performs thorough due diligence and risk analyses on third party vendors, verifying that sufficient security testing is performed on all software before installation on Luxfer's network. The IT Steering Committee also monitors and reviews access and permissions to all software and programs regularly.*
Regulations	*We are required to comply with the UK General Data Protection Regulation (GDPR) relating to the security of personally identifiable information that we process. A data breach can result in non-compliance with the GDPR, leading to fines or litigation.*	*We make every effort to comply with the GDPR and implement best practices including annual review of our Data Protection Policy. We also train employees to maintain secure systems, and access control measures, and regularly monitor and test our networks to protect data, payment information, and personally identifiable information.*

Training and compliance - Our employees are a key line of defense against cybersecurity threats and malicious actors. In addition to our IT Policies, Luxfer has a comprehensive cybersecurity training and awareness program to educate employees on how to recognize cybersecurity threats, prevent cyber-related incidents, and how to report a potential threat or breach. Our online compliance training program is mandatory for all employees worldwide, and includes cybersecurity awareness and IT security trainings, along with other compliance and governance related topics. Within each training module, employees are required to review a Company IT policy applicable to the topic of the training, and attest that they have read, understood, and agree to comply with the Policy.

Luxfer's IT Steering Committee continues to carry out internal phishing simulations to engage employees with cybersecurity, raise awareness, and educate employees on how to recognize and report phishing attacks. Through the simulations, we are able to test our employees' reaction to phishing emails and collect important metrics such as click rate. Data collection allows us to pinpoint trouble spots and target additional trainings to specific teams or locations. This information is also reported once quarterly to Luxfer's Senior Leadership Team and is an important supplement to our overall IT security training program.

Security audits and assessments - We perform periodic security audits and assessments to test our cybersecurity program. These efforts span across our cybersecurity program, including but not limited to audits, assessments, and penetration tests. We regularly engage third parties to assess our cybersecurity program, including cybersecurity maturity assessments, penetration testing, and independent review of our security control environment and operating effectiveness.

Item 2. Properties

Our principal executive office in the United States is located in leased premises in Milwaukee, Wisconsin and we also have a corporate office located in owned premises in Manchester, United Kingdom. Our operations are conducted in facilities throughout the world. These facilities house manufacturing and distribution operations, as well as sales and distribution offices.

We carry out Elektron manufacturing operations at four plants in the United States and one plant in the United Kingdom.

We carry out Gas Cylinders manufacturing operations at two plants in the United States and single plants in each of the United Kingdom, Canada and China. Gas Cylinders also has a sales and distribution office in both Australia and Italy.

We carry out Graphic Arts manufacturing operations at one plant in the United States and one plant in the United Kingdom.

We have a further plant in the United States which is classified as discontinued operations.

Our manufacturing plants comprise both owned and leased properties. We believe that our production facilities are suitable for their purpose and are adequate to support our businesses.

Division	Property / Plant	Principal products manufactured	Ownership	Approximate area (square feet)
Elektron				
	Manchester, England	Magnesium alloys / zirconium chemicals	Split Lease / Own	520,000
	Tamaqua, PA	Magnesium powders	Own	65,000
	Flemington, NJ	Zirconium chemicals	Own	65,000
	Cincinnati, OH	Magnesium heating pads	Lease	150,000
	Saxonburg, PA	Magnesium powders	Own	70,000
Gas Cylinders				
	Nottingham, England	Composite and aluminum cylinders	Lease	145,000
	Calgary, Canada	Composite cylinders	Lease	65,000
	Pomona, CA	Composite cylinders	Lease	175,000
	Riverside, CA	Composite cylinders	Lease / Own	125,000
	Shanghai, China	Composite cylinders	Lease	15,000
Graphic Arts				
	Madison, IL	Magnesium Sheet	Lease	805,000
	Manchester, England	Magnesium Sheet	Own*	40,000
Discontinued operations				
	Riverside, CA	Aluminum panels	Lease	70,000

*With the separate disclosure of Graphic Arts reporting segment in 2023, a portion of the Manchester site, owned and previously disclosed within Elektron, has been reclassified as Graphic Arts. Graphic Arts lease the site from Luxfer MEL Technologies.

Item 3. Legal Proceedings

The Company is a defendant in various lawsuits and is subject to various claims that arise in the normal course of business, the most significant of which are summarized in Note 19 (commitments and contingencies) to the consolidated financial statements in ITEM 8.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock is listed on the New York Stock Exchange and is traded under the symbol "LXFR." As of December 31, 2023, the Company had 17 shareholders of record.

Dividends

During the years ended December 31, 2021, and in February 2022, the Company paid quarterly dividends of $0.125 per ordinary share. In the final three quarters of 2022 and throughout 2023, the Company paid quarterly dividends of $0.13 per ordinary share. This equated to $14.0 million paid in 2023, $14.2 million in 2022 and $13.6 million in 2021 respectively. A further dividend of $3.5 million was declared and paid in the first quarter of 2024. The declaration and payment of any future dividends will be at the discretion of our Board of Directors and will depend upon our results of operations, cash requirements, financial position, contractual restrictions, restrictions imposed by our indebtedness, any future debt agreements or applicable laws and other factors that our Board of Directors may deem relevant. As with all dividends declared to date, we expect future dividends to be paid out of our earnings.

Any payment of dividends is also subject to the provisions of the U.K. Companies Act, according to which dividends may only be paid out of profits available for distribution determined by reference to financial statements prepared in accordance with the Companies Act and the International Accounting Standards Board, which differ in some respects from U.S. GAAP. In the event that dividends are paid in the future, holders of the ordinary shares will be entitled to receive payments in U.S. dollars in respect of dividends on the underlying ordinary shares in accordance with the deposit agreement. Furthermore, because we are a holding company, any dividend payments would depend on cash flows from our subsidiaries.

United Kingdom tax consequences for holders of common stock

The United Kingdom tax consequences discussed below do not reflect a complete analysis or listing of all the possible United Kingdom tax consequences that may be relevant to holders of our common stock. Moreover, the statements below only apply to holders of our common stock who are residents for tax purposes outside of the United Kingdom.

Investors should consult their own tax advisers in respect of the tax consequences related to receipt, ownership, purchase or sale or other disposition of our common stock.

United Kingdom withholding tax

Under current law, the Company is not required to make any deduction or withholding for or on account of United Kingdom tax from dividends distributed on our common stock, irrespective of the tax residence or individual circumstances of the recipient shareholder.

United Kingdom income tax on dividends

A non-United Kingdom tax resident holder of our common stock will not be subject to United Kingdom income taxes on dividend income and similar distributions in respect of our shares, unless the shares are attributable to a permanent establishment or a fixed place of business maintained in the United Kingdom by such non-United Kingdom holder.

Stamp duty and stamp duty reserve tax ("SDRT")

While the ordinary shares are held within a depository trust company ("DTC"), provided that DTC satisfies various conditions specified in U.K. legislation, electronic book-entry transfers of such shares should not be subject to U.K. stamp duty, and agreements to transfer such shares should not be subject to U.K. stamp duty reserve tax (“SDRT”). The parties have obtained confirmation of this position by way of formal clearance by HMRC. Likewise, transfers of, or agreements to transfer, the ordinary shares from the DTC clearance service into another clearance service or into a depository receipt system should not, provided that the other clearance service or depository receipt system satisfies various conditions specified in U.K. legislation, be subject to U.K. stamp duty or SDRT.

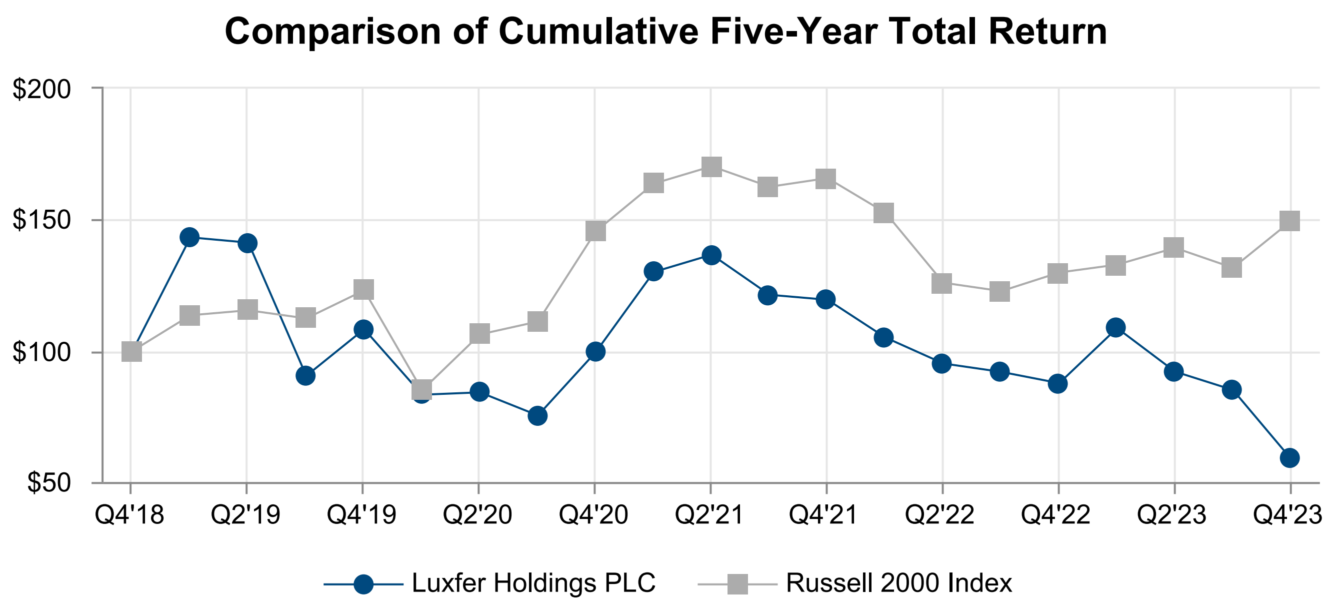
In the event that the ordinary shares have left the DTC clearance service, other than into another clearance service or depository receipt system, any subsequent transfer of, or agreement to transfer, such ordinary shares may, subject to any available exemption or relief, be subject to U.K. stamp duty or SDRT at a rate of 0.5% of the consideration for such transfer or agreement. Any such U.K. stamp duty or SDRT will generally be payable by the transferee and must be paid (and any relevant transfer document stamped by HMRC) before the transfer can be registered in the books of Luxfer Holdings PLC.

In the event that ordinary shares which have left the DTC clearance service, other than into another clearance service or depository receipt system, are subsequently transferred back into a clearance service or depository receipt system, such transfer, or agreement to transfer, may, subject to any available exemption or relief, be subject to U.K. stamp duty or SDRT at a rate of 1.5% of the consideration for such transfer (or, where there is no such consideration, 1.5% of the value of such ordinary shares). In practice, this liability for stamp duty or SDRT is generally borne by the person depositing the relevant shares in the clearance service or depository receipt system.

Share performance graph

The following information under the caption "Share Performance Graph" in this ITEM 5 of this Annual Report on Form 10-K is not deemed to be "soliciting material" or to be "filed" with the SEC or subject to Regulation 14A or 14C under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or subject to the liabilities of Section 18 of the Exchange Act and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent we specifically incorporate it by reference into such a filing.

The following graph sets forth the cumulative total shareholder return on our ordinary shares for the last five years, assuming an investment of $100 on December 31, 2018, and the reinvestment of all dividends since that date to December 31, 2023. The graph also contains for comparison purposes the Russell 2000 Index, assuming the same investment level and reinvestment of dividends. By virtue of our market capitalization and characteristics, we believe the Russell 2000 Index is an appropriate published industry index for comparison purposes.



Purchase of Equity Securities

As part of a weekly share buyback program, in 2023, the Company purchased 210,000 ordinary shares in open-market transactions for a total cost of $2.7 million. The following table shows this by quarter.

	Total number of shares purchased	Average price paid per share
January 1 - April 2	**48,000**	$ 16.15
April 3 - July 2	**52,000**	15.48
July 3 - October 1	**52,000**	12.69
October 2 - December 31	**58,000**	9.47
Total	**210,000**	

In January 2024, the Board of Directors authorized the repurchase of 50,000 of our ordinary shares in the first quarter of 2024.

Item 6. [Reserved]

Not applicable

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Information regarding forward-looking statements

This Annual Report on Form 10-K contains certain statements, statistics and projections that are, or may be, forward-looking. These forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors that could cause our actual results of operations, financial condition, liquidity, performance, prospects, opportunities, achievements or industry results, as well as those of the markets we serve or intend to serve, to differ materially from those expressed in, or suggested by, these forward-looking statements. The accuracy and completeness of all such statements, including, without limitation, statements regarding our future financial position, strategy, plans and objectives for the management of future operations, is not warranted or guaranteed. These statements typically contain words such as "believes," "intends," "expects," "anticipates," "estimates," "may," "will," "should" and words of similar import. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise. Although we believe that the expectations reflected in such statements are reasonable, no assurance can be given that such expectations will prove to be correct. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements. These factors include, but are not limited to, factors identified in "Business," "Risk factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," or elsewhere in this Annual Report, as well as:

- general economic conditions, or conditions affecting demand for the services offered by us in the markets in which we operate, both domestically and internationally, being less favorable than expected;
- worldwide economic and business conditions and conditions in the industries in which we operate;
- our ability to execute our strategic review, including our Graphic Arts business, to safeguard margins and reduce costs;
- post-pandemic impact of COVID-19 and future pandemics;
- fluctuations in the cost and / or availability of raw materials, labor and energy, as well as our ability to pass on cost increases to customers;
- currency fluctuations and other financial risks;
- our ability to protect our intellectual property;
- the amount of indebtedness we have incurred and may incur, and the obligations to service such indebtedness and to comply with the covenants contained therein;
- relationships with our customers and suppliers;
- increased competition from other companies in the industries in which we operate;
- changing technology;
- our ability to execute and integrate new acquisitions;
- claims for personal injury, death or property damage arising from the use of products produced by us;
- the occurrence of accidents or other interruptions to our production processes;
- changes in our business strategy or development plans, and our expected level of capital expenditure;
- our ability to attract and retain qualified personnel;
- restrictions on the ability of Luxfer Holdings PLC to receive dividends or loans from certain of its subsidiaries;
- climate change regulations and the potential impact on energy costs;
- regulatory, environmental, legislative and judicial developments; and
- our intention to pay dividends.

Please read the sections "Business," "Risk factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Annual Report on Form 10-K for a more complete discussion of the factors that could affect our performance and the industries in which we operate, as well as those discussed in other documents we file or furnish with the SEC.

About Luxfer

Luxfer Holdings PLC ("Luxfer," "the Company," "we," "our") is a global industrial company innovating niche applications in materials engineering. Luxfer focuses on value creation by using its broad array of technical know-how and proprietary technologies to help create a safe, clean and energy-efficient world. Luxfer's high-performance materials, components and high-pressure gas containment devices are used in defense, first response and healthcare, transportation and general industrial applications.

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Key trends and uncertainties regarding our existing business

Margin pressure resulting from supply chain challenges easing

We have recently experienced supply chain challenges, which resulted in higher cost of certain raw materials. In our supply chain, previously described challenges caused by the disruption in our U.S. domestic magnesium supply continued, and overall competitive cost pressures persisted. These issues have been particularly acute in our Graphic Arts segment, where the ability to pass through higher costs to our customers has proved to be constrained. In recent months however, the purchase price of Magnesium has been falling, which will result in lower input cost in 2024. We have implemented elements of our strategic review in Graphic Arts to reduce costs, including a headcount reduction program. We are also pursuing further actions to improve margins and maintain strong cash flow across the business.

In the majority of cases we are able to pass through inflationary costs to our customers, although we are still constrained by a small number of contracts, particularly in the Gas Cylinders segment, the longest running of which is not subject to renewal until mid-2024. However, our expectation is that the adverse impact of material availability / inflation, energy cost inflation and labor and transport constraints will lessen in 2024 and when costs fall we will look to share cost savings with customers through lower pricing. However the outlook remains highly uncertain with both the size and timing of future cost increases difficult to predict.

Operating objectives and trends

In 2024, we expect the following operating objectives and trends to impact our business:

- Addressing general macro uncertainty and building resilience into the outlook, especially in our General Industrial end-market;
- Execution of actions identified upon completion of the recently-announced expanded and accelerated strategic review, including the divestiture of Graphic Arts;
- Completion of long-term agreement renewals in Gas Cylinders enabling pass through of inflationary costs;
- Ongoing focus on cost control, new product launches and productivity improvements across the business;
- Execution of selected capital investment projects to support our strategy of profitable growth while maintaining our infrastructure;
- Continued emphasis on operating cash generation and maintaining strong working capital performance;
- Further improvements in ESG standing through focus on sustainability and on our values of teamworking and accountability; and
- Focus on recruiting, developing and maintaining talent, including our new leadership development programs, while driving a high-performance culture.

CONSOLIDATED RESULTS OF OPERATIONS

The consolidated results of operations from continuing operations of Luxfer were as follows:

	Years ended December 31,			% / point change	
In millions	**2023**	**2022**	**2021**	**2023 v 2022**	**2022 v 2021**
Net sales	$ 405.0	$ 423.4	$ 374.1	(4.3)%	13.2 %
Cost of sales	(328.4)	(328.4)	(278.1)	— %	18.1 %
Gross profit	76.6	95.0	96.0	(19.4)%	(1.0)%
% of net sales	*18.9 %*	*22.4 %*	*25.7 %*	*(3.5)*	*(3.3)*
Selling, general and administrative expenses	(48.7)	(43.1)	(47.3)	13.0 %	(8.9)%
% of net sales	*12.0 %*	*10.2 %*	*12.6 %*	*1.8*	*(2.4)*
Research and development	(4.6)	(4.9)	(3.9)	(6.1)%	25.6 %
% of net sales	*1.1 %*	*1.2 %*	*1.0 %*	*(0.1)*	*0.2*
Restructuring charges	(6.4)	(1.9)	(6.2)	236.8 %	(69.4)%
% of net sales	*1.6 %*	*0.4 %*	*1.7 %*	*1.2*	*(1.3)*
Impairment charges	(12.7)	—	—	n/a	n/a
% of net sales	*3.1 %*	*— %*	*— %*	*3.1*	*—*
Acquisition and disposals costs	—	(0.3)	(1.5)	(100.0)%	(80.0)%
% of net sales	*— %*	*0.1 %*	*0.4 %*	*(0.1)*	*(0.3)*
Other income	—	—	0.2	n/a	(100.0)%
% of net sales	*— %*	*— %*	*0.1 %*	*—*	*(0.1)*
Other charges	—	—	(1.1)	n/a	(100.0)%
% of net sales	*— %*	*— %*	*0.3 %*	*—*	*(0.3)*
Operating income	4.2	44.8	36.2	(90.6)%	23.8 %
% of net sales	*1.0 %*	*10.6 %*	*9.7 %*	*(9.6)*	*0.9*
Net interest expense	(6.3)	(3.9)	(3.1)	61.5 %	25.8 %
% of net sales	*1.6 %*	*0.9 %*	*0.8 %*	*0.7*	*0.1*
Defined benefit pension (charge) / credit	(7.6)	0.1	2.3	n/a	(95.7)%
% of net sales	*(1.9)%*	*— %*	*0.6 %*	*(1.9)*	*(0.6)*
(Loss) / income before income taxes	(9.7)	41.0	35.4	n/a	15.8 %
% of net sales	*(2.4)%*	*9.7 %*	*9.5 %*	*(12.1)*	*0.2*
Credit / (provision) for income taxes	7.1	(9.0)	(5.4)	n/a	66.7 %
Effective tax rate	*73.2 %*	*22.0 %*	*15.3 %*	*51.2*	*6.7*
Net (loss) / income from continuing operations	$ (2.6)	$ 32.0	$ 30.0	n/a	6.7 %
% of net sales	*(0.6)%*	*7.6 %*	*8.0 %*	*(8.2)*	*(0.4)*

Net sales

Adjusting for foreign exchange headwinds of $0.3 million, consolidated net sales have decreased by 4.3% in 2023 from 2022. The adverse impact of volume and mix has accounted for a $43.1 million reduction in sales, while the passing through of material cost inflation, where not constrained by contract, has partially offset this decrease by $25.0 million.

While sales in our General Industrial and Transportation end markets have decreased by 23.9% and 10.2% respectively, our sales in our Defense, First Response and Healthcare end market has increased by 23.9%.

Overall sales have been negatively impacted by:

- Decreased demand for photo-engraving plates, particularly outside the North American market due to competitive pressure from increased raw material costs;
- Lower sales of SoluMag® in the Oil and Gas industry;
- Reduction in sales of magnesium powders for commercial use; and
- Lower demand for AF cylinders, coupled with industrial cylinders' sales being weaker in the year.

These decreases were partially offset by:

- Increased sales of our SCBA and medical cylinders;
- Increase in demand for zirconium products, particularly those used in pharmaceutical applications;
- Significant increase in sales of chemical response kits; and
- Strong demand for our new unitized ration product ("UGR-E") in quarter two.

Gross profit

The 3.5 percentage point decrease in gross profit as a percentage of sales in 2023 from 2022 was primarily the result of adverse sales mix and higher materials costs relative to price increases. These issues have been particularly acute in our Graphic Arts Division where the ability to pass through higher costs to our customers has proved to be constrained with the emergence of lower cost competition. However, cost recovery and margin has improved throughout the year in the Gas Cylinders Division as fixed-priced contracts continue to be renegotiated.

Selling, general and administrative expenses ("SG&A")

SG&A costs as a percentage of sales have increased by 1.8 percentage points in 2023 from 2022, largely due to the $5.9 million of legal costs expensed in the Elektron Division. These predominantly relate to the case described in Note 19 and are not expected to recur in 2024.

Research and development costs

Research and development costs as a percentage of sales declined marginally in 2023 when compared to 2022 although overall spend of $4.6 million continues to show our commitment to new product development.

Restructuring charges

The $6.4 million restructuring charges in 2023 includes:

- $3.0 million of asset impairments and $2.3 million asset relocation, restructuring and other costs in relation to the rationalization of our North American Gas Cylinders businesses to reduce our fixed cost base;
- An additional $0.4 million in relation to the closure of Luxfer Gas Cylinders France;
- $0.2 million of further redundancies within our Gas Cylinders division;
- $0.5 million of waste clean up costs and $0.2 million of asset impairments in the Elektron division in relation to the consolidation of production facilities in the Magnesium Powders operations; and
- $0.2 million credit in relation to the closure of our Elektron Division's Canadian facility.

Acquisition and disposals costs

There were no acquisition or disposals costs in 2023.

Impairment charges

The $12.7 million impairment charges incurred in 2023 arose from fully writing down property, plant and equipment and right of use assets from operating leases within our Graphic Arts division as a result of our annual impairment and strategic review.

Net interest expense

Net interest expense of $6.3 million in 2023 increased from $3.9 million in 2022 due to the continued combination of increased interest rates and higher drawings on the revolving credit facility.

Defined benefit pension credit

The defined benefit pension charge of $7.6 million in 2023 was predominantly the result of the sale of the U.S. pension plan liability to an insurer. In the first quarter of 2023, there was a $9.2 million charge in relation to the sale, which included $2.3 million cash and $6.9 million in relation to the derecognition of the U.S. pension liability and reallocation of accumulated actuarial losses from other comprehensive income. In the second quarter of 2023, we received a $0.2 million contribution refund, resulting in a net cash outflow of $2.1 million and a charge of $9.0 million in 2023 in relation to the settlement. An additional $0.3 million interest cost has been recognized in relation to the U.S. plan in the year.

This charge was partially offset by a $1.7 million credit on the U.K. plan as expected return on assets outweighed the interest cost and net actuarial loss.

Provision for income taxes

The 51.2 percentage point increase in the effective tax rate in 2023 from 2022 was primarily due to the impact of increase tax credits in relation to U.K. incentives and the U.K. rate change from 19% to 25%, partially offset by the jurisdictional mix of income.

2022 compared with 2021

For a discussion comparing our consolidated operating results for the year ended December 31, 2022, with the year ended December 31, 2021, refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation - Discussion and Analysis - Consolidated Operating Results in our Annual Report on Form 10-K for the year ended December 31, 2022, which was filed with the U.S. Securities and Exchange Commission on March 01, 2023. This section is incorporated by reference into this Annual Report on Form 10-K for the year ended December 31, 2023.

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES TO GAAP MEASURES

The following tables of non-GAAP summary financial data presents a reconciliation of net income from continuing operations and diluted earnings per ordinary share from continuing operations to adjusted net income from continuing operations, adjusted EBITA from continuing operations, adjusted income from continuing operations before income taxes, adjusted EBITDA from continuing operations, adjusted earnings per ordinary share from continuing operations, adjusted provision for income taxes and adjusted effective tax rate from continuing operations, for the periods presented, being the most comparable GAAP measures. Management believes that adjusted net income, adjusted earnings per share, adjusted EBITA and adjusted EBITDA are key performance indicators ("KPIs") used by the investment community and that such presentation will enhance an investor’s understanding of the Company's operational results. In addition, Luxfer's CEO and other senior management use these KPIs, among others, to evaluate business performance. However, investors should not consider adjusted net income from continuing operations, adjusted earnings per share from continuing operations, adjusted EBITA from continuing operations and adjusted EBITDA from continuing operations in isolation as an alternative to net income and earnings per share when evaluating Luxfer's operating performance or measuring Luxfer's profitability.

	Years ended December 31,		
In millions except per share data	**2023**	**2022**	**2021**
Net (loss) / income from continuing operations	**(2.6)**	32.0	30.0
Accounting charges relating to acquisitions and disposals of businesses:			
Amortization on acquired intangibles	**0.8**	0.7	0.9
Acquisitions and disposals cost	**—**	0.3	1.5
Defined benefit pension credit	**7.6**	(0.1)	(2.3)
Restructuring charges	**6.4**	1.9	6.2
Impairment charges	**12.7**	—	—
Other charges	**—**	—	1.1
Share-based compensation charges	**2.8**	2.5	2.8
Tax impact of defined benefit pension settlement	**(4.9)**	—	—
Other non-recurring tax items	**—**	—	(1.9)
Income tax on adjusted items	**(6.4)**	0.1	(2.1)
Adjusted net income from continuing operations	**16.4**	37.4	36.2
Adjusted earnings per ordinary share from continuing operations			
Diluted earnings per ordinary share	**(0.10)**	1.16	1.07
Impact of adjusted items	**0.70**	0.20	0.22
Adjusted diluted earnings per ordinary share[(1)]	**0.61**	1.36	1.29

[(1)] For the purpose of calculating diluted earnings per share, the weighted average number of ordinary shares outstanding during the financial year has been adjusted for the dilutive effects of all potential ordinary shares and share options granted to employees.

	Years ended December 31,		
In millions except per share data	**2023**	**2022**	**2021**
Adjusted net income from continuing operations	**16.4**	37.4	36.2
Add back:			
Tax impact of defined benefit pension settlement	**4.9**	—	—
Other non-recurring tax items	**—**	—	1.9
Income tax on adjusted items	**6.4**	(0.1)	2.1
Income tax expense	**(7.1)**	9.0	5.4
Net finance costs	**6.3**	3.9	3.1
Adjusted EBITA from continuing operations	**26.9**	50.2	48.7
Depreciation	**11.9**	12.9	14.7
Adjusted EBITDA from continuing operations	**38.8**	63.1	63.4

	Years ended December 31,		
In millions	**2023**	2022	2021
Adjusted net income from continuing operations	**$ 16.4**	$ 37.4	$ 36.2
Add back:			
Tax impact of defined benefit pension settlement	**4.9**	—	—
Other non-recurring tax items	**—**	—	1.9
Income tax on adjusted items	**6.4**	(0.1)	2.1
Provision for income taxes	**(7.1)**	9.0	5.4
Adjusted income from continuing operations before income taxes	**$ 20.6**	$ 46.3	$ 45.6
Adjusted provision for income taxes	**4.2**	**8.9**	**9.4**
Adjusted effective tax rate from continuing operations	**20.4 %**	19.2 %	20.6 %

SEGMENT RESULTS OF OPERATIONS

The summary that follows provides a discussion of the results of operations of each of our three reportable segments (Gas Cylinders, Elektron and Graphic Arts). The three segments comprise various product offerings that serve multiple end-markets.

During 2023, the Graphic Arts reporting segment has been disaggregated from the Elektron segment and is being reported separately as the Graphic Arts segment. The Elektron segment's results for 2022 and 2021 have been adjusted to strip out Graphic Arts' results.

Adjusted EBITDA, which is our segment income metric, represents net income from continuing operations adjusted for share-based compensation charges, restructuring charges, impairment charges, other charges, acquisitions and disposals costs, net interest expenses, defined benefits pension credit, provision for taxes and depreciation and amortization.. A reconciliation to net income can be found in ITEM 8, Note 17.

GAS CYLINDERS

The results of operations from the Gas Cylinders segment are for continuing operations only.

The net sales and adjusted EBITDA for Gas Cylinders were as follows:

	Years ended December 31,			% / point change	
In millions	**2023**	**2022**	**2021**	**2023 v 2022**	**2022 v 2021**
Net sales	$ 186.4	$ 183.7	$ 178.3	1.5 %	3.0 %
Adjusted EBITDA	16.7	12.8	22.7	30.5 %	(43.6)%
% of net sales	9.0 %	7.0 %	12.7 %	2.0	(5.7)

Net sales

The 1.5% increase in Gas Cylinders sales in 2023 from 2022 was primarily the result of:

- Higher sales of SCBA cylinders;
- Increased volume of our medical cylinders; and
- Price increases throughout the segment as contracts are renegotiated.

These increases have been partially offset by:

- Reduced sales of industrial and AF cylinders.

Net sales in Gas Cylinders continued to be impacted throughout the year by the fixed-price contracts in place across the segment, although we have been able to renegotiate some of our fixed-price contracts to offset inflation.

Adjusted EBITDA

The 2.0 percentage point increase in adjusted EBITDA for Gas Cylinders as a percentage of net sales in 2023 from 2022 is the result of the renegotiation of fixed price contracts, as price more than offset inflation during the year.

ELEKTRON

The net sales and adjusted EBITDA for Elektron were as follows:

	Years ended December 31,			% / point change	
In millions	2023	2022	2021	2023 v 2022	2022 v 2021
Net sales	$ 187.1	$ 201.0	$ 155.7	(6.9)%	29.1 %
Adjusted EBITDA	26.6	42.5	34.1	(37.4)%	24.6 %
% of net sales	14.2 %	21.1 %	21.9 %	(6.9)	(0.8)

Net sales

The 6.9% decrease in Elektron sales in 2023 from 2022 was negatively impacted by adverse volume and mix, while price increase contributed an additional $9.6 million. Primary movements were:

- Lower sales of SoluMag® in the Oil and Gas industry; and
- Reduction in sales of magnesium powders for commercial use.

These decreases were partially offset by increased sales of chemical response kits and flameless ration heaters. There has also been continued increase in demand for zirconium products, particularly those used in pharmaceutical applications, as well as increases in our industrial end-market.

Adjusted EBITDA

The 6.9 percentage point decrease in adjusted EBITDA for Elektron as a percentage of net sales in 2023 from 2022 was primarily the result of adverse product mix across the segment and increased legal fees, coupled with $1.0 million FX headwind. Price increases throughout the year more than offset inflation.

GRAPHIC ARTS

The net sales and adjusted EBITDA for Graphic Arts were as follows:

	Years ended December 31,			% / point change	
In millions	2023	2022	2021	2023 v 2022	2022 v 2021
Net sales	$ 31.5	$ 38.7	$ 40.1	(18.6)%	(3.5)%
Adjusted EBITDA	(4.5)	7.8	6.6	n/a	18.2 %
% of net sales	(14.3)%	20.2 %	16.5 %	n/a	3.7

Net sales

The 18.6% decrease in Graphic Arts sales in 2023 from 2022 was a result of decreased demand for photo-engraving plates, particularly outside the North American market as competition has increased as a result of recent inflation, especially the high cost of magnesium.

Adjusted EBITDA

The loss in 2023 for Graphic Arts was a result of lower volumes coupled with the increased cost of magnesium filtering through. High fixed costs and the lowering of pricing to slow sales decline had a negative impact on margins.

LIQUIDITY AND CAPITAL RESOURCES

Our liquidity requirements arise primarily from obligations under our indebtedness, capital expenditures, acquisitions, the funding of working capital and the funding of hedging facilities to manage foreign exchange and commodity purchase price risks. We meet these requirements primarily through cash flows from operating activities, cash deposits and borrowings under the Revolving Credit Facility ("RCF") and accompanying ancillary hedging facilities and the Loan Note due 2026. Our principal liquidity needs are:

- funding acquisitions;
- capital expenditure requirements;
- payment of shareholder dividends;
- servicing interest on the Loan Notes, which is payable at each quarter end, in addition to interest and / or commitment fees on the RCF;
- working capital requirements, particularly in the short term as we aim to achieve organic sales growth; and
- hedging facilities used to manage our foreign exchange and aluminum purchase price risks.

We believe that, in the long term, cash generated from our operations will be adequate to meet our anticipated requirements for working capital, capital expenditures and interest payments on our indebtedness. In the short term, we believe we have sufficient credit facilities to cover any variation in our cash flow generation. However, any major repayments of indebtedness will be dependent on our ability to raise alternative financing or to realize substantial returns from operational sales. Also, our ability to expand operations through sales development and capital expenditures could be constrained by the availability of liquidity, which, in turn, could impact the profitability of our operations.

We have been in compliance with the covenants under the Loan Notes and the RCF throughout all of the quarterly measurement dates from and including September 30, 2011, to December 31, 2023.

In January 2023, the Company increased the capacity of its existing RCF to $125.0 million, an increase of $25.0 million. In June 2023, the Company repaid the $25.0 million loan note due in 2023.

Luxfer conducts all of its operations through its subsidiaries, joint ventures and affiliates. Accordingly, Luxfer's main cash source is dividends from its subsidiaries. The ability of each subsidiary to make distributions depends on the funds that a subsidiary receives from its operations in excess of the funds necessary for its operations, obligations or other business plans. We have not historically experienced any material impediment to these distributions, and we do not expect any local legal or regulatory regimes to have any impact on our ability to meet our liquidity requirements in the future. In addition, since our subsidiaries are wholly-owned, our claims will generally rank junior to all other obligations of the subsidiaries. If our operating subsidiaries are unable to make distributions, our growth may slow, unless we are able to obtain additional debt or equity financing. In the event of a subsidiary's liquidation, there may not be assets sufficient for us to recoup our investment in the subsidiary.

Our ability to maintain or increase the generation of cash from our operations in the future will depend significantly on the competitiveness of and demand for our products, including our success in launching new products. Achieving such success is a key objective of our business strategy. Due to commercial, competitive and external economic factors, however, we cannot guarantee that we will generate sufficient cash flows from operations or that future working capital will be available in an amount sufficient to enable us to service our indebtedness or make necessary capital expenditures.

Cash Flows from Continuing Operations

Operating activities

Cash provided by operating activities was $26.2 million and $15.8 million in 2023 and 2022 respectively, which includes approximately $3.6 million and $10.0 million of cash spent on restructuring activities in those years. Cash was primarily related to the net loss / net income from operating activities, net of the following non-cash items: (i) depreciation and amortization; (ii) share-based compensation charges; (iii) pension adjustments (iv) impairment charges and (v) net changes to assets and liabilities. In 2022, the Company had increased its working capital balances, predominantly as a result of inventory build to try and reduce inflationary price rises, 2023 saw a corresponding reduction in those balances.

Investing activities

Net cash used for investing activities was $9.4 million in 2023, compared to $5.6 million in 2022. The following investing activities impacted our cash flow:

Capital expenditures

Capital expenditures in 2023 was $9.4 million compared to $8.3 million in 2022. We anticipate capital expenditures for 2024 to be between $11 million and $14 million as we increase investment in order to grow the business.

Proceeds from sale of property, plant and equipment

In May 2022, the Company sold a previously held-for-sale building in the Elektron segment for $3.7 million. Consideration was paid in full upon sale.

Settlements from sale of business

In October 2022, the Company agreed a final settlement of $1.0 million to the purchasers of the previously disposed aluminum gas cylinder business. The settlement was a reduction to the original consideration paid.

Financing activities

In 2023, net cash used for financing activities was $27.5 million, (2022: $2.0 million). We repaid $25.0 million of short term borrowings, partially offset by a $4.3 million increase in our bank overdraft. We made net drawdowns on our borrowing facilities of $10.2 million (2022: net drawdowns of $24.8 million) and dividend payments of $14.0 million (2022: $14.2 million), equating to $0.52 per ordinary share (2022: $0.515 per ordinary share). In 2023, the Company spent $2.7 million repurchasing approximately 200,000 shares, (2022: $11.1 million repurchasing approximately 700,000 shares).

Loan Note 2026

The Note Purchase Agreement contains customary covenants and events of default, in each case with customary and appropriate grace periods and thresholds. In addition, the Note Purchase Agreement requires us to maintain compliance with a minimum interest coverage ratio and a leverage ratio. The interest coverage ratio measures our EBITDA (as defined in the Note Purchase Agreement) to Net Finance Charges (as defined in the Note Purchase Agreement). We are required to maintain an interest coverage ratio of 4.0:1. The leverage ratio measures our Total Net Debt (as defined in the Note Purchase Agreement) to Adjusted Acquisition EBITDA (as defined in the Note Purchase Agreement). We are required to maintain a leverage ratio of no more than 3.0:1. We have been in compliance with the covenants under the Note Purchase Agreement throughout all of the quarterly measurement dates from and including September 30, 2011, to December 31, 2023.

The Loan Note due 2026 and the Note Purchase Agreement are governed by the law of the State of New York.

The Loan Note due 2026 is denominated in U.S. dollars, which creates a natural partial offset between the dollar-denominated net assets and earnings of our U.S. operations and the dollar-denominated debt and related interest expense of the notes. We have included the Note Purchase Agreement and a form of the Loan Note due 2026 as exhibits to this Annual Report and refer you to the exhibits for more information on the Note Purchase Agreement and the Loan Note due 2026.

Senior Facilities Agreement

A new Senior Facilities Agreement was signed in October 2021, for more information see ITEM 8 Note 11.

*Structure.*At December 31, 2023 the Senior Facilities Agreement provided $125 million of committed debt facilities in the form of a multi-currency (GBP sterling, U.S. dollars or euros) RCF and an additional $25 million of uncommitted facilities through an accordion clause. The facilities mature in October 2026. As of December 31, 2023, we had drawn down $43.1 million under the Revolving Credit Facility (December 31, 2022: $31.9 million).

Availability. The facility is used for loans and overdrafts. Amounts unutilized under the RCF (or, if the case, under the revolving portion of the accordion) are allocated to ancillary facilities available under the Senior Facilities Agreement in connection with overdraft facilities, bilateral loan facilities and letter of credit facilities. As of December 31, 2023, we had drawn down $2.2 million under the ancillary facilities (December 31, 2022: $1.8 million). We may use amounts drawn under the RCF for our general corporate purposes and certain capital expenditures, as well as for the financing of permitted acquisitions and reorganizations. As of December 31, 2023, $81.9 million (net of $43.1 million drawn down) was available under the RCF. The last month in which we may draw funds from the RCF is September 2026.

The Company also had a separate (uncommitted) bonding facility for bank guarantees; denominated in GBP sterling totaling £0.5 million ($0.6 million) and £0.1 million ($0.2 million) was utilized at December 31, 2023.

Interest rates and fees. Borrowings under the facility bear an interest rate equal to an applicable margin plus either EURIBOR, in the case of amounts drawn in euros, or SONIA (Sterling Overnight Index Average), in the case of amounts drawn in GBP sterling or U.S. dollars.

The tables below sets out the range of ratios and the related margin percentage currently in effect.

Leverage	**Margin (% per annum)**
Greater than 2.5:1	2.75
Less than or equal to 2.5:1, but greater than 2.0:1	2.50
Less than or equal to 2.0:1, but greater than 1.5:1	2.25
Less than or equal to 1.5:1, but greater than 1.0:1	2.00
Less than or equal to 1.0:1	1.75

As of December 31, 2023, we had drawn down $43.1 million under the RCF (December 31, 2022: $31.9 million). A commitment fee is levied each quarter against any unutilized element of the RCF, excluding overdraft or ancillary facilities.

In the event of a sale of all or substantially all of our business and / or assets, or if any person or group of persons acting in concert gains direct or indirect control (as defined in the Senior Facilities Agreement) of Luxfer Holdings PLC, we will be required to immediately repay all outstanding amounts under the RCF (and, if the case, the accordion) and the ancillary facilities under the Senior Facilities Agreement.

In addition, the Senior Facilities Agreement requires us to maintain compliance with an interest coverage ratio and a leverage ratio. The interest coverage ratio measures our EBITDA (as defined in the Senior Facilities Agreement) to Net Finance Charges (as defined in the Senior Facilities Agreement). We are required to maintain a minimum interest coverage ratio of 4.0:1. The leverage ratio measures our Total Net Debt (as defined in the Senior Facilities Agreement) to the Relevant Period Adjusted Acquisition EBITDA (as defined in the Senior Facilities Agreement). We are required to maintain a leverage ratio of no more than 3.0:1.

We have been in compliance with the covenants under the Senior Facilities Agreement throughout all of the quarterly measurement dates from and including September 30, 2011, to December 31, 2023.

The Senior Facilities Agreement is governed by English law. For more information see ITEM 8, Note 11.

Dividends

We paid dividends in 2023 of $14.0 million (2022: $14.2 million), or $0.52 (2022: $0.515) per ordinary share.

Any payment of dividends is also subject to the provisions of the U.K. Companies Act, according to which dividends may only be paid out of profits available for distribution determined by reference to financial statements prepared in accordance with the Companies Act and the International Accounting Standards Board, which differ in some respects from U.S. GAAP. In the event that dividends are paid in the future, holders of the ordinary shares will be entitled to receive payments in U.S. dollars in respect of dividends on the underlying ordinary shares in accordance with the deposit agreement. Furthermore, because we are a holding company, any dividend payments would depend on cash flows from our subsidiaries.

Authorized shares

Our authorized share capital consists of 40.0 million ordinary shares with a par value of £0.50 per share.

Contractual obligations
The following summarizes our significant contractual obligations that impact our liquidity:

		Payments Due by Period			
In millions	**Total**	**Less than 1 year**	**1 – 3 years**	**3 – 5 years**	**After 5 years**
Contractual cash obligations					
Loan Notes due 2026	25.0	—	25.0	—	—
Revolving Credit Facility	43.1	—	43.1	—	—
Bank overdraft	4.6	4.6	—	—	—
Obligations under operating leases	26.0	5.4	9.2	2.7	8.7
Capital commitments	2.3	2.3	—	—	—
Interest payments	11.1	4.2	6.9	—	—
Total contractual cash obligations	**$ 112.1**	**$ 16.5**	**$ 84.2**	**$ 2.7**	**$ 8.7**

2022 compared with 2021

For a discussion comparing our net cash activities (operating, investing and financing) for the year ended December 31, 2022, with the year ended December 31, 2021, refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation - Discussion and Analysis - Consolidated Operating Results in our Annual Report on Form 10-K for the year ended December 31, 2022, which was filed with the U.S. Securities and Exchange Commission on March 01, 2023. This section is incorporated by reference into this Annual Report on Form 10-K for the year ended December 31, 2023.

Off-balance sheet measures

At December 31, 2023, we had no off-balance sheet arrangements other than the three bonding facilities as described above.

COMMITMENTS AND CONTINGENCIES

Capital commitments

At December 31, 2023, the Company had capital expenditure commitments of $2.3 million (2022: $1.4 million and 2021: $1.5 million) for the purchase of new plant and equipment.

Committed banking facilities

The Company refinanced in October 2021, see Note 11 for details of the refinance.

At December 31, 2023 the Company had committed banking facilities of $125.0 million with an additional $25.0 million of uncommitted facilities through an accordion provision. Of these committed facilities, $43.1 million was drawn at December 31, 2023. The banking facilities expire in October 2026.

At December 31, 2022, the Company had committed banking facilities of $100.0 million with an additional $50.0 million of uncommitted facilities through an accordion provision. Of the committed facilities, $31.9 million was drawn at December 31, 2022.

Contingencies

In November 2018, an alleged explosion occurred at a third-party waste disposal and treatment site in Grand View, Idaho, reportedly causing property damage, personal injury, and one fatality. The Company had contracted with a service company for removal and disposal of certain waste resulting from the magnesium powder manufacturing operations at the Reade facility in Manchester, New Jersey. The Company believes this service company, in turn, contracted with the third-party disposal company, at whose facility the explosion occurred, for treatment and disposal of the waste. In November 2020, we were named as a defendant in three lawsuits in relation to the incident – one by the third-party disposal company, one by the estate of the decedent, and one by an injured employee of the third-party disposal company. The three lawsuits were administratively consolidated and, to date, two lawsuits remain ongoing. The Company believes that we are not liable for the incident, have asserted such, and, in conjunction with our insurers, continue to fully defend the Company against these lawsuits. Therefore, we do not currently expect any eventual outcome in these matters to have a material impact on the Company's financial position or results of operations.

In December 2023, it was established that any potential liability arising from the lawsuits and reasonable defense costs related thereto are covered by insurance. Negotiations as to recovery of historic defense costs are ongoing, and therefore the Company has not recognized any asset with respect to said recovery as of December 31, 2023.

NEW ACCOUNTING STANDARDS

See ITEM 8, Note 1 of the notes to the Consolidated Financial Statements, included in this Form 10-K, for information pertaining to recently adopted accounting standards or accounting standards to be adopted in the future.

CRITICAL ACCOUNTING ESTIMATES

We have adopted various accounting policies to prepare the consolidated financial statements in accordance with GAAP. Our significant accounting policies are more fully described in ITEM 8, Note 1 of the Notes to Consolidated Financial Statements. Certain of our accounting policies require the application of significant judgment by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. These judgments are based on our historical experience, terms of existing contracts, our observance of trends in the industry and information available from other outside sources, as appropriate. We consider an accounting estimate to be critical if:

- it requires us to make assumptions about matters that were uncertain at the time we were making the estimate; and
- changes in the estimate or different estimates that we could have selected would have had a material impact on our financial condition or results of operations.

Our critical accounting estimates include the following:

Impairment of goodwill and identifiable intangible assets

Goodwill

Goodwill represents the excess of the cost of acquired businesses over the net of the fair value of identifiable net assets purchased and liabilities assumed.

Goodwill is tested at least annually for impairment and is tested for impairment more frequently if events or changes in circumstances indicate that the asset might be impaired. Goodwill is tested for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. We may elect not to perform the qualitative assessment for some or all reporting units and perform a quantitative impairment test. Management carried out its qualitative review on the last day of the third quarter in 2023 and 2022. Our qualitative review showed no indicators of impairment in segments carrying goodwill. As a result, the Company concluded its review and was not required to perform a quantitative review.

Pension and other post-retirement plans

We sponsor U.S. and non-U.S. defined-benefit pension and other post-retirement plans, although we sold our significant U.S. defined pension plan in 2023. The amounts recognized in our consolidated financial statements related to our defined-benefit pension and other post-retirement plans are determined from actuarial valuations. Inherent in these valuations are assumptions, including: (i) discount rates; (ii) inflation rates; (iii) pension increases; and (iv) life expectancy. These assumptions are updated annually and are disclosed in ITEM 8, Note 14 to the Notes to Consolidated Financial Statements. Differences in actual experience or changes in assumptions can have a material impact on the pension and other post-retirement obligations and future expense.

We recognize changes in the fair value of plan assets and net actuarial gains or losses for pension and other post-retirement benefits annually in the fourth quarter each year ("mark-to-market adjustment") and, if applicable, in any quarter in which an interim remeasurement is triggered. Net actuarial gains and losses occur when the actual experience differs from any of the various assumptions used to value our pension and other post-retirement plans or when assumptions change as they may each year. The primary factors contributing to actuarial gains and losses each year are (i) changes in the discount rate used to value pension and other post-retirement benefit obligations as of the measurement date and (ii) differences between the expected and the actual return on plan assets. This accounting method also results in the potential for volatile and difficult to forecast mark-to-market adjustments. The remaining components of pension expense, including service and interest costs and the expected return on plan assets, are recorded on a quarterly basis as ongoing pension expense.

Discount rate

The discount rate used represents the annualized yield based on a cash flow matched methodology with reference to an AA corporate bond spot curve and having regard to the duration of the Plan's liabilities. This yield produced a weighted-average discount rate for our U.K. plans of 4.50% in 2023, 4.80% in 2022 and 1.90% in 2021. The discount rate on our U.S. plans was 5.10% in 2022 and 2.70% in 2021. There are no known or anticipated changes in our discount rate assumption that will impact our pension expense in 2024.

To indicate the sensitivity of results to this assumption, a 0.1% per annum increase in the discount rate for our U.K. plans would reduce the value of the liabilities and therefore increase the pension surplus by approximately $2.0 million and increase the projected 2023 income statement credit by approximately $0.2 million.

Inflation rate

In September 2019, the UK Statistics Authority announced plans to reform the RPI inflation index. On November 25, 2020, the government and UK Statistics Authority confirmed these plans to reform the RPI index to bring it into line with the CPIH index from 2030, with no compensation for the holders of index-linked gilts. Inflation measured by the CPIH is consistently significantly lower than that measured by RPI, and therefore, these plans imply a significant expected reduction in RPI inflation from 2030 onwards. As a result we have taken a stepped approach and used different inflation rates pre and post 2030.

To indicate the sensitivity of results to the CPI assumption, a 0.1% per annum decrease in all CPI-linked assumptions, (including pension increases) for our U.K. plan, would reduce the value of the liabilities and therefore increase the pension surplus at December 31, 2022 by approximately $1.0 million and increase the projected 2024 income statement credit by approximately $0.1 million.

Pension increases

The pension increase assumptions have been set with reference to the corresponding CPI inflation assumption and take account of the caps and floors applicable to the various components of pension indexation.

Life expectancy

The life expectancies of male and female members aged 65 on 31 December 2023 are assumed to be 21.2 and 23.1 years, respectively, with the life expectancies of male and female members aged 65 on 31 December 2043 assumed to be 22.5 and 24.6 years, respectively.

To indicate the sensitivity of results to the life expectancy assumption, a one year increase in assumed life expectancy on the U.K. plan could increase the value of the liabilities and therefore decrease the pension surplus at December 31, 2023 by approximately $8.0 million.

Expected rate of return

Our expected rate of return on plan assets for our U.K. plans was 4.80% in 2023, 5.60% in 2022 and 3.30% in 2021. The expected rate of return on our U.S. plans was 4.70% in 2022 and 2.50% in 2021. The expected rate of return is designed to be a long-term assumption that may be subject to considerable year-to-year variance from actual returns. In developing the expected long-term rate of return, we considered our historical returns, with consideration given to forecast economic conditions, our asset allocations, input from external consultants and broader longer-term market indices.

See ITEM 8, Note 14 of the Notes to Consolidated Financial Statements for further information regarding pension and other post-retirement plans.

Loss contingencies

Accruals are recorded for various contingencies, including legal proceedings, self-insurance and other claims that arise in the normal course of business. The accruals are based on judgment, the probability of losses and, where applicable, the consideration of opinions of internal and/or external legal counsel and actuarial determined estimates. Additionally, we record receivables from third party insurers when recovery has been determined to be probable.

Our critical judgment revolves around the recognition of litigation and environmental liabilities in relation to the closure of our French site. We have recognized a loss contingency of $3.0 million, for which we have engaged with external experts to assist with the valuation of these liabilities.

Item 7A. Quantitative and qualitative disclosures about market risk

Market risk is the potential economic loss arising from adverse changes in market rates and market prices such as interest rates, foreign currency exchange rates, commodity prices and changes in the market value of equity instruments. We are exposed to market risk, primarily related to foreign exchange, commodity prices and interest rates. Counterparties to all derivative contracts are major financial institutions. All instruments are entered into for other than trading purposes. The major accounting policies and utilization of these instruments is described more fully in ITEM 8, Note 1 of the Notes to Consolidated Financial Statements.

Foreign currency risk

We conduct business in various locations throughout the world and are subject to market risk due to changes in the value of foreign currencies in relation to our reporting currency, the U.S. dollar. Periodically, we use derivative financial instruments to manage these risks. The functional currencies of our foreign operating locations are generally the local currency in the country of domicile. We manage these operating activities at the local level and revenues, costs, assets and liabilities are generally denominated in local currencies, thereby mitigating the risk associated with changes in foreign exchange. However, our results of operations and assets and liabilities are reported in U.S. dollars and thus will fluctuate with changes in exchange rates between such local currencies and the U.S. dollar.

To hedge foreign currency risks, we enter into short duration currency contracts. The below table details the foreign currency contracts which we have in place over sales and purchases. Changes in the fair value of all derivatives are recognized immediately in the income statement unless the derivative qualifies as a hedge of future cash flows. Gains and losses related to a hedge are deferred and recorded in the Consolidated Balance Sheets as a component of Accumulated Other Comprehensive Income ("AOCI") and are subsequently recognized in the Consolidated Statements of Income and Comprehensive Statements of Income when the hedged item affects earnings.

	December 31, 2023			
Sales hedges	**U.S. dollars**	**Euros**	**Canadian Dollars**	**Japanese Yen**
Contract totals/£m	23.5	3.4	0.3	0.2
Maturity dates	01/24 to 02/24	01/24 to 03/24	01/24 to 02/24	01/24 to 02/24
Exchange rates	$1.2159 to $1.2760	€1.1432 to €1.1494	$1.6843	¥179.3673 to ¥185.6455

Purchase hedges	**U.S. dollars**	**Euros**	**Canadian dollars**	**Australian dollars**	**Chinese yuan**
Contract totals/£m	0.4	0.8	11.0	0.9	1.4
Maturity dates	02/24 to 03/24	01/24	01/24 to 02/24	01/24	01/24
Exchange rates	$1.2155 to $1.2614	€1.1577 to €1.1535	$1.7199 to $1.6840	$1.8719	¥9.0433 to ¥9.0440

	December 31, 2022		
Sales hedges	**U.S. dollars**	**Euros**	**Canadian Dollars**
Contract totals/£m	13.4	12.8	0.1
Maturity dates	01/23 to 03/23	01/23 to 03/23	01/24
Exchange rates	$1.1207 to $1.2083	€1.1234 to €1.1468	$1.632

Purchase hedges	**U.S. dollars**	**Euros**	**Canadian dollars**	**Australian dollars**	**Chinese yuan**
Contract totals/£m	9.2	2.6	9.5	1.0	1.6
Maturity dates	01/23 to 04/23	01/23 to 04/23	01/23	01/23	01/23 to 03/23
Exchange rates	$1.1040 to $1.2084	€1.1437 to €1.2240	$1.6796 to $1.6239	$1.7787	¥8.3906 to ¥8.4126

Commodity price risk

We are exposed to commodity price risks in relation to the purchases of our raw materials.

There is no financial market to hedge magnesium, zirconium raw materials or carbon fiber, and prices for these raw materials have been volatile in recent years, with substantial increases in the second half of 2021 and throughout 2022, with price fluctuations throughout 2023. To help mitigate these risks, we have a number of fixed-price supply contracts for a portion of these raw materials, which limits our exposure to price volatility over a calendar year. However, we remain exposed over time to rising prices in these markets, and therefore rely on the ability to pass on any major price increases to our customers in order to maintain our levels of profitability especially for carbon fiber wrapped composite cylinders, zirconium, and magnesium-based products. We have also in the last few years, when we felt it was appropriate, made additional physical purchases of magnesium and some rare earth chemicals to delay the impact of higher prices, but this has had a cash flow impact on occasion, thereby leading to greater utilization of our revolving credit bank facilities.

Primary aluminum is a global commodity, with its principal trading market on the LME. In the normal course of business, we are exposed to aluminum price volatility to the extent that the costs of aluminum purchases are more closely related to the LME price than the sales prices of certain of our products. Our Gas Cylinders Segment will buy various aluminum alloys, in log, sheet, or tube form, and the contractual price will usually include an LME-linked base price plus a premium for a particular type of alloy, as well as the cost of casting, rolling or extruding. The price of high-grade aluminum, which is actively traded on the LME, has fluctuated significantly in recent years.

Interest rate risk

As of December 31, 2023, we had both fixed rate and variable rate debt outstanding on our consolidated balance sheet. As a result of this exposure, we have in the past hedged interest payable under our floating rate indebtedness based on a combination of forward rate agreements, interest rate caps and swaps. There were no fixed or variable rate interest hedge agreements in place as of December 31, 2023, and December 31, 2022.

Luxfer has exposure to variable interest rates when it draws down on the revolving credit facilities. As a result of this exposure, we may decide to hedge interest payable based on a combination of forward rate agreements, interest rate caps and swaps. It has also used fixed rate debt within its financing structure to mitigate volatility in interest rate movements as disclosed in Notes 11 and 12 in the Notes to the Consolidated Financial Statements.

/Item 8. Financial Statements and Supplementary Data

Luxfer Holdings PLC

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Luxfer Holdings PLC

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Luxfer Holdings PLC and its subsidiaries (the "Company") as of December 31, 2023 and 2022, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows, for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO because a material weakness in internal control over financial reporting existed as of that date, as the Company's management did not properly design or maintain effective risk assessment control activities to allow for timely reassessment of the material risks of misstatement in financial reporting due to a lack of controls related to the accounting for inventory in-transit.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness referred to above is described in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. We considered this material weakness in determining the nature, timing, and extent of audit tests applied in our audit of the 2023 consolidated financial statements, and our opinion regarding the effectiveness of the Company's internal control over financial reporting does not affect our opinion on those consolidated financial statements.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in management's report referred to above. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Pension Benefit Obligations

As described in Notes 1 and 14 to the consolidated financial statements, the Company had pension benefit obligations of $234.0 million as of December 31, 2023. As disclosed by management, the amounts in the consolidated financial statements related to the pension benefit obligations are determined from actuarial valuations. The valuation of the pension benefit obligations requires estimation in determining appropriate assumptions including: (i) discount rates; (ii) inflation rates; (iii) pension increases; and (iv) life expectancy. Differences in actual experience or changes in these assumptions can have a material impact on the determination of the liabilities in the Company's pension schemes.

The principal considerations for our determination that performing procedures relating to the valuation of the pension benefit obligations is a critical audit matter are (i) the significant judgment and assumptions made by management, including the use of management's specialists, when determining the pension benefit obligations; (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's significant assumptions related to discount rates, inflation rates, pension increases, and life expectancy; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of the pension benefit obligations. These procedures also included, among others, testing the completeness, accuracy and relevance of the underlying data used in the valuation of the pension benefit obligations. Professionals with specialized skill and knowledge were used to assist in (i) testing management's process for estimating the pension benefit obligations, (ii) evaluating the reasonableness of the assumptions used in calculating the pension benefit obligations, including the discount rates, inflation rates, pension increases, and life expectancy assumptions; and (iii) assessing the appropriateness of management's methodology in line with the requirements of ASC 715 Compensation — Retirement Benefits.

/s/ PricewaterhouseCoopers LLP
Manchester, United Kingdom
February 27, 2024

We have served as the Company's auditor since 2015.

LUXFER HOLDINGS PLC
CONSOLIDATED STATEMENTS OF INCOME

	Years Ended December 31,		
In millions, except share and per-share data	**2023**	**2022**	**2021**
Net sales	**$ 405.0**	$ 423.4	$ 374.1
Cost of sales	**(328.4)**	(328.4)	(278.1)
Gross profit	**76.6**	95.0	96.0
Selling, general and administrative expenses	**(48.7)**	(43.1)	(47.3)
Research and development	**(4.6)**	(4.9)	(3.9)
Restructuring charges	**(6.4)**	(1.9)	(6.2)
Impairment charges	**(12.7)**	—	—
Acquisitions and disposals costs	**—**	(0.3)	(1.5)
Other income	**—**	—	0.2
Other charges	**—**	—	(1.1)
Operating income	**4.2**	44.8	36.2
Net interest expense	**(6.3)**	(3.9)	(3.1)
Defined benefit pension (charge) / credit	**(7.6)**	0.1	2.3
(Loss) / income before income taxes	**(9.7)**	41.0	35.4
Credit / (provision) for income taxes	**7.1**	(9.0)	(5.4)
Net (loss) / income from continuing operations	**(2.6)**	32.0	30.0
Net gain on disposition of discontinued operations	**—**	—	6.6
Income / (loss) from discontinued operations, net of tax	**0.7**	(5.1)	(6.7)
Net (loss) / income	**$ (1.9)**	$ 26.9	$ 29.9
(Loss) / earnings per share[1]			
Basic from continuing operations	**(0.10)**	1.17	1.08
Basic from discontinued operations	**0.03**	(0.19)	—
Basic	**$ (0.07)**	$ 0.99	$ 1.08
Diluted from continuing operations	**(0.10)**	1.16	1.07
Diluted from discontinued operations	**0.03**	(0.19)	—
Diluted	**$ (0.07)**	$ 0.98	$ 1.07
Weighted average ordinary shares outstanding			
Basic	**26,897,556**	27,304,847	27,698,691
Diluted	**27,020,959**	27,541,202	28,032,506

[1] *The* calculation of earnings per share is performed separately for continuing and discontinued operations. As a result, the sum of the two in any particular year may not equal the earnings-per-share amount in total.

See accompanying notes to consolidated financial statements

LUXFER HOLDINGS PLC

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Years Ended December 31,		
In millions	**2023**	2022	2021
Net (loss) / income	**$ (1.9)**	$ 26.9	$ 29.9
Other comprehensive income / (loss)			
Net change in foreign currency translation adjustment	**7.3**	(13.2)	(0.8)
Pension and post-retirement gains, net of $7.5, $3.1 and $10.6 of tax, respectively	**14.2**	8.8	31.6
Other comprehensive income / (loss) net of tax	**21.5**	(4.4)	30.8
Total comprehensive income	**$ 19.6**	$ 22.5	$ 60.7

See accompanying notes to consolidated financial statements

LUXFER HOLDINGS PLC

CONSOLIDATED BALANCE SHEETS

In millions, except share and per-share data	**December 31, 2023**	**2022**
Current assets		
Cash and cash equivalents	**$ 2.3**	$ 12.6
Restricted cash	**0.3**	0.3
Accounts and other receivables, net of allowances of $0.7 and $0.4, respectively	**59.9**	67.8
Inventories	**95.9**	111.1
Current assets held-for-sale	**8.9**	9.3
Other current assets	**1.5**	—
Total current assets	**168.8**	201.1
Non-current assets		
Property, plant and equipment, net	**63.8**	77.7
Right-of-use assets from operating leases	**15.4**	19.8
Goodwill	**67.5**	65.6
Intangibles, net	**12.0**	12.5
Deferred tax assets	**3.9**	3.0
Pensions and other retirement benefits	**40.3**	27.0
Investments and loans to joint ventures and other affiliates	**0.4**	0.4
Total assets	**$ 372.1**	$ 407.1
Current liabilities		
Current maturities of long-term debt and short-term borrowings	**$ 4.6**	$ 25.0
Accounts payable	**26.5**	37.8
Accrued liabilities	**20.9**	29.4
Taxes on income	**—**	1.8
Current liabilities held-for-sale	**3.9**	5.0
Other current liabilities	**8.9**	11.2
Total current liabilities	**64.8**	110.2
Non-current liabilities		
Long-term debt	**67.6**	56.2
Pensions and other retirement benefits	**0.1**	4.5
Deferred tax liabilities	**10.2**	9.9
Other non-current liabilities	**16.8**	19.0
Total liabilities	**$ 159.5**	$ 199.8
Commitments and contingencies (Note 19)		
Shareholders' equity		
Ordinary shares of £0.50 par value; authorized 40,000,000 shares for 2023 and 2022; issued and outstanding 28,944,000 shares for 2023 and 2022	**$ 26.5**	$ 26.5
Additional paid-in capital	**223.5**	221.4
Treasury shares	**(22.9)**	(20.4)
Company shares held by ESOP	**(0.9)**	(1.0)
Retained earnings	**104.3**	120.2
Accumulated other comprehensive loss	**(117.9)**	(139.4)
Total shareholders' equity	**$ 212.6**	$ 207.3
Total liabilities and shareholders' equity	**$ 372.1**	$ 407.1

See accompanying notes to consolidated financial statements

LUXFER HOLDINGS PLC
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
In millions	**2023**	**2022**	**2021**
Operating activities			
Net (loss) / income	**$ (1.9)**	$ 26.9	$ 29.9
Net (income) / loss from discontinued operations	**(0.7)**	5.1	0.1
Net (loss) / income from continuing operations	**(2.6)**	32.0	30.0
Adjustments to reconcile net loss from continuing operations to net cash provided by operating activities			
Depreciation	**11.9**	12.9	14.7
Amortization of purchased intangible assets	**0.8**	0.7	0.9
Amortization of debt issuance costs	**0.4**	0.5	0.5
Share-based compensation charge	**2.8**	2.5	2.8
Deferred income taxes	**(0.6)**	8.7	(1.6)
Loss on disposal of business	**—**	1.0	—
Asset impairment charges and non-cash restructuring charges	**15.9**	—	—
Defined benefit pension expense / (credit)	**7.9**	0.1	(1.9)
Defined benefit pension contributions	**(2.3)**	(0.4)	(18.2)
Changes in assets and liabilities, net of effects of business acquisitions			
Accounts and notes receivable	**16.6**	(27.2)	(9.8)
Inventories	**16.6**	(25.0)	(15.3)
Current assets held-for-sale	**1.0**	(3.3)	(2.9)
Other current assets	**(1.5)**	—	1.3
Accounts payable	**(19.0)**	21.3	11.4
Accrued liabilities	**(9.2)**	2.4	7.5
Current liabilities held-for-sale	**0.5**	0.9	(1.8)
Other current liabilities	**(4.3)**	(8.8)	8.4
Other non-current assets and liabilities	**(8.7)**	(2.5)	—
Net cash provided by operating activities - continuing	**26.2**	15.8	26.0
Net cash provided by operating activities - discontinued	**0.1**	0.1	0.1
Net cash provided by operating activities	**26.3**	**15.9**	**26.1**
Investing activities			
Capital expenditures	**(9.4)**	(8.3)	(9.1)
Proceeds from sale of property, plant and equipment	**—**	3.7	—
Proceeds from sale of businesses	**—**	—	23.4
Settlements from sale of businesses	**—**	(1.0)	—
Acquisitions, net of cash acquired	**—**	—	(19.3)
Net cash used for investing activities - continuing	**(9.4)**	(5.6)	(5.0)
Net cash used for investing activities - discontinued	**(0.1)**	(0.1)	(0.1)
Net cash used for investing activities	**(9.5)**	**(5.7)**	**(5.1)**
Financing activities			
Repayment of loan notes	**(25.0)**	—	—
Drawdown of bank overdraft	**4.6**	—	—
Net drawdown of of long-term borrowings	**10.2**	24.8	6.4
Debt issuance costs	**(0.2)**	—	(1.0)
Dividends paid	**(14.0)**	(14.2)	(13.6)
Share-based compensation cash paid	**(0.4)**	(1.4)	(1.5)
Repurchase of deferred shares	**—**	(0.1)	—
Repurchase of ordinary shares	**(2.7)**	(11.1)	(6.4)
Net cash used for financing activities	**(27.5)**	**(2.0)**	**(16.1)**
Effect of exchange rate changes on cash and cash equivalents	**0.4**	**(1.7)**	**—**
Net (decrease) / increase	**(10.3)**	**6.5**	**4.9**
Cash, cash equivalents and restricted cash; beginning of year	**12.9**	6.4	1.5
Cash, cash equivalents and restricted cash; end of year	**$ 2.6**	$ 12.9	$ 6.4
Supplemental cash flow information:			
Interest payments	**$ 6.1**	$ 4.0	$ 3.2
Income tax payments	**3.3**	0.6	5.3

See accompanying notes to consolidated financial statements

LUXFER HOLDINGS PLC
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

In millions,	Ordinary shares	Deferred shares	Additional paid-in capital	Treasury shares Number	Treasury shares Amount	Company shares held by ESOP Number	Company shares held by ESOP Amount	Retained earnings	Accumulated other comprehensive loss	Total shareholders' equity
At January 1, 2021	**$ 26.6**	**$ 149.9**	**$ 70.6**	**(0.4)**	**$ (4.0)**	**(1.0)**	**$ (1.4)**	**$ 91.2**	**$ (165.8)**	**$ 167.1**
Net income for the year	—	—	—	—	—	—	—	29.9	—	29.9
Other comprehensive income, net of tax	—	—	—	—	—	—	—	—	30.8	30.8
Dividends declared and paid	—	—	—	—	—	—	—	(13.6)	—	(13.6)
Share-based compensation	—	—	2.8	—	—	—	—	—	—	2.8
Utilization of treasury shares to satisfy share-based compensation	—	—	(0.1)	—	0.1	—		—	—	—
Utilization of shares from ESOP to satisfy share-based compensation	—	—	(1.8)	—	—	0.2	0.3	—	—	(1.5)
Repurchase of ordinary shares	—	—	—	(0.3)	(6.4)	—	—	—	—	(6.4)
Cancellation of ordinary shares	(0.1)	—	(0.6)	0.1	0.7	—	—	—	—	—
At December 31, 2021	**$ 26.5**	**$ 149.9**	**$ 70.9**	**(0.6)**	**$ (9.6)**	**(0.8)**	**$ (1.1)**	**$ 107.5**	**$ (135.0)**	**$ 209.1**
Net income for the year	—	—	—	—	—	—	—	26.9	—	26.9
Other comprehensive loss, net of tax	—	—	—	—	—	—	—	—	(4.4)	(4.4)
Dividends declared and paid	—	—	—	—	—	—	—	(14.2)	—	(14.2)
Share-based compensation	—	—	2.5	—	—	—	—	—	—	2.5
Utilization of treasury shares to satisfy share-based compensation	—	—	(0.7)	—	0.3	—	—	—	—	(0.4)
Utilization of shares from ESOP to satisfy share-based compensation	—	—	(1.1)	—	—	0.1	0.1	—	—	(1.0)
Repurchase of ordinary shares	—	—	—	(0.7)	(11.1)	—	—	—	—	(11.1)
Cancellation of ordinary shares	—	(149.9)	149.8	—	—	—	—	—	—	(0.1)
At December 31, 2022	**$ 26.5**	**$ —**	**$ 221.4**	**(1.3)**	**$ (20.4)**	**(0.7)**	**$ (1.0)**	**$ 120.2**	**$ (139.4)**	**$ 207.3**
Net loss for the year	—	—	—	—	—	—	—	(1.9)	—	(1.9)
Other comprehensive income, net of tax	—	—	—	—	—	—	—	—	21.5	21.5
Dividends declared and paid	—	—	—	—	—	—	—	(14.0)	—	(14.0)
Share-based compensation charges	—	—	2.8	—	—	—	—	—	—	2.8
Utilization of treasury shares to satisfy share-based compensation	—	—	(0.3)	—	0.2	—	—	—	—	(0.1)
Utilization of shares from ESOP to satisfy share-based compensation	—	—	(0.4)	—	—	0.1	0.1	—	—	(0.3)
Repurchase of ordinary shares	—	—	—	(0.2)	(2.7)	—	—	—	—	(2.7)
At December 31, 2023	**$ 26.5**	**$ —**	**$ 223.5**	**(1.5)**	**$ (22.9)**	**(0.6)**	**$ (0.9)**	**$ 104.3**	**$ (117.9)**	**$ 212.6**

See accompanying notes to consolidated financial statements

1. Summary of Significant Accounting Policies

Business description
Luxfer Holdings PLC is a global industrial company innovating niche applications in materials engineering. Luxfer focuses on value creation by using its broad array of technical know-how and proprietary technologies to help create a safe, clean and energy-efficient world. Luxfer's high-performance materials, components and high-pressure gas containment devices are used in defense, first response and healthcare, transportation and general industrial applications. It comprises three reportable segments being Gas Cylinders, Elektron and Graphic Arts.

Principles of consolidation
The consolidated financial statements comprise the financial statements of Luxfer Holdings PLC and its subsidiaries (collectively "we," "our," "Luxfer" or "the Company") that we control. Investments in unconsolidated affiliates, where we have the ability to exercise significant influence over the operating and financial policies, are accounted for using the equity method. All inter-company balances and transactions, including unrealized profits arising from intra-company transactions, have been eliminated in full.

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and are presented in U.S. dollars ("USD"). The books of the Company's non-U.S. entities are converted to USD at each reporting period date in accordance with the accounting policy below. The functional currency of the holding company, Luxfer Holdings PLC, is USD and that of its U.K. subsidiaries is GBP, being the most appropriate currency for those particular operations.

Discontinued operations
Certain amounts relating to our discontinued businesses are recorded within assets or liabilities held-for-sale on the consolidated balance sheets and within net income / loss from discontinued operations on the consolidated statements of income.

Fiscal year
Our fiscal year ends on December 31.

Use of estimates
The preparation of our consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported in these consolidated financial statements and accompanying notes, disclosures of contingent assets and liabilities at the date of the financial statements and in the reported amounts of revenues and expenses during the reporting period. Significant estimates include our assessment of property, plant and equipment, right of use asset valuations and impairment, goodwill for impairment, loss contingencies, estimated realizable value on excess and obsolete inventory, assets acquired and liabilities assumed in acquisitions, estimated selling proceeds from assets held for sale, contingent liabilities, income taxes and pension benefits. Actual results could differ from our estimates.

1. Summary of Significant Accounting Policies (continued)

Goodwill and other identifiable intangible assets

Business combinations are accounted for using the purchase method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value, and the amount of any non-controlling interest in the acquiree. The measurement of non-controlling interest is at fair value and is determined on a transaction by transaction basis. Acquisition costs are expensed as incurred.

Goodwill represents the excess of the cost of acquired businesses over the net of the fair value of identifiable tangible net assets, identifiable intangible assets purchased, and liabilities assumed.

Goodwill is tested at least annually for impairment or more frequently if events or changes in circumstances indicate that the asset might be impaired. Goodwill is tested for impairment by performing a qualitative evaluation which could then lead to a quantitative assessment. The qualitative evaluation is an assessment of factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. We may elect not to perform the qualitative assessment for some or all reporting units and only perform a quantitative impairment test.

On the last day of the third quarter in 2023, management carried out the qualitative review on all reporting units with a goodwill balance. No indicators of impairment were identified in these reporting units, therefore the Company concluded its review at this point and was not required to perform a quantitative review.

Other intangible assets are measured initially at cost, or, where acquired in a business combination, at fair value, and are amortized on a straight-line basis over their estimated useful lives, as shown in the table below.

Customer relationships	15 - 25 years
Technology and trading related	5 - 25 years

The carrying values are reviewed for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable. Reviews are made annually of the estimated remaining lives and residual values of the patents and trademarks.

Investments in affiliates

The company owns interest in the following affiliate:

Name of company	Country of incorporation	Holding	Proportion of voting rights and shares held	Classification	Consolidation method
Nikkei-MEL Co. Limited	Japan	Ordinary shares	50%	Joint venture	Equity method

1. Summary of Significant Accounting Policies (continued)

Property, plant and equipment, net

Property, plant and equipment are stated at cost less accumulated depreciation and any impairment in value. Depreciation is calculated on a straight-line basis over the estimated useful life of the particular asset. The depreciation expense during 2023, 2022 and 2021 was $11.9 million, $12.9 million and $14.7 million, respectively. The estimated useful lives are summarized as follows:

Freehold buildings	10 - 33 years
Leasehold land and buildings	The lesser of life of lease or freehold rate
Machinery and equipment	3 - 25 years
Including:	
Heavy production equipment (including casting, rolling, extrusion and press equipment)	20 - 25 years
Chemical production plant and robotics	7 - 10 years
Other production machinery	5 - 10 years
Furniture, fittings, storage and equipment	3 - 10 years
Computer equipment	5 years

Freehold land is not depreciated.

Reviews are made annually of the estimated remaining lives and residual values of individual productive assets, taking account of commercial and technological obsolescence, as well as normal wear and tear.

We review the carrying value for any individual asset or asset group for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. If any such indication exists, and where the carrying value exceeds the estimated recoverable amount, the asset is written-down to its estimated recoverable amount. The assessment of possible impairment is based on our ability to recover the carrying value of the asset or asset group from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If these cash flows are less than the carrying value of such asset or asset group, an impairment loss is recognized for the difference between estimated fair value and carrying value. Impairment losses on long-lived assets held for sale are determined in a similar manner, except that fair values are reduced for the cost to dispose of the assets.The measurement of impairment requires us to estimate future cash flows and the fair value of long-lived assets.

Impairments

The Company will recognize impairments in relation to property, plant and equipment, investments, goodwill, other identifiable intangible assets and other long-lived assets in accordance with the above policies. Impairments relating to restructuring activities, incurred to exit an activity or location, will be recorded within the restructuring line on the Statements of Income. Other impairments will be recorded within the impairment charges line on the Statements of Income. Impairments related to discontinued operations will be recorded within the net loss from discontinued operations line on the Statements of Income.

During the Company's recently commenced strategic review, in December 2023, the Company determined that the Graphic Arts business no longer aligns with the overall Luxfer strategy and have initiated a process to divest the Graphic Arts business in 2024. As a result of such decision and its impact on the Company's hold period, a $12.7 million impairment charge has been recognized in 2023, disclosed as impairment charges in the consolidated statement of income, relating to right of use assets,$1.6 million and property, plant and equipment, $11.1 million, in our Graphic Arts segment.

There was also $3.2 million of asset impairments recognized within restructuring charges predominantly relating to rationalization of our North American Gas Cylinders businesses.

Within discontinued operations in 2022, there was a $2.6 million impairment charge relating to the right of use asset previously held as a sublet to Neos International Limited, the right of use asset being building leases retained on sale of Superform U.K.

Also within discontinued operations in 2021, there was a $1.5 million impairment charge relating to plant and equipment held in our Superform U.S. business, reflecting updated expectations of fair market value.

1. Summary of Significant Accounting Policies (continued)

Revenue recognition
A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. The majority of the Company's contracts have a single performance obligation, as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. There is no variable consideration or obligations for returns, refunds, or other related obligations in the Company's contracts.

Payment terms and conditions vary by contract type and may include a requirement of payment in advance. In general, our payment terms are 30 to 60 days. In instances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined its contracts do not include a significant financing component.

The Company's revenue is primarily derived from the following sources and are recognized when or as the Company satisfies a performance obligation by transferring a good or service to a customer:

Product revenues
We recognize revenue when it is realized or realizable and has been earned. Revenue is recognized when the following are met: (i) persuasive evidence of an arrangement exists; (ii) shipment or delivery has occurred (depending on the terms of the sale), which is when the transfer of product or control occurs; (iii) our price to the buyer is fixed or determinable; and (iv) the ability to collect is reasonably assured.

Royalties
Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreements, provided that it is probable that the economic benefits will flow to the Company and the amount of revenue can be measured reliably.

Practical Expedients
The Company applies the practical expedient and does not disclose information about remaining performance obligations for contracts that have original expected durations of one year or less.

Cash, Cash Equivalents and Restricted Cash
We consider all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Restricted cash is recognized separately in the Consolidated Balance Sheets. Restricted cash balances were $0.3 million at December 31, 2023, and $0.3 million at December 31, 2022. The amounts held in escrow were held in relation to a payment received for a historic doubtful debt in our Elektron division and workers' compensation insurance.

Inventories
Inventories are stated at the lower of cost or net realizable value. Raw materials are valued on a first-in, first-out basis. Strategic purchases of inventories in order to secure supply and reduce the impact of price volatility on the cost of inventories are valued on a weighted-average cost basis. Work in progress and finished goods costs comprise direct materials including, where applicable, direct labor costs, an apportionment of production overheads and any other costs that have been incurred in bringing the inventories to their present location and condition. Inventories are reviewed on a regular basis, and we make allowance for excess or obsolete inventories and write-down to net realizable value based primarily on committed sales prices and our estimates of expected and future product demand and related pricing.

Research and Development
Included within research and development costs are directly attributable salaries, materials and consumables, as well as third-party contractor fees and research costs. These costs are expensed as incurred.

1. Summary of Significant Accounting Policies (continued)

Foreign currencies

Transactions in currencies other than an operation's functional currency are initially recorded in the functional currency at the rate of exchange prevailing on the dates of transactions. At each balance sheet date, the foreign currency monetary assets and liabilities of each operation are translated into the functional currency of that operation at the rates prevailing on the balance sheet date.

All differences are taken to the consolidated statement of income, with the exception of differences on foreign currency borrowings that provide a hedge against a net investment in a foreign entity. These differences on foreign currency borrowings are taken directly to equity until the disposal of the net investment, at which time they are recognized in the consolidated statement of income. Tax charges and credits attributable to exchange differences on those borrowings are also included in equity.

On consolidation, the assets and liabilities of the Company's foreign operations are translated at exchange rates prevailing on the balance sheet date. Income and expense items are translated at the average exchange rates for the period. Exchange differences that arise, if any, are included in Accumulated other comprehensive income (“AOCI”), a separate component of equity. Such translation differences are recognized in the consolidated statements of income in the period in which the Company either loses control of the operation or liquidation occurs.

During 2023, the average USD/GBP sterling exchange rate was £0.8032 compared to the 2022 average of £0.8108. This change resulted in a positive impact of $2.8 million on revenue and $0.7 million on operating income. Based on the 2023 level of revenue and income, a weakening in GBP sterling leading to a £0.05 increase in the USD/GBP sterling exchange rate would result in a decrease of $7.9 million in revenue and a decrease of $0.7 million in operating net income.

Income taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. When the Company does not believe that, on the basis of available information, it is more likely than not that deferred tax assets will be fully recovered, it recognizes a valuation allowance against its deferred tax assets to reduce the deferred tax assets to the amount more likely than not to be realized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactments date.

Furthermore, a tax benefit from a tax position may be recognized in the financial statements only if it is more-likely-than-not that the position is sustainable, based solely on its technical merits and consideration of the relevant tax authority’s widely understood administrative practices and precedents. The tax benefit recognized, when the likelihood of realization is more likely-than-not (i.e. greater than 50 percent), is measured at the largest amount that is greater than 50 percent likely of being realized upon settlement.

1. Summary of Significant Accounting Policies (continued)

Employee benefit plans

The Company operates funded defined benefit pension plans in the U.K., the U.S. and France. The levels of funding are determined by periodic actuarial valuations that take into account changes in actuarial assumptions, including discount rates and expected returns on plan assets. The assets of the plans are generally held in separate Trustee-administered funds. The Company also operates defined contribution plans in the U.K., the U.S., Australia and Canada.

Actuarial assumptions are updated annually and are disclosed in Note 14. We recognize changes in the fair value of plan assets and net actuarial gains or losses for pension and other post-retirement benefits annually in the fourth quarter each year (“mark-to-market adjustment”) and, if applicable, in any quarter in which an interim remeasurement is triggered. Net actuarial gains and losses occur when the actual experience differs from any of the various assumptions used to value our pension and other post-retirement plans or when assumptions change, as they may each year. The remaining components of pension expense, including service and interest costs and estimated return on plan assets, are recorded on a quarterly basis.

Payments to defined contribution plans are charged as an expense as they fall due.

Commitments and contingencies

Loss contingencies are recognized when the Company has a present obligation as a result of a past event, it is probable that a transfer of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Share-based compensation

We account for share-based compensation awards on a fair value basis at the grant date. The estimated grant date fair value of each option award is recognized in income on an accelerated basis over the requisite service period (generally the vesting period). The estimated fair value of each option award is calculated using either the Black-Scholes option-pricing model or a Monte-Carlo simulation, both of which are subjective and involve the application of significant estimates and assumptions, including the expected term of the award, implied volatility, expected dividend yield and the risk-free interest rate. Restricted share awards and units are recorded as compensation cost on an accelerated basis over the requisite service periods based on the market value on the date of the grant.

Performance share units ("PSU") are stock awards where the ultimate number of shares issued will be contingent on the Company's performance against certain financial performance targets. The fair value of each PSU is based on the market value on the date of grant. We recognize expense based upon the fair value of the awards on the grant date and the estimated vesting of the PSUs granted. The estimated vesting of the PSUs is based on the probability of achieving certain financial performance thresholds over the specified performance period.

Trade receivables and concentration of credit risk

The Company is exposed to credit losses primarily through sales of products. The Company’s expected loss allowance methodology for accounts receivable is developed using historical collection experience, current and future economic and market conditions and a review of the current status of customers' trade accounts receivables. Due to the short-term nature of such receivables, the estimate of accounts receivable amounts that may not be collected is based on aging of the accounts receivable balances and the financial condition of customers. Additionally, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default.

Estimates are used to determine the allowance. It is based on assessment of anticipated receipts and all other historical, current and future information that is reasonably available.

We are exposed to credit risk in the event of nonpayment by customers. However, we mitigate our exposure to credit risk by performing ongoing credit evaluations and, when deemed necessary, utilizing credit insurance, prepayments or guarantees. No individual customer represented more than 10% of our revenue or accounts receivable. The concentration of credit risks from financial instruments related to the markets we serve is not expected to have a material adverse effect on our consolidated financial position, cash flows or future results of operations.

Derivative financial instruments

We recognize all derivatives as either assets or liabilities (within accounts and other receivables or other current liabilities) at fair value in our Consolidated Balance Sheets. Any changes in fair value are reported in the income statement immediately in cost of sales. We use derivative instruments for the purpose of hedging commodity price risk and currency exposures, which exist as part of ongoing business operations.

1. Summary of Significant Accounting Policies (continued)

New accounting standards

There were no new accounting standards issued which neither had a significant impact nor required adoption in the fiscal year ended December 31, 2023.

Accounting standards which have been early adopted

None

Accounting standards issued but not yet effective

In November 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-07, "Segment Reporting", which expands annual and interim disclosure requirements for reportable segments, primarily through enhanced disclosures regarding significant expenses. We plan to adopt the standard retrospectively beginning with our annual reporting for the year ending December 31, 2024 and interim reporting beginning January 1, 2025. We are currently evaluating the potential effect that the updated standard will have on our financial statement disclosures.

In December 2023, the FASB issued ASU No. 2023-09, "Improvements to Income Tax Disclosures", which requires new and enhanced disclosures primarily related to income taxes paid and the effective tax rate reconciliation. We will adopt the standard beginning with our annual reporting for the year ending December 31, 2025. We are currently evaluating the potential effect that the updated standard will have on our financial statement disclosures.

2. Revenue

Disaggregated revenue from continuing operations for the fiscal years ended December 31, 2023, 2022, and 2021, are included below and in Note 17, Segment Information.

	Years ended December 31,			
	2023			
In millions	Gas Cylinders	Elektron	Graphic Arts	**Total**
General industrial	$ 32.0	$ 54.9	$ 31.5	**$ 118.4**
Transportation	70.6	48.7	—	**119.3**
Defense, First Response & Healthcare	83.8	83.5	—	**167.3**
Total	**$ 186.4**	**$ 187.1**	**$ 31.5**	**$ 405.0**

	2022			
	Gas Cylinders	Elektron	Graphic Arts	**Total**
General industrial	$ 34.0	$ 82.8	$ 38.7	**$ 155.5**
Transportation	77.8	55.1	—	**132.9**
Defense, First Response & Healthcare	71.9	63.1	—	**135.0**
Total	**$ 183.7**	**$ 201.0**	**$ 38.7**	**$ 423.4**

	2021			
	Gas Cylinders	Elektron	Graphic Arts	**Total**
General industrial	$ 33.4	$ 55.7	$ 40.1	**$ 129.2**
Transportation	71.2	45.8	—	**117.0**
Defense, First Response & Healthcare	73.7	54.2	—	**127.9**
Total	**$ 178.3**	**$ 155.7**	**$ 40.1**	**$ 374.1**

The Company’s performance obligations are satisfied at a point in time. With the classification of our Superform business as discontinued operations, none of the Company's revenue from continuing operations is satisfied over time. As a result, the Company's contract receivables, contract assets and contract liabilities at December 31, 2023, 2022 and 2021 are included within current assets and liabilities held-for-sale.

3. Acquisitions and disposals

In March 2021, the Company completed the acquisition of the Structural Composites Industries LLC ("SCI") business of Worthington Industries, Inc., based in Pomona, California, for $19.3 million cash consideration. The fair value of assets and liabilities acquired were equal to the cash consideration paid.

There were acquisition-related costs of $0.3 million and $1.5 million in 2022 and 2021 respectively. These represented transitional costs and professional fees incurred in relation to the above SCI acquisition.

In 2021, the Company recognized a net gain on disposition of $6.6 million, consisting of a $7.1 million gain on our U.S. aluminum business, sold in March 2021, partially offset by a $0.5 million loss on our Superform U.K. business sold in September 2021.

4. Restructuring charges

During 2023, 2022 and 2021, we initiated and continued execution of certain business restructuring initiatives aimed at reducing our fixed cost structure and realigning our business.

All restructuring charges in the consolidated statements of income are in relation to severance and related costs for 2023, 2022 and 2021.

Restructuring costs by reportable segment were as follows:

	Years ended December 31,		
In millions	**2023**	**2022**	**2021**
Severance and other costs			
Gas Cylinders Segment	**$ (2.9)**	$ (1.7)	$ (5.3)
Elektron Segment	**(0.3)**	(0.2)	(0.9)
	$ (3.2)	$ (1.9)	$ (6.2)
Asset impairments			
Gas Cylinders Segment	**$ (3.0)**	$ —	$ —
Elektron Segment	**(0.2)**	—	—
	$ (3.2)	$ —	$ —
Total restructuring charges	**(6.4)**	(1.9)	(6.2)

Activity related to restructuring, recorded in *other current liabilities* in the consolidated balance sheets is summarized as follows:

In millions	**2023**	**2022**
Balance at January 1,	**$ 3.7**	$ 11.7
Costs incurred	**3.2**	1.9
Cash payments and other	**(3.6)**	(9.9)
Balance at December 31,	**$ 3.3**	$ 3.7

5. Other charges

There were other charges of $1.1 million in 2021 which related to the settlement of a class action lawsuit in the Gas Cylinders segment as a result of an alleged historic violation of the California Labor Code, concerning a Human Resources administration matter.

6. Earnings per share

Basic loss / earnings per share are computed by dividing net loss / income for the period by the weighted-average number of ordinary shares outstanding, net of Treasury shares and shares held in ESOP. Diluted loss / earnings per share are computed by dividing net loss / income for the period by the weighted average number of ordinary shares outstanding and the dilutive ordinary share equivalents.

Basic and diluted loss / earnings per share were calculated as follows:

	Years ended December 31,		
In millions except share and per-share data	**2023**	**2022**	**2021**
Basic (loss) / earnings:			
Net (loss) / income from continuing operations	**$ (2.6)**	$ 32.0	$ 30.0
Net income / (loss) from discontinued operations (including net gain on disposition of $6.6m in 2021)	**0.7**	(5.1)	(0.1)
Net (loss) / income	**$ (1.9)**	$ 26.9	$ 29.9
Weighted average number of £0.50 ordinary shares:			
For basic loss / earnings per share	**26,897,556**	27,304,847	27,698,691
Dilutive effect of potential common stock	**123,403**	236,355	333,815
For diluted loss / earnings per share	**27,020,959**	27,541,202	28,032,506
(Loss) / earnings per share using weighted average number of ordinary shares outstanding:[(1)(2)]			
Basic from continuing operations	**$ (0.10)**	$ 1.17	$ 1.08
Basic from discontinued operations	**$ 0.03**	$ (0.19)	$ —
Basic (loss) / earnings per ordinary share	**$ (0.07)**	$ 0.99	$ 1.08
Diluted from continuing operations	**$ (0.10)**	$ 1.16	$ 1.07
Diluted from discontinued operations	**$ 0.03**	$ (0.19)	$ —
Diluted (loss) / earnings per ordinary share	**$ (0.07)**	$ 0.98	$ 1.07

[(1)] The calculation of earnings per share is performed separately for continuing and discontinued operations. As a result, the sum of the two in any particular year may not equal the earnings-per-share amount in total.

[(2)] The loss per share for continuing operations in 2023 has not been diluted, since the incremental shares included in the weighted-average number of shares outstanding would have been anti-dilutive.

7. Discontinued operations

Our Superform aluminum superplastic forming business, which operated from sites in the U.S. and the U.K., and our U.S. aluminum gas cylinder business were historically included in the Gas Cylinders Segment. As a result of our decision to exit non-strategic aluminum product lines, we have reflected the results of operations of these businesses as discontinued operations in the Consolidated Statements of Income for all periods presented. We expect our Superform U.S. business to be sold within the next twelve months.

Our U.S. aluminum gas cylinder business was sold in March 2021 for $20.2 million, net of working capital adjustments. The Company recognized a gain on disposition, net of tax, of $7.1 million.

In September 2021, our Superform U.K. business was sold for $4.0 million, net of working capital adjustments. The Company recognized a loss on disposition, net of tax, of $0.5 million.

In 2022, the Company recognized impairment and disposal-related costs of $2.6 million and $2.0 million respectively, in relation to the previous dispositions which occurred in 2021.

In 2023, the Company recognized a disposal-related credit of $0.2 million, in relation to a previously impaired asset from the previous dispositions which occurred in 2021.

The assets and liabilities of the above businesses have been presented within C*urrent assets held-for-sale* and C*urrent liabilities held-for-sale* in the Consolidated Balance Sheets at December 31, 2023, and December 31, 2022. In 2021, Company recognized a $1.5 million impairment charge relating to plant and equipment held in our Superform U.S. business reflecting updated expectations of fair market value.

7. Discontinued operations (continued)

Results of discontinued operations were as follows:

In millions		2023		2022		2021
Net sales	**$**	**8.2**	$	7.7	$	20.9
Cost of goods sold		**(6.4)**		(6.9)		(21.8)
Gross profit / (loss)		**1.8**		0.8		(0.9)
Selling, general and administrative expenses		**(1.7)**		(0.9)		(2.9)
Restructuring charges		**(0.2)**		(0.3)		(1.0)
Acquisition and disposal credit / (costs)		**0.2**		(2.0)		—
Impairment charges		**—**		(2.6)		(1.5)
Income / (loss) before income taxes		**0.1**		(5.0)		(6.3)
Provision for income taxes		**0.6**		(0.1)		(0.4)
Income / (loss) after income taxes		**0.7**		(5.1)		(6.7)
Net gain on disposition of discontinued operations		**—**		—		6.6
Net income / (loss)	**$**	**0.7**	$	(5.1)	$	(0.1)

The assets and liabilities classified as held-for-sale were as follows:

In millions		December 31, 2023		December 31, 2022
Accounts and other receivables	**$**	**2.3**	$	2.7
Inventories		**3.3**		2.7
Current assets		**5.6**		5.4
Right-of-use assets		**2.1**		2.7
Total assets	**$**	**7.7**	$	8.1
Accounts payable		**0.9**		0.8
Accrued liabilities		**0.4**		0.2
Other current liabilities		**2.6**		4.0
Current liabilities		**3.9**		5.0
Total liabilities	**$**	**3.9**	$	5.0

Also included within assets held-for-sale in 2023 and 2022 are land and buildings valued at $1.2 million, within our Elektron Segment.

The depreciation and amortization, capital expenditures and significant operating non-cash items were as follows:

In millions		2023		2022		2021
Non-cash add-backs to cash flows from discontinued operating activities:						
Depreciation	**$**	**0.1**	$	0.1	$	0.5
Impairment charges		**—**		—		1.5
Settlements from sale of businesses		**—**		1.0		—
Cash flows from discontinued investing activities:						
Capital expenditures	**$**	**0.1**	$	0.1	$	0.1

8. Goodwill and other identifiable intangible assets

Changes in goodwill during the years ended December 31, 2023 and 2022 were as follows:

In millions	Gas Cylinders	Elektron	Total
At January 1, 2022	**$ 27.6**	**$ 42.1**	**$ 69.7**
Exchange difference	(2.6)	(1.5)	(4.1)
At December 31, 2022	**25.0**	**40.6**	**65.6**
Exchange difference	1.2	0.7	1.9
Net balance at December 31, 2023	**$ 26.2**	**$ 41.3**	**$ 67.5**

Accumulated goodwill impairment losses in relation to continuing operations were $8.0 million as of December 31, 2023 and 2022.

Changes in the gross value of identifiable intangible assets during the year ended December 31, 2023, were as follows:

In millions	Customer relationships	Technology and trading related	Total
At January 1, 2022	**$ 15.2**	**$ 8.2**	**$ 23.4**
Exchange movements	—	(0.8)	**(0.8)**
At December 31, 2022	**$ 15.2**	**$ 7.4**	**$ 22.6**
Exchange movements	—	0.4	0.4
At December 31, 2023	**$ 15.2**	**$ 7.8**	**$ 23.0**

Identifiable intangible assets consisted of the following:

	December 31, 2023			December 31, 2022		
In millions	Gross	Accumulated amortization	Net	Gross	Accumulated amortization	Net
Customer relationships	**$ 15.2**	**$ (6.6)**	**$ 8.6**	$ 15.2	$ (6.1)	$ 9.1
Technology and trading related	**7.8**	**(4.4)**	**3.4**	7.4	(4.0)	3.4
Total identifiable intangibles	**$ 23.0**	**$ (11.0)**	**$ 12.0**	$ 22.6	$ (10.1)	$ 12.5

Identifiable intangible asset amortization expense in 2023, 2022 and 2021 was $0.8 million, $0.7 million and $0.9 million, respectively.

Intangible asset amortization expense over the next five years is expected to be approximately $0.8 million per year.

The weighted-average amortization period for the customer relationships is 15 years and for the technology and trading related assets is 13 years.

9. Supplementary balance sheet information

In millions	**2023**	**2022**
Accounts and other receivables		
Trade receivables, net	**$ 52.3**	$ 56.4
Related parties	**0.1**	0.1
Prepayments and accrued income	**5.7**	6.6
Derivative financial instruments	**0.4**	0.7
Other receivables	**1.4**	4.0
Total accounts and other receivables	**$ 59.9**	$ 67.8
Inventories		
Raw materials and supplies	**$ 34.7**	$ 42.7
Work-in-process	**34.8**	44.0
Finished goods	**26.4**	24.4
Total inventories	**$ 95.9**	$ 111.1
Other current assets		
Income tax receivable	**1.5**	—
Total other current assets	**$ 1.5**	$ —
Property, plant and equipment, net		
Land, buildings and leasehold improvements	**$ 51.0**	$ 58.9
Machinery and equipment	**234.9**	254.9
Construction in progress	**13.6**	9.8
Total property plant and equipment	**299.5**	323.6
Accumulated depreciation and impairment	**(235.7)**	(245.9)
Total property, plant and equipment, net	**$ 63.8**	$ 77.7
Current maturities of long-term debt and short-term borrowings		
Bank and other loans	**$ —**	$ 25.0
Bank overdraft	**4.6**	—
Total current maturities of long-term debt and short-term borrowings	**$ 4.6**	$ 25.0
Other current liabilities		
Short term provision	**$ 0.1**	$ 0.1
Restructuring provision	**3.3**	3.7
Derivative financial instruments	**—**	0.4
Operating lease liability	**4.7**	4.7
Advance payments	**0.8**	2.3
Total other current liabilities	**$ 8.9**	$ 11.2
Other non-current liabilities		
Contingent liabilities	**$ 1.6**	$ 0.7
Operating lease liability	**15.0**	18.2
Other non-current liabilities	**0.2**	0.1
Total other non-current liabilities	**$ 16.8**	$ 19.0

Impairment of property, plant and equipment

In 2023, $11.1 million and $1.6 million of property, plant and equipment, and right-of-use asset impairments respectively, were recognized in continuing operations relating to our Graphic Arts segment. There were no property, plant and equipment, or right-of-use asset impairments recognized in 2022 or 2021.

10. Accumulated Other Comprehensive Loss

Components of Accumulated Other Comprehensive Loss consist of the following:

In millions		December 31, 2023		December 31, 2022
Cumulative translation adjustments	**$**	**(58.4)**	$	(65.7)
Pension plans actuarial loss, net of tax		**(59.5)**		(73.7)
Accumulated other comprehensive loss	**$**	**(117.9)**	$	(139.4)

11. Debt

Debt outstanding was as follows:

In millions		December 31, 2023		December 31, 2022
4.88% Loan Notes due June 2023		**—**		25.0
4.94% Loan Notes due June 2026		**25.0**		25.0
Revolving credit facility		**43.1**		31.9
Bank overdraft		**4.6**		—
Unamortized debt issuance costs		**(0.5)**		(0.7)
Total debt	**$**	**72.2**	$	81.2
Less current portion		**(4.6)**		(25.0)
Non-current debt	**$**	**67.6**	$	56.2

In October 2021, the Company completed a refinancing of its existing Revolving Credit Facility, ("RCF"), extending its tenure to October 2026, while providing increased flexibility to incur additional indebtedness outside of this agreement if required and reducing the covenant burden.

At December 31, 2023, $125 million (December 31, 2022, $100 million) of committed debt facilities in the form of a multi-currency (GBP sterling, U.S. dollars or euros) RCF was available to the Company. In 2023, the Company increased the capacity from $100 million to $125 million and the RCF was used to fund the $25 million Loan Notes repayment in June 2023. In addition, $25 million of uncommitted facility capacity remains available through an accordion increase clause.

The RCF bears interest equal to an applicable margin, based upon the Company's leverage, plus either EURIBOR, in the case of amounts drawn in euros, SONIA (Sterling Overnight Index Average), in the case of amounts drawn in GBP sterling, or SOFR (Secured Overnight Financing Rate) in the case of amounts drawn in U.S. dollars. The weighted-average interest rate on the RCF was 7.70% and 3.80% in 2023 and 2022, respectively.

The maturity profile of the Company's debt, excluding unamortized issuance costs and discounts is, as follows:

In millions		2024		2025		2026		Total
Loan Notes due June 2026		—		—		25.0		**25.0**
Revolving credit facility due October 2026		—		—		43.1		**43.1**
Other - Bank overdraft		4.6		—		—		**4.6**
Total debt	$	4.6	$	—	$	68.1	**$**	**72.7**

The bank overdraft is an uncommitted facility with no expiration date, this is reviewed annually and can be cancelled by either the bank or the Company on demand.

11. Debt (continued)

Facilities

We have been in compliance with the covenants under the Note Purchase, Private Shelf Agreement and Senior Facilities Agreement throughout all of the quarterly measurement dates in 2023.

The agreements contain a number of additional undertakings and covenants that, among other things, restrict, subject to certain exceptions, our and our subsidiaries' ability to:

- engage in mergers, divestitures, consolidations or divisions;
- change the nature of our business;
- make certain acquisitions;
- participate in certain joint ventures;
- grant liens or other security interests on our assets;
- sell, lease, transfer or otherwise dispose of assets, including receivables;
- enter into certain non-arm's-length transactions;
- grant guarantees;
- pay off certain existing indebtedness;
- make investments, loans or grant credit; and
- issue shares or other securities;

The agreements requires us to maintain compliance with an interest coverage ratio and a leverage ratio. The interest coverage ratio measures our EBITDA (as defined in the agreements) to Net Finance Charges (as defined in the agreements). We are required to maintain a minimum interest coverage ratio of 4.0:1. The leverage ratio measures our Total Net Debt (as defined in the agreements) to the Relevant Period Adjusted Acquisition EBITDA (as defined in the agreements). We are required to maintain a leverage ratio of no more than 3.0:1.

Any breach of a covenant could result in a default under the agreements, in which case lenders could elect to declare all borrowed amounts immediately due and payable if the default is not remedied or waived within any applicable grace periods. Additionally, our subsidiaries' ability to make investments, incur liens and make certain restricted payments is also controlled by limits within the agreements.

12. Derivatives and Financial Instruments

The Company's financial instruments comprise bank and other loans, senior loan notes, derivatives and trade payables. Other than derivatives, the main purpose of these financial instruments is to raise finance for the Company's operations. The Company also has various financial assets, such as trade receivables and cash and cash equivalents, which arise directly from its operations.

Derivative financial instruments
We are exposed to market risk during the normal course of business from changes in currency exchange rates, interest rates and commodity prices, such as magnesium and aluminum prices. We manage interest rate exposures through a combination of normal operating and financing activities and through the use of derivative financial instruments, such as foreign currency forward purchase contracts. We do not use market risk-sensitive instruments for trading or speculative purposes. In 2023, the Company had $0.4 million (2022: $0.7 million) derivative financial instruments recorded within accounts and other receivables. The value of derivative financial instruments recorded in other current liabilities in 2023 was $nil (2022: $0.4 million).

Forward foreign currency exchange contracts

The Company incurs currency transaction risk whenever one of the Company's operating subsidiaries enters into either a purchase or sales transaction in a currency other than its functional currency. Currency transaction risk is reduced by matching sales and expenses in the same currency. The Company's U.S. operations have little currency exposure as most purchases, costs and sales are conducted in U.S. dollars. The Company's U.K. operations are exposed to exchange transaction risks, mainly because these operations sell goods priced in U.S. dollars and purchase raw materials priced in U.S. dollars.

At December 31, 2023 and 2022, the Company held various forward foreign currency exchange contracts in respect of forward sales for U.S. dollars, euros, Canadian dollars and Japanese yen for the receipt of GBP sterling. The Company also held forward foreign currency exchange contracts in respect of forward purchases for U.S. dollars, euros, Canadian dollars, Australian dollars and Chinese yuan by the sale of GBP sterling. The contract totals in GBP sterling, range of maturity dates and range of exchange rates are disclosed overleaf, with the value denominated in GBP sterling, given that it is the currency the all of the contracts are held in.

12. Derivatives and Financial Instruments (continued)

	December 31, 2023			
Sales hedges	**U.S. dollars**	**Euros**	**Canadian Dollars**	**Japanese Yen**
Contract totals/£m	23.5	3.4	0.3	0.2
Maturity dates	01/24 to 02/24	01/24 to 03/24	01/24 to 02/24	01/24 to 02/24
Exchange rates	$1.2159 to $1.2760	€1.1432 to €1.1494	$1.6843	¥179.3673 to ¥185.6455

Purchase hedges	U.S. dollars	Euros	Canadian dollars	Australian dollars	Chinese yuan
Contract totals/£m	0.4	0.8	11.0	0.9	1.4
Maturity dates	02/24 to 03/24	01/24	01/24 to 02/24	01/24	01/24
Exchange rates	$1.2155 to $1.2614	€1.1577 to €1.1535	$1.7199 to $1.6840	1.8719	¥9.0433 to ¥9.0440

	December 31, 2022		
Sales hedges	**U.S. dollars**	**Euros**	**Canadian Dollars**
Contract totals/£m	13.4	12.8	0.1
Maturity dates	01/23 to 03/23	01/23 to 03/23	01/24
Exchange rates	$1.1207 to $1.2083	€1.1234 to €1.1468	$1.6320

Purchase hedges	U.S. dollars	Euros	Canadian dollars	Australian dollars	Chinese yuan
Contract totals/£m	9.2	2.6	9.5	1.0	1.6
Maturity dates	01/23 to 04/23	01/23 to 04/23	01/23	01/23	01/23 to 03/23
Exchange rates	$1.1040 to $1.2084	€1.1437 to €1.2240	$1.6796 to $1.6239	$1.7787	¥8.3906 to ¥8.4126

The above contracts are held in GBP sterling. Therefore, the analysis in the table has been given in GBP sterling to avoid any movements as a result of translation.

Fair value of financial instruments

The following methods were used to estimate the fair values of each class of financial instrument:

Cash at bank and in hand

The carrying value approximates the fair value as a result of the short-term maturity of the instruments. Cash at bank and in hand are subject to a right to offset in the U.S. and U.K.

Bank loans

At December 31, 2023, bank and other loans of $72.7 million (2022: $81.9 million) were outstanding. At December 31, 2023, bank and other loans are shown net of issue costs of $0.5 million (2022: $0.7 million), and these issue costs are to be amortized to the expected maturity of the facilities. This carrying value approximates to its fair value at December 31, 2023 and 2022 respectively. At December 31, 2023, $47.7 million(2022: $31.9 million) of the total $72.7 million (2022: $81.9 million) bank and other loans was variable interest rate debt and subject to floating interest rate risk, with the remainder being fixed rate debt.

Forward foreign currency exchange rate contracts

The fair value of these contracts was calculated by determining what the Company would be expected to receive or pay on termination of each individual contract by comparison to present market prices.

12. Derivatives and Financial Instruments (continued)

Fair value of financial instruments (continued)

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

Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities.

Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.

Level 3: techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

The fair values of the financial instruments of the Company at December 31, 2023 and 2022, were analyzed using the hierarchy as follows:

	December 31, 2023			
In millions	**Total**	**Level 1**	**Level 2**	**Level 3**
Derivative financial assets:				
Foreign currency contract assets	**$ 0.4**	$ —	$ 0.4	$ —
Interest bearing loans and borrowings:				
Loan Notes due 2026	**25.0**	—	25.0	—
Revolving credit facility	**43.1**	—	43.1	—
Bank overdraft	**4.6**	—	4.6	—

	December 31, 2022			
In millions	**Total**	**Level 1**	**Level 2**	**Level 3**
Derivative financial assets:				
Foreign currency contract assets	**$ 0.7**	$ —	$ 0.7	$ —
Derivative financial liabilities:				
Foreign currency contract liabilities	**0.4**	—	0.4	—
Interest bearing loans and borrowings:				
Loan Notes due 2023	**25.0**	—	25.0	—
Loan Notes due 2026	**25.0**	—	25.0	—
Revolving credit facility	**31.9**	—	31.9	—

13. Income Taxes

Income before income taxes consisted of the following:

In millions	Years ended December 31, 2023	2022	2021
U.K.	**$ 10.4**	$ 10.9	$ 21.8
International[1]	**(20.1)**	30.1	13.6
(Loss) / income before income taxes	**$ (9.7)**	$ 41.0	$ 35.4

[1] "International" reflects non-U.K. income before income taxes.

The provision for income taxes consisted of the following:

In millions	Years ended December 31, 2023	2022	2021
Currently payable			
U.K.	**$ 0.5**	$ (3.5)	$ 2.0
International[1]	**0.4**	2.7	5.4
Total current taxes	**$ 0.9**	$ (0.8)	$ 7.4
Deferred			
U.K.	**$ 1.3**	$ 7.1	$ (1.1)
International[1]	**(9.3)**	2.7	(0.9)
Total deferred taxes	**$ (8.0)**	$ 9.8	$ (2.0)
Total provision for income taxes	**$ (7.1)**	$ 9.0	$ 5.4

[1] "International" reflects non-U.K. income taxes.

Differences between the financial reporting and the corresponding tax basis of assets and liabilities and the different income tax rates and laws applicable to the Company, among other factors, give rise to permanent differences between the statutory tax rate applicable in the U.K. and the effective tax rate presented in the Consolidated Income Statement, which in 2023, 2022 and 2021, were as follows:

In millions	Years ended December 31, 2023	2022	2021
Income before income taxes	**$ (9.7)**	$ 41.0	$ 35.4
Provision for income taxes at the U.K. statutory tax rate (2023: 23.5%, 2022:19%, 2021: 19%)	**(2.3)**	7.8	6.7
Effect of:			
Non-deductible expenses	**0.6**	0.7	1.9
Movement in valuation allowances	**(0.2)**	0.6	(0.6)
Differences in income tax rates in countries where the Company operates[1]	**0.6**	1.5	0.5
Effect of changes in tax rates [2]	**0.1**	(0.1)	(2.0)
Tax impact of defined benefit pension settlement	**(4.9)**	—	—
Other	**(1.0)**	(1.5)	(1.1)
Total provision for income taxes	**$ (7.1)**	$ 9.0	$ 5.4

[1] Refers mainly to the effects of the differences between the statutory income tax rate in the U.K. against the applicable income tax rates of each country where the Company operates.

[2] An increase in the U.K. corporation tax rate from 19% to 25%, effective from April 1, 2023, was announced in March 2021. Rate changes also occur in each period as a result of changes in the average state tax rate in the U.S.

13. Income Taxes (continued)

Reconciliations of the beginning and ending gross unrecognized tax benefits were as follows:

In millions	Years ended December 31, 2023	2022	2021
Beginning balance	**$ 1.1**	$ 1.8	$ 2.4
Gross increases based on tax positions related to the current year	**—**	—	0.1
Reductions due to expiry of statute of limitations	**—**	(0.7)	(0.7)
Ending balance	**$ 1.1**	$ 1.1	$ 1.8
Non-current	**$ 1.1**	$ 1.1	$ 1.8

The Company's unrecognized tax benefits relate to the pricing of its various inter-company transactions. Because the transfer pricing calculation is often multifaceted, taking into account economics, finance, industry practice, and functional analysis, a company's transfer pricing position often sits at a particular point along a wide continuum of possible pricing outcomes. The inherent subjectivity in pricing inter-company balances gives rise to measurement uncertainty. Management has considered the valuation uncertainty in determining the measurement of the uncertain tax position. There are no current tax audit examinations.

At December 31, 2023, 2022 and 2021, there were $0.1 million, $0.3 million, and $0.4 million of unrecognized tax benefits, respectively, that, if recognized, would affect the annual effective tax rate.

The Company recognizes interest accrued and penalties relating to unrecognized tax benefits in the income tax line. During the years ended December 31, 2023, 2022 and 2021, the Company recognized no amounts related to interest and penalties.

The following is a summary of the tax years open by major tax jurisdiction:

Jurisdiction	Years open
U.K.	**2020 - 2023**
U.S. Federal	**2020 - 2023**
U.S. State and local	**2020 - 2023**
France	**2020 - 2023**
Germany	**2019 - 2023**
China	**2020 - 2023**
Canada	**2019 - 2023**

13. Income Taxes (continued)

Taxes have not been provided on undistributed earnings of subsidiaries where it is our intention to reinvest these earnings permanently or to repatriate the earnings only when it is tax efficient to do so. The amount of unremitted earnings at December 31, 2023 was approximately $92.6 million (at December 31, 2022: $83.1 million, at December 31, 2021: $70.3 million). If these earnings were remitted, it is estimated that the additional income tax arising would be approximately $1.3 million (at December 31, 2022: $1.2 million, at December 31, 2021: $1.0 million).

Deferred taxes were recorded in the Consolidated Balance Sheets as follows:

	December 31,	
In millions	**2023**	**2022**
Deferred tax assets	**$ 3.9**	$ 3.0
Deferred tax liabilities	**(10.2)**	(9.9)
Net deferred tax (liabilities) / assets	**$ (6.3)**	$ (6.9)

The tax effects of the major items recorded in deferred tax assets and liabilities were as follows:

	December 31,	
In millions	**2023**	**2022**
Deferred tax assets		
Accrued liabilities	**1.0**	0.8
Tax loss and credit carry forwards	**19.0**	18.9
Employee compensation benefits	**1.2**	1.3
Operating leases	**3.5**	4.0
Property, plant and equipment	**1.4**	1.7
Excess interest capacity carry forward	**2.0**	—
Other	**0.7**	0.4
Total deferred tax assets	**28.8**	27.1
Valuation allowances	**(17.0)**	(16.5)
Deferred tax assets, net of valuation allowances	**$ 11.8**	$ 10.6
Deferred tax liabilities		
Property, plant and equipment	**$ 1.5**	$ 6.0
Pension benefits	**9.4**	3.7
Goodwill and other intangibles	**4.4**	3.9
Operating leases	**2.8**	3.9
Other	**—**	—
Total deferred tax liabilities	**$ 18.1**	$ 17.5
Net deferred tax assets	**$ (6.3)**	$ (6.9)

Deferred tax liabilities and assets represent the tax effect of temporary differences between the value of assets and liabilities for financial statement purposes and such values as measured by the relevant jurisdiction's tax laws and regulations. Deferred tax assets and liabilities from the same tax jurisdiction have been netted, resulting in assets and liabilities being recorded under the deferred taxation captions on the consolidated balance sheet.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences and carryforwards become deductible or creditable. Management considers the scheduled reversal of existing taxable temporary differences, projected future taxable income, and tax-planning strategies in making this assessment.

Reconciliations of the beginning and ending valuation allowances were as follows:

	Years ended December 31,	
In millions	**2023**	2022
Beginning balance	**$ 16.5**	$ 18.0
Foreign exchange movements	**0.7**	(2.2)
(Deductions) / additions	**(0.2)**	0.7
Closing balance	**$ 17.0**	$ 16.5

In March 2021 an increase in the U.K. corporation tax rate from 19% to 25% was announced, effective from April 1, 2023. Deferred tax liabilities and assets which are expected to unwind after April 1, 2023 have been valued at 25%.

13. Income Taxes (continued)

At December 31, 2023, the Company had carried forward tax losses and tax credits of $74.1 million (U.K.: $16.5 million, non-U.K.: $57.6 million). Carried forward tax losses and tax credits for 2022 were $74.8 million (U.K.: $15.6 million, non-U.K.: $59.2 million) and for 2021 were $106.3 million (U.K.: $43.0 million, non-U.K.: $63.3 million). To the extent that these losses are not already recognized as deferred income taxes assets and are available to offset against future taxable profits, it is expected that the future effective tax rate would be below the standard rate in the country where the profits are offset. A valuation allowance of $17.0 million (2022: $16.5 million, 2021: $18.0 million) exists for deferred tax benefits related to the tax loss and tax credit carry forwards and other benefits that may not be realized. The apportionment of the valuation allowance between the U.K. and non-U.K. jurisdictions is U.K.: $3.9 million, non-U.K.: $13.1 million (2022: U.K.: $3.5 million, non-U.K.: $13.0 million; 2021: U.K.: $4.1 million, non-U.K.: $13.9 million). The non-U.K. valuation allowances relates to tax losses in France and Germany.

Of the carried forward tax losses and tax credits as at December 31, 2023, $8.0 million expire between 2024 and 2034, and $66.1 million are available for indefinite carry-forward.

14. Pension Plans

The Company operates funded defined benefit pension plans in the U.K., the U.S. and France. The levels of funding are determined by periodic actuarial valuations that take into account changes in actuarial assumptions, including discount rates and expected returns on plan assets. The assets of the plans are generally held in separate Trustee-administered funds. The Company also operates defined contribution plans in the U.K., the U.S., Australia and Canada.

The "10% corridor" method for recognizing gains and losses has been adopted. This methodology means that cumulative gains and losses up to an amount equal to 10% of the higher of the liabilities and the assets (the corridor) have no impact on the pension cost. Cumulative gains or losses greater than this corridor are amortized over the average future lifetime of the members in the plans.

The principal defined benefit pension plan in the Company is the U.K. Luxfer Group Pension Plan ("the Plan"), which closed to new members in 1998, with new employees then being eligible for a defined contribution plan. In April 2016, the Plan was closed to further benefit accrual, with members being offered contributions to a defined contribution plan. The Company completed a buyout of the U.S. BA Holdings, Inc. Pension Plan in the first quarter of 2023. The Company's other arrangements are less significant than the Plan.

The following tables present reconciliations of pension benefit obligations, fair value of plan assets and the funded status of pension plans as of and for the years ended December 31, 2023 and 2022:

In millions	**2023 U.K.**	**2023 U.S. / other**	**2023 Total**	**2022 U.K.**	**2022 U.S. / other**	**2022 Total**
Change in benefit obligations						
Benefit obligation at January 1	**$ 225.6**	**$ 32.6**	**$ 258.2**	$ 362.9	$ 48.7	$ 411.6
Interest cost	**11.0**	**0.2**	**11.2**	6.2	1.3	7.5
Settlement gain	**—**	**(29.3)**	**(29.3)**	—	(5.9)	(5.9)
Actuarial gains	**(2.9)**	**(2.5)**	**(5.4)**	(93.7)	(9.0)	(102.7)
Exchange difference	**12.8**	**—**	**12.8**	(37.0)	—	(37.0)
Benefits paid	**(12.6)**	**(0.9)**	**(13.5)**	(12.8)	(2.5)	(15.3)
Benefit obligation at December 31	**$ 233.9**	**$ 0.1**	**$ 234.0**	$ 225.6	$ 32.6	$ 258.2
Change in plan assets						
Fair value of plan assets at January 1	**$ 252.6**	**$ 28.1**	**$ 280.7**	$ 376.6	$ 46.8	$ 423.4
Actual return on assets	**19.4**	**—**	**19.4**	(71.2)	(10.4)	(81.6)
Exchange difference	**14.6**	**—**	**14.6**	(40.4)	—	(40.4)
Contributions from employer	**0.2**	**2.1**	**2.3**	0.4	—	0.4
Benefits paid	**(12.6)**	**(0.9)**	**(13.5)**	(12.8)	(2.4)	(15.2)
Settlement loss	**—**	**(29.3)**	**(29.3)**	—	(5.9)	(5.9)
Fair value of plan assets at December 31	**$ 274.2**	**$ —**	**$ 274.2**	$ 252.6	$ 28.1	$ 280.7
Funded status						
Net benefit surplus / (obligation)	**$ 40.3**	**$ (0.1)**	**$ 40.2**	$ 27.0	$ (4.5)	$ 22.5

The net benefit surplus of $40.3 million (2022: $27.0 million) in the U.K. plan is recorded in non-current assets at December 31, 2023 and December 31, 2022, the net benefit obligation of $0.1 million (2022: $4.5 million) in the U.S. / other is recorded in non-current liabilities at December 31, 2022.

In December 2021, the Company made a special one-off deficit reduction payment to the U.K. Plan of $12.7 million. The payment means the Company is not expected to make any additional deficit recovery contributions to the Plan until at least December 2024. Contributions of $0.2m were paid to the U.K. plan in relation to the Pension Protection Fund levy.

14. Pension Plans (continued)

The amounts recognized in the Consolidated Statements of Income in respect of the pension plans were as follows:

In millions	2023 U.K.	2023 U.S. / other	2023 Total	2022 U.K.	2022 U.S. / other	2022 Total	2021 U.K.	2021 U.S. / other	2021 Total
In respect of defined benefit plans:									
Interest cost	**11.0**	**0.2**	**11.2**	6.2	1.3	7.5	5.6	1.1	6.7
Expected return on assets	**(13.8)**	**0.2**	**(13.6)**	(10.4)	(0.7)	(11.1)	(10.2)	(1.8)	(12.0)
Settlement loss	**—**	**8.9**	**8.9**	—	2.0	2.0	—	—	—
Amortization of net actuarial loss	**1.7**	**0.1**	**1.8**	1.8	0.3	2.1	3.4	0.4	3.8
Amortization of prior service credit	**(0.4)**	**—**	**(0.4)**	(0.4)	—	(0.4)	(0.4)	—	(0.4)
Total (credit) / expense for defined benefit plans	**$ (1.5)**	**$ 9.4**	**$ 7.9**	$ (2.8)	$ 2.9	$ 0.1	$ (1.6)	$ (0.3)	$ (1.9)
In respect of defined contribution plans:									
Total charge for defined contribution plans	**$ 2.1**	**$ 1.6**	**$ 3.7**	$ 2.0	$ 1.7	$ 3.7	$ 2.1	$ 1.5	$ 3.6
Total charge / (credit) for benefit plans	**$ 0.6**	**$ 11.0**	**$ 11.6**	$ (0.8)	$ 4.6	$ 3.8	$ 0.5	$ 1.2	$ 1.7

In accordance with ASC 715, defined benefit pension credit is split in the income statement, with $0.3 million (2022: $0.2 million; 2021: $0.4 million) of expenses recognized within sales, general and administrative expenses and a charge of $7.6 million (2022: $0.1 million credit; 2021: $2.3 million credit) recognized below operating income in the income statement.

The following table shows other changes in plan assets and benefit obligations recognized in other comprehensive income during the years ended December 31:

In millions	2023	2022	2021
Net actuarial gain	**$ 11.4**	$ 8.2	$ 38.8
Amortization of actuarial loss	**1.8**	2.1	3.8
Actuarial loss recognized due to settlement event	**8.9**	2.0	—
Amortization of prior service credit	**(0.4)**	(0.4)	(0.4)
Total recognized in other comprehensive income	**21.7**	11.9	42.2
Total recognized in net periodic benefit cost and other comprehensive income	**$ 13.8**	$ 11.8	$ 44.1

The estimated net loss for defined benefit plans included in AOCI that will be recognized in net periodic benefit cost during 2024 is $1.0 million, consisting of amortization of net actuarial loss of $1.4 million, partially offset by amortization of prior service credit of $0.4 million. In accordance with ASC 715, recognition of all accumulated losses were triggered upon settlement of the U.S. plan.

The following table shows the amounts included in AOCI that have not yet been recognized as components of net periodic benefit cost for the years ended December 31:

In millions	2023	2022
Gross actuarial loss	**$ (88.1)**	$ (110.2)
Gross prior service credit	**10.6**	11.0
Total included in AOCI not yet recognized in the statement of income	**$ (77.5)**	$ (99.2)

14. Pension Plans (continued)

In September 2019, the U.K. Statistics Authority announced plans to reform the RPI inflation index. On November 25, 2020, the government and U.K. Statistics Authority confirmed these plans to reform the RPI index to bring it into line with the CPIH index from 2030, with no compensation for the holders of index-linked gilts. Inflation measured by the CPIH is consistently significantly lower than that measured by RPI, and, therefore, these plans imply a significant expected reduction in RPI inflation from 2030 onwards. As a result.we have taken a stepped approach and used different inflation rates pre and post 2030.

The financial assumptions used in the calculations were:

	Projected Unit Credit Valuation					
	U.K.			U.S.		
	2023	2022	2021	2023	2022	2021
	%	%	%	%	%	%
Discount rate	**4.50**	4.80	1.90	**n/a**	5.10	2.70
Expected return on assets	**4.80**	5.60	3.30	**n/a**	4.70	2.50
Pre-2030						
Retail Price Inflation	**3.10**	3.20	3.30	**n/a**	n/a	n/a
Consumer Price Inflation	**2.00**	2.10	2.20	**n/a**	n/a	n/a
Pension increases						
Pre 6 April 1997	**1.80**	1.90	2.00	**n/a**	n/a	n/a
1997 - 2005	**2.10**	2.10	2.20	**n/a**	n/a	n/a
Post 5 April 2005	**1.60**	1.70	1.80	**n/a**	n/a	n/a
Post-2030						
Retail Price Inflation	**3.10**	3.20	3.30	**n/a**	n/a	n/a
Consumer Price Inflation	**3.00**	3.10	3.20	**n/a**	n/a	n/a
Pension increases						
Pre 6 April 1997	**2.30**	2.40	2.50	**n/a**	n/a	n/a
1997 - 2005	**2.90**	3.00	3.10	**n/a**	n/a	n/a
Post 5 April 2005	**2.00**	2.20	2.20	**n/a**	n/a	n/a

The discount rate used for the UK Plan represents the annualized yield based on a cash-flow matched methodology, with reference to an AA corporate bond spot curve and having regard to the duration of the Plan's liabilities. The inflation rate is derived using a similar cash flow matched methodology as used for the discount rate but with regard to the difference between yields on fixed-interest and index-linked United Kingdom government gilts. The expected return on assets assumption is set with regard to the asset allocation and expected return on each asset class as of the balance sheet date.

During 2023, the Plan's actuary was changed, enabling a more refined cashflow roll-forward to December 31, 2023, and providing the ability to allow for actual pension increase experience over the inter-valuation period more accurately. Due to this, an approximate 3% to 4% technical provisions basis difference was identified in valuation liabilities at April 5, 2021. As a result of the change in Plan actuary, we therefore have an experience gain coming through the UK figures at 31 December 2023.

	2023	2022
Other principal actuarial assumptions:	**Years**	**Years**
Life expectancy of male / female in the U.K. aged 65 at accounting date	21.2 / 23.1	21.2 / 23.0
Life expectancy of male / female in the U.K. aged 65 at 20 years after accounting date	22.5 / 24.6	22.5 / 24.5

Investment strategies

For the principal defined benefit plan in the Company and the U.K., the Luxfer Group Pension Plan, (the "Plan," as defined above), the assets are invested in a diversified range of asset classes and include matching assets (comprising fixed-interest and index-linked bonds and swaps) and growth assets (comprising all other assets). The Trustees of the Plan have formulated a de-risking strategy to help control the short-term risk of volatility associated with holding growth assets. The Trustees also monitor the cost of a buy-in to secure pensioner liabilities with an insurance company to ensure they and the Company are able to act if such an opportunity arises.

14. Pension Plans (continued)

Risk exposures

The U.K. plan currently has a long-term strategic target to hold 20 percent of assets in equity and other growth investments, with the intention of growing the value of assets relative to liabilities. The Company is at risk if the value of liabilities grows at a faster rate than the plans' assets, or if there is a significant fall in the value of these assets not matched by a fall in the value of liabilities. If any of these events occurred, it would be expected to lead to an increase in the Company's future cash contributions.

Special events

In 2021, the Company decided to terminate its U.S. Pension Plan. The Company completed the buyout of the U.S. plan in the first quarter of 2023. As a result, a final premium totaling $29.3 million was paid to settle the liabilities. Assets of $27.2 million were sold from the plan, resulting in a $2.1 million contribution from the Company to extinguish the liabilities from the plan in full.

The fair value of plan assets were:

In millions	2023 U.K.	2023 U.S. / other	2023 Total	2022 U.K.	2022 U.S. / other	2022 Total
Assets in active markets:						
Equities and growth funds	**$ 65.7**	**$ —**	**$ 65.7**	$ 78.3	$ —	$ 78.3
Government bonds	**69.6**	**—**	**69.6**	65.7	—	65.7
Corporate bonds	**135.5**	**—**	**135.5**	106.1	27.5	133.6
Cash	**3.4**	**—**	**3.4**	2.5	0.6	3.1
Total fair value of plan assets	**$ 274.2**	**$ —**	**$ 274.2**	$ 252.6	$ 28.1	$ 280.7

We have taken the bid value of invested assets as at December 31, 2023 as supplied by Legal & General ('L&G'), the LGPP's investment managers. As the L&G funds are weekly priced we have taken the price on the first dealing day of the New Year

All investments, apart from cash, were classified as Level 2 in the fair value hierarchy as of December 31, 2023 and 2022. Cash is classified as Level 1 in the fair value hierarchy as of December 31, 2023 and 2022.

The following benefit payments are expected to be paid by the plans for the years ended December 31 as follows:

In millions	U.K. pension plans
2024	$ 13.6
2025	14.4
2026	14.6
2027	14.5
2028	14.6
Thereafter	76.4

The estimated amount of employer deficit recovery contributions expected to be paid to the defined benefit pension plans for the year ending December 31, 2024, is nil (2023: nil actual employer contributions).

15. Shareholders' Equity

(a) ***Ordinary share capital***

	December 31, 2023 No.	December 31, 2022 No.	December 31, 2023 Millions		December 31, 2022 Millions	
Authorized:						
Ordinary shares of £0.50 each	**40,000,000**	40,000,000	**$ 35.7**	(1)	$ 35.7	(1)
	40,000,000	40,000,000	**$ 35.7**	(1)	$ 35.7	(1)
Allotted, called up and fully paid:						
Ordinary shares of £0.50 each	**28,944,000**	28,944,000	**$ 26.5**	(1)	$ 26.5	(1)
	28,944,000	28,944,000	**$ 26.5**	(1)	$ 26.5	(1)

(1) The Company's ordinary share capital is shown in U.S. dollars at the exchange rate prevailing at the month-end spot rate at the time of the share capital being issued.

The rights of the shares are as follows:

Ordinary shares of £0.50 each

The ordinary shares carry no entitlement to an automatic dividend but rank *pari passu* in respect of any dividend declared and paid. The ordinary shares were allotted and issued to satisfy share awards which vested under the Company's share award and share incentive plans.

At December 31, 2023, there were 26,834,628 (2022: 26,934,973) ordinary shares of Luxfer Holdings PLC listed on the New York Stock Exchange (NYSE).

(b) ***Treasury Shares***

In millions	
At January 1, 2022	**$ (9.6)**
Purchase of treasury shares	(11.1)
Utilization of treasury shares	0.3
At December 31, 2022	**(20.4)**
Purchase of treasury shares	(2.7)
Utilization of treasury shares	0.2
At December 31, 2023	**$ (22.9)**

In 2023, the Company purchased 210,000 ordinary shares for a total cost of $2.7 million. 14,195 of these shares were utilized at $0.2 million , with the remaining 185,805 retained within Treasury shares.

In 2022, the Company purchased 711,572 ordinary shares for a total cost of $11.1 million. 9,424 of these shares were utilized at $0.3 million, with the remaining 702,148 retained within Treasury shares.

At December 31, 2023, there were 1,473,571 (2022: 1,277,766) treasury shares held at a cost of $22.9 million (2022: $20.4 million).

15. Shareholders' Equity (continued)

(c) **Company *shares held by ESOP***

In millions		
At January 1, 2022	**$**	**(1.1)**
Utilization of ESOP shares		0.1
At December 31, 2022		**(1.0)**
Utilization of ESOP shares		0.1
At December 31, 2023	**$**	**(0.9)**

At December 31, 2023, there were 635,801 ordinary shares at £0.50 each (2022: 721,261 ordinary shares of £0.50 each) held by The Luxfer Group Employee Share Ownership Plan (the "ESOP").

(d) ***Dividends paid and proposed***

In millions		**2023**		**2022**		**2021**
Dividends declared and paid during the year:						
Interim dividend paid February 4, 2021 ($0.125 per ordinary share)	**$**	**—**	$	—	$	3.4
Interim dividend paid May 5, 2021 ($0.125 per ordinary share)		**—**		—		3.4
Interim dividend paid August 4, 2021 ($0.125 per ordinary share)		**—**		—		3.4
Interim dividend paid November 3, 2021 ($0.125 per ordinary share)		**—**		—		3.4
Interim dividend paid February 2, 2022 ($0.125 per ordinary share)		**—**		3.4		—
Interim dividend paid May 4, 2022 ($0.130 per ordinary share)		**—**		3.6		—
Interim dividend paid August 3, 2022 ($0.130 per ordinary share)		**—**		3.6		—
Interim dividend paid November 2, 2022 ($0.130 per ordinary share)		**—**		3.6		—
Interim dividend paid February 1, 2023 ($0.130 per ordinary share)		**3.5**		—		—
Interim dividend paid May 3, 2023 ($0.130 per ordinary share)		**3.5**		—		—
Interim dividend paid August 2, 2023 ($0.130 per ordinary share)		**3.5**		—		—
Interim dividend paid November 1, 2023 ($0.130 per ordinary share)		**3.5**		—		—
	$	**14.0**	$	14.2	$	13.6

In millions		**2023**		**2022**		**2021**
Dividends declared and paid after December 31 (not recognized as a liability at December 31):						
Interim dividend paid February 2, 2022: ($0.125 per ordinary share)	**$**	**—**	$	—	$	3.4
Interim dividend paid February 1, 2023: ($0.130 per ordinary share)		**—**		3.5		—
Interim dividend paid February 7, 2024: ($0.130 per ordinary share)		**3.5**		—		—
	$	**3.5**	$	3.5	$	3.4

16. Share Plans

(a) ***The Luxfer Group Employee Share Ownership Plan***

The trust

In 1997, the Company established an employee benefit trust ("the ESOP") with independent Trustees, to purchase and hold shares in the Company in trust to be used to satisfy options granted to eligible senior employees under the Company's share plans established from time to time.

The ESOP was established with the benefit of a gift equivalent to the set up and running costs. Purchase monies and costs required by the ESOP Trustees to purchase shares for and under the provisions of the trust are provided by way of an interest free loan from a Company subsidiary. The loan is repayable, in normal circumstances, out of monies received from senior employees when they exercise options granted to them over shares. Surplus shares are held by the ESOP Trustees to satisfy future option awards. The ESOP Trustees have waived their right to receive dividends on shares held in trust. The Remuneration Committee is charged with determining which senior employees are to be granted options, and in what number, subject to the relevant plan rules.

Changes in the year

The change in the number of shares held by the Trustees of the ESOP and the number of share options held over those shares are shown below:

	Number of shares held by ESOP Trustees
	£0.50 ordinary shares
At January 1, 2023	721,261
Shares utilized during the year	(85,460)
At December 31, 2023	**635,801**

At December 31, 2023, the loan outstanding from the ESOP was $0.5 million (2022: $0.5 million).

The market value of each £0.50 ordinary share held by the ESOP at December 31, 2023, was $8.94 (2022: $13.72).

(b) ***Share-based compensation***

Luxfer Holdings PLC Long-Term Umbrella Incentive Plan and Luxfer Holdings PLC Non-Executive Directors Equity Incentive Plan

As an important retention tool and to align the long-term financial interests of our management with those of our shareholders, the Company adopted the Luxfer Holdings PLC Long-Term Umbrella Incentive Plan (the "LTIP") for the Company's senior employees and the Luxfer Holdings PLC Non-Executive Directors Equity Incentive Plan (the "Director EIP") for the Non-Executive Directors.

The equity or equity-related awards under the LTIP and the Director EIP are based on the ordinary shares of the Company. The Remuneration Committee administers the LTIP and has the power to determine to whom the awards will be granted, the amount, type and other terms. Awards granted under the LTIP generally vest one-quarter each year over a four-year period, subject to continuous employment and certain other conditions, with the exercise period expiring six years after grant date. Awards granted under the Director EIP are non-discretionary, are purely time-based and vest over one year, with settlement occurring immediately on vesting.

16. Share Plans (continued)

(b) ***Share-based compensation (continued)***

Share option and restricted stock awards

In March 2023, a combined 127,000 of Restricted Stock Units and Options over ordinary shares were granted under the LTIP, which were all time-based awards vesting over a period of four years and expiring two years later. Also in March 2023, a maximum 157,000 awards were granted based on the achievement of shareholder return targets. In June 2023, a combined 31,000 Restricted Stock Units and Options over ordinary shares were granted under the Director EIP, which were all time-based awards that would fully vest one year later.

In March 2022, a combined 130,000 of Restricted Stock Units and Options over ordinary shares were granted under the LTIP, which were all time-based awards vesting over a period between three and four years and expiring two years later. Also throughout 2022, a maximum 280,000 awards were granted based on the achievement of shareholder return targets. In May 2022, 19,000 additional awards were granted under the LTIP, which were all time-based awards vesting over four years and an additional 15,000 awards were granted under the LTIP, which vested immediately. In June 2022, a combined 26,000 Restricted Stock Units and Options over ordinary shares were granted under the Director EIP, which were all time-based awards that would fully vest one year later.

In March 2021, a combined 110,000 of Restricted Stock Units and Options over ordinary shares were granted under the LTIP, which were all time-based awards vesting over four years and expiring two years later. Also throughout 2021, a maximum 100,000 awards were granted based on the achievement of shareholder return targets. In June 2021, a combined 19,000 Restricted Stock Units and Options over ordinary shares were granted under the Director EIP, which were all time-based awards that would fully vest one year later.

Total share-based compensation expense for 2023, 2022 and 2021 was as follows:

	Years ended December 31,		
In millions	**2023**	**2022**	**2021**
Total share-based compensation charges	**$ 2.8**	$ 2.5	$ 2.8

There were no cancellations or modifications to the awards in 2023, 2022 or 2021.

The actual tax benefit realized for the tax deductions from option exercises totaled $0.4 million, $0.8 million and $1.1 million in 2023, 2022 and 2021, respectively.

The following tables illustrates the number of, and movements in, share options during the year, with each option relating to one ordinary share:

	Number of shares	Weighted-average exercise price	Weighted-average remaining contractual life (years)	Aggregate intrinsic value ($M)
At January 1, 2023	579,153	$ 1.00	3.0	$ 8.0
Granted during the year	314,828	$ 1.00		
Exercised during the year	(116,148)	$ 1.00		
Accrued dividend awards	10,902	$ 1.00		
Lapsed during the year	(75,638)	$ 1.00		
At December 31, 2023	**713,097**	**$ 1.00**	**3.0**	**$ 6.4**
Options exercisable at December 31, 2023	16,423	$ 1.00	2.9	$ 0.1
Options expected to vest as of December 31, 2023	387,123	$ 1.00	3.0	$ 3.5

The weighted average fair value of options granted in 2023, 2022 and 2021 was estimated to be $14.73, $16.45 and $20.56 per share, respectively. The total intrinsic value of options that were exercised during 2023, 2022 and 2021 was $1.7 million, $2.9 million and $5.8 million, respectively. At December 31, 2023, the total unrecognized compensation cost related to share options was $2.8 million (2022: $3.1 million). This cost is expected to be recognized over a weighted average period of 2.4 years (2022: 2.7 years).

16. Share Plans (continued)

(b) ***Share-based compensation (continued)***

The following table illustrates the assumptions used in deriving the fair value of share options during the year:

	2023	2022	2021
Dividend yield (%)	**3.15 - 3.32**	2.75 - 3.41	2.27
Expected volatility range (%)	**31.54 - 43.49**	36.11 - 49.43	42.80 - 59.03
Risk-free interest rate (%)	**3.67 - 5.16**	1.28 - 2.99	0.04 - 0.24
Expected life of share options range (years)	**1.00 - 4.00**	0.50 - 4.00	0.50 - 4.00
Forfeiture rate (%)	**5.00**	5.00	5.00
Weighted average exercise price ($)	**$1.00**	$1.00	$1.00
Models used	**Black-Scholes & Monte-Carlo**	Black-Scholes & Monte-Carlo	Black-Scholes & Monte-Carlo

The expected life of the share options is based on historical data and current expectations and is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility over a period similar to the life of the options is indicative of future trends, which may not necessarily be the actual outcome.

Employee share incentive plans

The Company operates an all-employee share incentive plan in its U.K. and U.S. operations and may look to implement plans in other geographic regions.

17. Segment Information

We classify our operations into business segments, based primarily on shared economic characteristics for the nature of the products and services; the nature of the production processes; the type or class of customer for their products and services; the methods used to distribute their products or provide their services; and the nature of the regulatory environment. The Company has five identified business units, which aggregate into three reportable segments within continuing operations, and one within discontinued operations. Luxfer Gas Cylinders forms the Gas Cylinders segment, and Luxfer MEL Technologies and Luxfer Magtech aggregate into the Elektron segment. As of December 31, 2023, it was determined that the Luxfer Graphic Arts reporting segment no longer met the criteria, specifically, similar economic characteristics, to be aggregated within the Elektron segment for 2023. As a result, Luxfer Graphic Arts has been disaggregated from the Elektron segment and is being reported separately as the Graphic Arts segment. The Elektron segment's results for 2022 and 2021 have been adjusted to exclude Graphic Arts' results. Our Superform business unit used to aggregate into the Gas Cylinders segment but is now recognized within discontinued operations. A summary of the operations of the segments within continuing operations is provided below:

Gas Cylinders segment
Our Gas Cylinders segment manufactures and markets specialized highly-engineered cylinders, using composites and aluminum alloys, including pressurized cylinders for use in various applications including self-contained breathing apparatus ('SCBA') for firefighters, containment of oxygen and other medical gases for healthcare, alternative fuel vehicles, and general industrial applications.

Elektron segment
Our Elektron segment focuses on specialty materials based primarily on magnesium and zirconium, with key product lines including advanced lightweight magnesium alloys with a variety of uses across a variety of industries; magnesium powders for use in countermeasure flares, as well as heater meals; and high-performance zirconium-based materials and oxides used as catalysts and in the manufacture of advances ceramics, fiber-optic fuel cells, and many other performance products.

Graphic Arts segment
Our Graphic Arts segment provides a full range of pre-sensitized magnesium, copper and zinc plates, along with associated chemicals, for the production of foil-stamping and embossing dies. In addition, non-sensitized polished brass and magnesium plates are also manufactured for computer numerical control ('CNC') engraving. The segment also advises on turnkey engraving operations, complete with etching machines, computer-to-plate ('CtP') machines, exposure units and film setters.

Other
Other, as used below, primarily represents unallocated corporate expense and includes non-service related defined benefit pension cost / credit.

Management monitors the operating results of its reportable segments separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated by the chief operating decision maker, the CEO, who is responsible for allocating resources and assessing performance of the operating segments, using adjusted EBITA(1) and adjusted EBITDA, which is defined as segment income, and is based on operating income adjusted for share-based compensation charges; restructuring charges; impairment charges; other charges; acquisitions and disposals costs; and depreciation and amortization.

Unallocated assets and liabilities include those which are held on behalf of the Company and cannot be allocated to a segment, such as taxation, investments, cash, retirement benefits obligations, bank and other loans and holding company assets and liabilities.

Financial information by reportable segment for the years ended December 31 is included in the following summary:

	Net Sales			Adjusted EBITDA		
In millions	**2023**	**2022**	**2021**	**2023**	**2022**	**2021**
Gas Cylinders segment	**$ 186.4**	$ 183.7	$ 178.3	**$ 16.7**	$ 12.8	$ 22.7
Elektron segment	**187.1**	201.0	155.7	**26.6**	42.5	34.1
Graphic Arts segment	**31.5**	38.7	40.1	**(4.5)**	7.8	6.6
Consolidated	**$ 405.0**	$ 423.4	$ 374.1	**$ 38.8**	$ 63.1	$ 63.4

During 2023 there were $0.7 million sales made between our Elektron segment and Graphic Arts segment (2022: $0.4 million and 2021: nil)

(1) Adjusted EBITA is adjusted EBITDA less depreciation and loss on disposal of property, plant and equipment.

17. Segment Information (continued)

In millions	Depreciation and amortization 2023	2022	2021	Restructuring Charges 2023	2022	2021
Gas Cylinders segment	**$ 4.1**	$ 4.8	$ 5.8	**$ 5.9**	$ 1.7	$ 5.3
Elektron segment	**6.6**	6.6	7.4	**0.5**	0.2	0.9
Graphic Arts segment	**2.0**	2.2	2.4	**—**	—	—
Consolidated	**$ 12.7**	$ 13.6	$ 15.6	**$ 6.4**	$ 1.9	$ 6.2

In millions	Total assets 2023	2022	Capital expenditure 2023	2022	2021
Gas Cylinders segment	**$ 131.0**	$ 133.1	**$ 2.1**	$ 1.2	$ 1.0
Elektron segment	**162.4**	172.5	**6.1**	6.7	6.9
Graphic Arts segment	**19.6**	43.9	**1.0**	0.7	1.0
Other	**51.3**	49.5	**—**	—	—
Discontinued operations	**7.8**	8.1	**0.1**	—	0.1
	$ 372.1	$ 407.1	**$ 9.3**	$ 8.6	$ 9.0

The following table presents a reconciliation of Adjusted EBITDA to net income from continuing operations:

In millions	2023	2022	2021
Adjusted EBITDA	**$ 38.8**	$ 63.1	$ 63.4
Share-based compensation charges	**(2.8)**	(2.5)	(2.8)
Depreciation and amortization	**(12.7)**	(13.6)	(15.6)
Restructuring charges	**(6.4)**	(1.9)	(6.2)
Impairment charges	**(12.7)**	—	—
Acquisition and disposal costs	**—**	(0.3)	(1.5)
Other charges	**—**	—	(1.1)
Defined benefits pension (charge) / credit	**(7.6)**	0.1	2.3
Interest expense, net	**(6.3)**	(3.9)	(3.1)
Credit / (provision) for taxes	**7.1**	(9.0)	(5.4)
Net income from continuing operations	**$ (2.6)**	$ 32.0	$ 30.0

The following tables present certain geographic information by geographic region for the years ended December 31:

	Net Sales[1] 2023 $M	2023 Percent	2022 $M	2022 Percent	2021 $M	2021 Percent
United States	**$ 243.1**	***60.0 %***	$ 243.3	*57.5 %*	$ 207.8	*55.6 %*
U.K.	**19.7**	***4.9 %***	20.6	*4.9 %*	24.4	*6.6 %*
Japan	**19.3**	***4.8 %***	18.2	*4.3 %*	9.8	*2.6 %*
Germany	**19.2**	***4.7 %***	19.2	*4.5 %*	17.7	*4.7 %*
Canada	**11.2**	***2.8 %***	12.8	*3.0 %*	11.4	*3.0 %*
Top five countries	**$ 312.5**	***77.2 %***	$ 314.1	*74.2 %*	$ 271.1	*72.5 %*
Rest of Europe	**47.5**	***11.7 %***	49.4	*11.7 %*	49.3	*13.2 %*
Asia Pacific	**28.0**	***6.9 %***	39.1	*9.2 %*	43.9	*11.7 %*
Other [2]	**17.0**	***4.2 %***	20.8	*4.9 %*	9.8	*2.6 %*
	$ 405.0		$ 423.4		$ 374.1	

(1) Net sales are based on the geographic destination of sale.

(2) Other includes South America, Latin America and Brazil.

17. Segment Information (continued)

	Property, plant and equipment, net	
In millions	**2023**	2022
United States	**$ 26.8**	$ 41.6
United Kingdom	**32.8**	32.0
Canada	**2.9**	2.8
Rest of Europe	**1.0**	1.0
Asia Pacific	**0.3**	0.3
	$ 63.8	$ 77.7

(1) Net sales are based on the geographic destination of sale.
(2) Other includes South America, Latin America and Brazil.

18. Leases

We have operating leases for buildings, vehicles and certain equipment. The Company has applied practical expedients for leases with a fair value of less than $5,000 or a lease term of less than twelve months. The majority of our leases have remaining lease terms of one to five years, with one building having 49 years remaining.

None of our leases were classified as finance leases in any of the years disclosed.

The components of the lease expense is as follows:

	Years ended December 31,		
In millions	**2023**	**2022**	**2021**
Operating lease cost	**$ 4.6**	$ 4.2	$ 3.4

Supplemental cash flow information related to leases was as follows:

	Years ended December 31,		
In millions	**2023**	**2022**	**2021**
Operating cash flows from operating leases	**$ 4.6**	$ 4.2	$ 3.4

During the year ended December 31, 2023, there were additional operating leases entered into totaling $0.5 million (2022: $17.7 million, 2021: $2.3 million). There was also a $1.6 million impairment recognized in 2023 in relation to the Graphic Arts segment. These are non-cash items but will impact cash in future years.

Supplemental balance sheet information related to leases was as follows:

In millions	**December 31, 2023**	**December 31, 2022**
Operating leases		
Operating lease right-of-use asset	**$ 15.4**	$ 19.8
Other current liabilities	**4.7**	4.7
Other non-current liabilities	**15.0**	18.2
	$ 19.7	$ 22.9
Weighted Average Remaining Lease Term (Years)	**11.9**	12.0
Weighted Average Discount Rate	**4.48 %**	4.48 %

Maturities of lease liabilities were as follows:

In millions	**2023**
2024	**$ 5.4**
2025	**5.1**
2026	**4.1**
2027	**1.5**
2028	**1.2**
Thereafter	**8.7**
Total lease payments	**$ 26.0**
Less imputed interest	**(6.3)**
Total	**$ 19.7**

19. Commitments and Contingencies

Capital commitments

At December 31, 2023, the Company had capital expenditure commitments of $2.3 million (2022: $1.4 million and 2021: $1.5 million) for the acquisition of new plant and equipment.

Committed banking facilities

The Company had committed banking facilities of $125.0 million at December 31, 2023 and $100.0 million at December 31, 2022. Of these committed facilities, $43.1 million was drawn at December 31, 2023 and $31.9 million at December 31, 2022. The Company also had an additional $25.0 million of uncommitted facilities through an accordion provision at December 31, 2023 and $50.0 million at December 31, 2022.

	Uncommitted Facilities			
	December 31, 2023		**December 31, 2022**	
	Facility	**Drawn**	**Facility**	**Drawn**
Bond and Guarantees	$ 0.6	$ 0.2	$ 0.6	$ 0.2
Letters of Credit	4.0	2.2	2.2	1.8
Overdraft	7.8	4.6	4.0	—
	$ 12.4	**$ 7.0**	$ 6.8	$ 2.0

Additionally, the Company has various uncommitted transitional banking and foreign exchange lines available for day-to-day operational purposes.

Contingencies

In November 2018, an alleged explosion occurred at a third-party waste disposal and treatment site in Grand View, Idaho, reportedly causing property damage, personal injury, and one fatality. The Company had contracted with a service company for removal and disposal of certain waste resulting from the magnesium powder manufacturing operations at the Reade facility in Manchester, New Jersey. The Company believes this service company, in turn, contracted with the third-party disposal company, at whose facility the explosion occurred, for treatment and disposal of the waste. In November 2020, we were named as a defendant in three lawsuits in relation to the incident – one by the third-party disposal company, one by the estate of the decedent, and one by an injured employee of the third-party disposal company. The three lawsuits were administratively consolidated and, to date, two lawsuits remain ongoing. The Company believes that we are not liable for the incident, have asserted such, and, in conjunction with our insurers, continue to fully defend the Company against these lawsuits. Therefore, we do not currently expect any eventual outcome in these matters to have a material impact on the Company's financial position or results of operations.

In December 2023, it was established that any potential liability arising from the lawsuits and reasonable defense costs related thereto are covered by insurance. Negotiations as to recovery of historic defense costs are ongoing, and therefore the Company has not recognized any asset with respect to said recovery as of December 31, 2023.

20. Related-Party Transactions

Joint venture in which the Company is a venturer

During 2023, the Company maintained its 50% investment in the equity of the joint venture, Nikkei-MEL Company Limited. During 2023, the Elektron Segment made $0.5 million of sales to the joint venture (2022: $0.6 million). At December 31, 2023, the gross and net amounts receivable from the joint venture amounted to $0.1 million (2022: $0.1 million).

Transactions with other related parties

At December 31, 2023, the directors and key management comprising the members of the Executive Leadership Team owned 289,036 £0.50 ordinary shares (2022: 233,724 £0.50 ordinary shares) and held awards over a further 271,003 £0.50 ordinary shares (2022: 231,668 £0.50 ordinary shares).

During the years ended December 31, 2023, and December 31, 2022, share options held by members of the Executive Leadership Team were exercised.

Other than the transactions with the joint ventures, associates and key management personnel disclosed above, no other related-party transactions have been identified.

21. Subsequent Events

No material subsequent events.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures for the period covered by this report, pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934 (the "Exchange Act"). Based upon their evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of the year ended December 31, 2023, due to the material weakness in our internal control over financial reporting described below.

Management's Annual Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Management's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements due to error or fraud.

Management has performed an evaluation of the effectiveness of its internal control over financial reporting as of December 31, 2023, based on the framework and criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on its evaluation, due to the material weakness described below, management concluded that the Company's internal control over financial reporting was not effective as of December 31, 2023.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements may not be prevented or detected on a timely basis.

In conjunction with the preparation of the Company's financial statements for the year ended December 31, 2023 management identified a lack of controls related to the Company's accounting for inventory in transit. As a result, management concluded it did not properly design or maintain effective risk assessment control activities to allow for timely reassessment of the material risk of misstatement in financial reporting. Management has thus identified a material weakness in internal control over financial reporting. This material weakness could result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected. However, this material weakness did not result in a misstatement to the annual or interim consolidated financial statements previously filed or included in this Annual Report on Form 10-K.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2023 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which appears in Item 8 of this Annual Report on Form 10-K.

Plan for Remediation of Material Weakness in Internal Control Over Financial Reporting

Following the identification of the material weakness described above, management developed and is executing a remediation plan to address the material weakness. Management plans to develop and design enhanced risk assessment procedures to identify and analyse changes in the business that could have a significant impact on financial reporting and determine actions necessary to mitigate new or evolving risks.

Management's remediation activities also include the implementation of a new period-end control over the recording of inventory in-transit. The material weakness will not be considered remediated until management has implemented their plan and operated the controls for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the fourth quarter of 2023, none of our directors or Section 16 officers adopted or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 10b5-1 trading arrangement” (as each term is defined in Item 408(a) of Regulation S-K).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated by reference to the following sections of our definitive Proxy Statement related to the 2024 Annual General Meeting to be filed with the SEC not later than 120 days after the end of the fiscal year covered by this annual report, (the "2024 Proxy Statement"): "Resolutions 1 - 5 - Election and Re-Election of Director Nominees," "Corporate Governance Matters" and "Section 16(a) Beneficial Ownership Reporting Compliance."

The Company has adopted a code of ethics which is applicable to all employees and is available on the corporate website, www.luxfer.com. A copy of the code can also be obtained, without charge, upon request. If there is an amendment to the code, then the nature of the amendment will also be made available of the corporate website.

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to the following sections of the Proxy Statement for the 2024 Annual General Meeting: “Executive Compensation Discussion and Analysis” and “Director Compensation.”

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated by reference to the following sections of the Proxy Statement for the 2024 Annual General Meeting: "Equity Compensation Plan Information" and "Security Ownership."

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to the following sections of the Proxy Statement for the 2024 Annual General Meeting: "Policies and Procedures Regarding Conflicts of Interest and Related Party Transactions" and "Corporate Governance Matters."

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated by reference to the following section of the Proxy Statement for the 2024 Annual General Meeting: "Resolution 9 - Ratification of the appointment of PricewaterhouseCoopers LLP as the independent auditors of Luxfer Holdings PLC for 2024, and to authorize, by binding vote, the Audit Committee to set the auditors’ remuneration".

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

The Financial Statements listed in the Index to Financial Statements in Item 8 are filed as part of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules

Financial statement schedules are omitted because they are either not required or because the required information is included in the Consolidated Financial Statements and related notes.

(a)(3) Exhibits

3.1	Articles of Association of the Registrant, initially filed with the SEC on December 2, 2011 and as amended on May 22, 2018 and as amended on May 15, 2019
4.1	Form of specimen certificate evidencing ordinary shares (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form F-1 (file no. 333-178278), as amended, initially filed with the SEC on December 2, 2011)
10.1	Amended and Restated Note Purchase Agreement dated as of June 29, 2016 by and among BA Holdings, Inc. and the parties named therein (incorporated by reference to Exhibit 2.3 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.2	Senior Facilities Agreement dated as of May 13, 2011, as amended and restated on July 31, 2017 by and among Luxfer Holdings PLC and the parties named therein (incorporated by reference to Exhibit 2.4 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.3	First Amendment to Amended and Restated Note Purchase Agreement dated as of March 13, 2017 by and among Luxfer Holdings PLC and the parties named therein (incorporated by reference to Exhibit 2.5 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.4	Amended and Restated Note Purchase and Private Shelf Agreement dated as of June 29, 2016 by and among Luxfer Holdings PLC and the parties named therein (incorporated by reference to Exhibit 2.6 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.5	First Amendment to Amended and Restated Note Purchase Agreement and Private Shelf Agreement dated as of March 13, 2017 by and among Luxfer Holdings PLC and the parties named therein (incorporated by reference to Exhibit 2.7 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.6	Second Amendment to Amended and Restated Note Purchase Agreement and Private Shelf Agreement dated as of October 26, 2021 by and among Luxfer Holdings PLC and the parties named therein, initially filed with the SEC on February 24, 2022
10.7	Senior Facilities Agreement dated as of October 26, 2021 by and among Luxfer Holdings PLC and the parties named therein, initially filed with the SEC on February 24, 2022
10.8*	Executive Share Option Plan (incorporated by reference to Exhibit 10.3 to our Registration Statement on Form F-1 (file no. 333-178278), as amended, initially filed with the SEC on December 2, 2011)
10.9*	Long-Term Umbrella Incentive Plan (incorporated by reference to Exhibit 4.2 to our Annual Report on Form 20-F (file no. 001-35370), initially filed with the SEC on March 19, 2018)
10.10*	Amended and Restated Non-Executive Director Equity Incentive Plan (incorporated by reference to Exhibit 4.7 to our Annual Report on Form 20-F (file no. 001-35370), filed with the SEC on March 29, 2013)
10.11*	The Luxfer Share Incentive Plan, initially filed with the SEC on March 11, 2019, amended May 15, 2019
10.12*	The Luxfer Employee Stock Purchase Plan, filed with the SEC on March 11, 2019
10.13*	Form of Executive Officer IPO Stock Option Grant Agreement (incorporated by reference to Exhibit 10.6 to our Registration Statement on Form F-1 (file no. 333-178278), as amended, initially filed with the SEC on December 2, 2011)
10.14*	Form of Non-Executive Director IPO Stock Option Grant Agreement (incorporated by reference to Exhibit 10.7 to our Registration Statement on Form F-1 (file no. 333-178278), as amended, initially filed with the SEC on December 2, 2011)
10.15*	Employment Agreements, filed with the SEC on March 11, 2019

10.16* Employment Agreements, filed with the SEC on March 11, 2019,

10.17* Employment Agreements, filed with the SEC on May 6, 2022

10.18* Employment Agreements, filed with the SEC on May 6, 2022

10.19* Employment Agreements, filed with the SEC on May 6, 2022

10.20* Employment Agreements, filed with the SEC on March 11, 2019

10.21* Employment Agreements, filed with the SEC on March 1, 2023

10.22* Employment Agreements, filed with the SEC on October 25, 2023

10.23 Insider Trading and Dealing Policy

10.24 Executive Compensation Clawback Policy

21.1 List of Subsidiaries of the Company

23.1 Consent of PricewaterhouseCoopers LLP

31.1 Certification Required by Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934-Andrew Butcher

31.2 Certification Required by Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934-Stephen Webster

32.1 Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)-Andrew Butcher

32.2 Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)-Stephen Webster

101 The financial statements from the Company's Annual Report on Form 10-K for the year ended December 31, 2023, formatted in XBRL: (i) Consolidated Statements of Income, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows, (v) Consolidated Statements of Changes in Equity, and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text and including detailed tags.

* Management contract or compensatory plan or arrangement

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Luxfer Holdings plc

(Registrant)

/s/Andrew Butcher

Andrew Butcher

Chief Executive Officer

(Duly Authorized Officer)

February 27, 2024

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Signature	Title	Date
/s/Andrew Butcher **Andrew Butcher**	Chief Executive Officer (Principal Executive Officer) and Director	February 27, 2024
/s/Stephen M.D. Webster **Stephen M.D. Webster**	Chief Financial Officer (Principal Financial and Accounting Officer)	February 27, 2024
/s/Patrick K. Mullen **Patrick K. Mullen**	Chairman of the Board and Director	February 27, 2024
/s/Richard J. Hipple **Richard J. Hipple**	Director	February 27, 2024
/s/Sylvia A. Stein **Sylvia A. Stein**	Director	February 27, 2024
/s/Clive J. Snowdon **Clive J. Snowdon**	Director	February 27, 2024
/s/Lisa G. Trimberger **Lisa G. Trimberger**	Director	February 27, 2024