Ferroglobe

Ferroglobe PLC

Extracts from the 2017 Form 20-F

To accompany the Ferroglobe PLC Annual Report and Accounts 2017

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ITEM 3. KEY INFORMATION

D. Risk factors.

An investment in our ordinary shares carries a significant degree of risk. You should carefully consider the following risks and all other information in this annual report, including our Consolidated Financial Statements. Additional risks and uncertainties we are not presently aware of, or that we currently deem immaterial, could also affect our business operations and financial condition. If any of these risks are realized, our business, results of operations and financial condition could be adversely affected to a material degree. As a result, the trading price of our ordinary shares could decline and you could lose part or all of your investment.

Risks Related to Our Business and Industry

Our operations depend on industries including the aluminum, steel, polysilicon, silicone and photovoltaic/solar industries, which, in turn, rely on several end-markets. A downturn in these industries or end-markets could adversely affect our business, results of operations and financial condition.

Because we primarily sell the silicon metal, silicon-based alloys, manganese-based alloys and other specialty alloys we produce to manufacturers of aluminum, steel, polysilicon, silicones, and photovoltaic products, our results are significantly affected by the economic trends in the steel, aluminum, polysilicon, silicone and photovoltaic industries. Primary end users that drive demand for steel and aluminum include construction companies, shipbuilders, electric appliance and car manufacturers, and companies operating in the rail and maritime industries. Primary end users that drive demand for polysilicon and silicones include the automotive, chemical, photovoltaic, pharmaceutical, construction and consumer products industries. Demand for steel, aluminum, polysilicon and silicones from such companies is driven primarily by gross domestic product growth and is affected by global economic conditions. Fluctuations in steel and aluminum prices may occur due to sustained price shifts reflecting underlying global economic and geopolitical factors, changes in industry supply-demand balances, the substitution of one product for another in times of scarcity, and changes in national tariffs. An easing of demand for steel and aluminum can quickly cause a substantial build-up of steel and aluminum stocks, resulting in a decline in demand for silicon metal, silicon-based alloys, manganese-based alloys, and other specialty alloys. Polysilicon and silicone producers are subject to fluctuations in crude oil, platinum, methanol and natural gas prices, which could adversely affect their businesses. The photovoltaic industry has been growing in the recent years. However, changes in power regulations in different countries, fluctuations in the relative costs of different sources of energy, and supply-demand balances in the different parts of the value chain, among other factors, may significantly affect the growth prospects of the photovoltaic industry. A significant and prolonged downturn in the end-markets for steel, aluminum, polysilicon, silicone and photovoltaic products, could adversely affect these industries and, in turn, our business, results of operations and financial condition.

The metals industry is cyclical and has been subject in the past to swings in market price and demand which could lead to volatility in our revenues.

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets, from late 2014 to late 2017. The weakened economic environment adversely affected our profitability for the year ended December 31, 2016.

Historically, our subsidiary Globe Metallurgical Inc., has been affected by recessionary conditions in the end-markets for its products, such as the automotive and construction industries. In April 2003, Globe Metallurgical Inc. sought protection under Chapter 11 of the U.S. Bankruptcy Code following its inability to restructure or refinance its indebtedness amidst a confluence of several negative economic and other factors, including an influx of low-priced, dumped imports, which caused it to default on then-outstanding indebtedness. A recurrence of such economic factors could have a material adverse effect on our business, results of operations and financial condition.

Additionally, as a result of unfavorable conditions in the end-markets for its products, Globe Metales S.R.L. (''Globe Metales'') became subject to reorganization proceedings (''*concurso preventivo''*) in 1999, which are scheduled to end in 2020. While such reorganization proceedings are ongoing, Globe Metales cannot dispose of or encumber its registered assets (including its real estate) or perform any action outside its ordinary course of business without prior court approval.

In calendar years 2009 and 2016, the global silicon metal, manganese- and silicon-based alloys industries suffered from unfavorable market conditions. Any decline in the global silicon metal, manganese- and silicon-based alloys industries could have a material adverse effect on our business, results of operations and financial condition. In addition, our business is directly related to the production levels of our customers, whose businesses are dependent on highly cyclical markets, such as the automotive, residential and non-residential construction, consumer durables, polysilicon, steel, and chemical industries. In response to unfavorable market conditions, customers may request delays in contract shipment dates or other contract modifications. If we grant modifications, these could adversely affect our anticipated revenues and results of operations. Also, many of our products are traded internationally at prices that are significantly affected by worldwide supply and demand. Consequently, our financial performance will fluctuate with the general economic cycle, which could have a material adverse effect on our business, results of operations and financial condition.

Our business is particularly sensitive to increases in energy costs, which could materially increase our cost of production.

Electricity is one of our largest production components. The price of electricity is determined in the applicable domestic jurisdiction and is influenced both by supply and demand dynamics and by domestic regulations. Changes in local energy policy, increased costs due to scarcity of energy supply, climate conditions, the termination or non-renewal of any of our power purchase contracts and other factors may affect the price of electricity supplied to our plants and adversely affect our results of operations and financial conditions.

Because electricity is indispensable to our operations and accounts for a high percentage of our production costs, we are particularly vulnerable to supply limitations and cost fluctuations in energy markets. For example, at our Spanish, Argentine, South African and Chinese plants, production must be modulated to reduce consumption of energy in peak hours or in seasons with higher energy prices, in order for us to maintain profitability. Our Venezuelan operations depend on national hydraulic energy production (rainfall) to produce sufficient power to provide a reliable source of supply, which is not always possible. Moreover, electricity prices in Venezuela recently have been affected by severe currency fluctuations. Generation of electricity in Spain and France by our own hydroelectric power operations partially mitigates our exposure to price increases in those two markets. However, we have pursued in the past the possibility of disposing of those operations, and may do so in the future. Such a divestiture, if completed, would result in a greater exposure to increases in electricity prices.

Electrical power to our U.S. and Canada facilities is supplied mostly by American Electric Power Co., Alabama Power Co., Brookfield Renewable Partners L.P., Hydro-Québec, the Tennessee Valley Authority, and Niagara Mohawk Power Corporation through dedicated lines. Our Alloy, West Virginia facility obtains approximately 56% of its power needs under a fixed-price power purchase agreement with a nearby hydroelectric facility owned by a Brookfield affiliate. This facility is over 70 years old and any breakdown could result in the Alloy facility having to purchase more grid power at higher rates. The energy supply for our Mendoza, Argentina facility is supplied by local utility Edemsa under a power purchase agreement expiring in December 2019. Energy rates in Argentina have increased on average by 200% since February 2016, resulting in challenges before the courts (with preliminary injunctive relief having been granted) as alternative arrangements are being negotiated. There can be no assurance that such negotiations will be completed on terms we consider to be commercially reasonable, or at all.

Energy supply to our facilities in South Africa is provided by Eskom (State-owned power utility) through rates that are approved annually by the national power regulator (NERSA). These rates have had an upward trend in the past years, due to the instability of available supply, and are likely to continue increasing. Also, NERSA applies certain revisions to rates based on cost variances for Eskom that are not within our control. We have completed negotiations with Eskom for a new power contract for 2018 and 2019.

In Spain, power is purchased in a competitive wholesale market. Our facilities have to pay access tariffs to the national grid and get certain payments in exchange for providing services to the grid (*i.e.*, interruptibility services). The volatile nature of the wholesale market in Spain results in price uncertainty that can be only partially offset by financial hedging contracts.

Energy prices in Spain are volatile and such volatility could have a material adverse effect on our business, results of operations, and financial condition.

Almost all of the revenues from Ferroglobe's energy segment are tied, either directly or indirectly, to wholesale market prices for electricity in Spain, which are volatile and may decline due to a number of factors that are not within our control. These include the price of fuels used to generate electricity by other means, the amount of excess generating capacity relative to load in particular markets, the cost of controlling polluting emissions, the structure and regulation of the electricity market overall, and fluctuations in demand, including weather conditions that impact electrical load. In addition, other power generators may develop new technologies or improvements to traditional technologies to produce power that could increase the supply of electricity and cause a sustained reduction in market prices for electricity.

The possible divestiture in the future of any of our hydroelectric power operations would result in a greater exposure to increases in electricity prices in that market.

Our energy operations and revenues depend largely on government regulation of the power sector and our business may be adversely affected if such policies are amended or eliminated.

Our energy operations and revenues depend largely on government regulation of the power sector. For example, in 2013, Spain introduced a new regulatory regime for renewable energies, which, among other things, suspended the pre-existing feed-in tariff support scheme for renewable energy producers that had benefitted us. This has had an adverse effect on the profitability of our energy operations, as prices at which we are able to sell electricity are now substantially dependent on the volatile wholesale market. If other power sector programs and regulations are adversely amended, reduced, eliminated, or subjected to new restrictions, it could have a material adverse effect on the profitability of our energy operations.

Losses caused by disruptions in the supply of power would reduce our profitability.

Large amounts of electricity are used to produce silicon metal, manganese- and silicon-based alloys and other specialty alloys, and our operations are heavily dependent upon a reliable supply of electrical power. We may incur losses due to a temporary or prolonged interruption of the supply of electrical power to our facilities, which can be caused by unusually high demand, blackouts, equipment failure, natural disasters or other catastrophic events, including failure of the hydroelectric facilities that currently provide power under contract to our West Virginia, New York, Québec and Argentina facilities. Additionally, on occasion, we have been instructed to suspend operations for several hours by the sole energy supplier in South Africa due to a general power shortage in the country. It is possible that this supplier may instruct us to suspend our operations for a similar or longer period in the future. Such interruptions or reductions in the supply of electrical power adversely affect production levels and may result in reduced profitability. Our insurance coverage does not cover all interruption events and may not be sufficient to cover losses incurred as a result.

In addition, investments in Argentina's electricity generation and transmission systems have been lower than the increase in demand in recent years. If this trend is not reversed, there could be electricity supply shortages as the result of inadequate generation and transmission capacity. Given the heavy dependence on electricity of our manufacturing operations, any electricity shortages could adversely affect our financial results.

Government regulations of electricity in Argentina give priority of use of hydroelectric power to residential users and subject violators of these restrictions to significant penalties. This preference is particularly acute during Argentina's winter months due to a lack of natural gas. We have previously successfully petitioned the government to exempt us from these restrictions given the demands of our business for continuous supply of electric power. If we are unsuccessful in our petitions or in any action we take to ensure a stable supply of electricity, our production levels may be adversely affected and our profitability reduced.

Any decrease in the availability, or increase in the cost, of raw materials or transportation could materially increase our costs.

Principal components in the production of silicon metal, silicon-based alloys and manganese-based alloys include metallurgical-grade coal, charcoal, graphite and carbon electrodes, manganese ore, quartzite, wood chips, steel scrap, and other metals. While we own certain sources of raw materials, we also buy raw materials on a spot or contracted basis. The availability of these raw materials and the prices at which we purchase them from third-party suppliers depend on market supply and demand and may be volatile. Our ability to obtain these materials in a cost efficient and timely manner is dependent on certain suppliers, their labor union relationships, mining and lumbering regulations and output and general local economic conditions.

We make extensive use of shipping by sea, rail and truck to obtain the raw materials used in our production and deliver our products to customers, depending on the geographic region and product or input. Raw materials and products often must be transported over long distances between mines and other production sites and the plants where raw materials are consumed, and between those sites and our customers. Any severe delay, interruption or other disruption in such transportation, any material damage to raw materials utilized by us or to our products while being transported, or a sharp rise in transportation prices could have a material adverse effect on our business, results of operations and financial condition. In addition, because we may not be able to obtain adequate supplies of raw materials from alternative sources on terms as favorable as our current arrangements, or at all, any disruption or shortfall in the production and delivery of raw

materials could result in higher raw materials costs and likewise materially adversely affect our business, results of operations and financial condition.

Cost increases in raw material inputs may not be passed on to our customers, which could negatively impact our profitability.

The prices of our raw material inputs are determined by supply and demand, which may be influenced by, *inter alia*, economic growth and recession, changes in world politics, unstable governments in exporting nations, and inflation. The market prices of raw material inputs will thus fluctuate over time, and we may not be able to pass significant price increases on to our customers. If we do try to pass them on, we may lose sales and thereby revenue, in addition to having the higher costs. Additionally, decreases in the market prices of our products will not necessarily enable us to obtain lower prices from our suppliers.

Metallurgical manufacturing and mining are inherently dangerous activities and any accident resulting in injury or death of personnel or prolonged production shutdowns could adversely affect our business and operations.

Metallurgical manufacturing generally, and smelting in particular, is inherently dangerous and subject to fire, explosion and sudden major equipment failure. Quartz and coal mining are inherently dangerous and subject to numerous hazards, including collisions, equipment failure, accidents arising from the operation of large mining and rock transportation equipment, dust inhalation, flooding, collapse, blasting operations and operating in extreme climatic conditions. These hazards have led to accidents resulting in the serious injury and death of production personnel and prolonged production shutdowns in the past. We may experience fatal accidents or equipment malfunctions in the future, which could have a material adverse effect on our business and operations.

We are heavily dependent on our mining operations, which are subject to risks that are beyond our control and which could result in materially increased expenses and decreased production levels.

We mine quartz and quartzite at open pit mining operations and coal at underground and surface mining operations. We are heavily dependent on these mining operations for our quartz and coal supplies. Certain risk factors beyond our control could disrupt our mining operations, adversely affect production and shipments, and increase our operating costs, such as: a major incident at the mine site that causes all or part of the operations of the mine to cease for some period of time; mining, processing and plant equipment failures and unexpected maintenance problems; changes in reclamation costs; the inability to renew mining concessions upon their expiration; the expropriation of territory subject to a valid concession without sufficient compensation; and adverse weather and natural disasters, such as heavy rains or snow, flooding and other natural events affecting operations, transportation or customers.

Regulatory agencies have the authority under certain circumstances following significant health and safety violations or incidents to order a mine to be temporarily or even permanently closed. If this occurs, we may be required to incur significant legal and capital expenditures to re-open the affected mine. In addition, environmental regulations and enforcement could impose unexpected costs on our mining operations, and future regulations could increase those costs or limit our ability to produce quartz and sell coal. A failure to obtain and renew permits necessary for our mining operations could limit our production and negatively affect our business. It is also possible that we have extracted or may in the future extract quartz from territory beyond the boundary of our mining concession or mining right, which could result in penalties or other regulatory action or liabilities.

We are subject to environmental, health and safety regulations, including laws that impose substantial costs and the risk of material liabilities.

Our operations are subject to extensive foreign, federal, national, state, provincial and local environmental, health and safety laws and regulations governing, among other things, the generation, discharge, emission, storage, handling, transportation, use, treatment and disposal of hazardous substances; land use, reclamation and remediation; waste management and pollution prevention measures; greenhouse gas emissions; and the health and safety of our employees. We are also required to obtain permits from governmental authorities for certain operations, and to comply with related laws and regulations. We may not have been and may not be at all times in complete compliance with such permits and related laws and regulations. If we violate or fail to comply with these permits and related laws and regulations, we could be subject to penalties, restrictions on operations or other sanctions, obligations to install or upgrade pollution control equipment and legal claims, including for alleged personal injury or property or environmental damages. Such liability could adversely affect our reputation, business, results of operations and financial condition. In addition, in the context of an investigation, the government may impose technology upgrades to our facilities that could represent material capital expenses. For example, we have received two Notices and Findings of Violation (''NOV/FOV'') from the federal government, alleging numerous violations of the Clean Air Act relating to Globe Metallurgical Inc.'s (''GMI'') Beverly facility. Should GMI and the federal government be unable to reach a negotiated resolution of the NOV/FOVs, the government could file a formal lawsuit in federal court for injunctive relief, potentially requiring GMI to implement emission reduction measures, and for civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April, 2013 to the present. See ''Item 8.A. — Financial Information — Consolidated Financial Statements and Other Financial Information — Legal proceedings'' for additional information.

The metals and mining industry is generally subject to risks and hazards, including fire, explosion, toxic gas leaks, spilling of polluting substances or other hazardous materials, rockfalls, and incidents involving mobile equipment, vehicles or machinery. These could occur by accident or by breach of operating and maintenance standards, and could result in personal injury, illness or death of employees or contractors, or in environmental damage, delays in production, monetary losses and possible legal liability.

Under certain environmental laws, we could be required to remediate or be held responsible for all of the costs relating to any contamination at our or our predecessors' past or present facilities and at third party waste disposal sites. We could also be held liable under these environmental laws for sending or arranging for hazardous substances to be sent to third party disposal or treatment facilities if such facilities are found to be contaminated. Under these laws we could be held liable even if we did not know of, or did not cause, such contamination, or even if we never owned or operated the contaminated disposal or treatment facility.

There are a variety of laws and regulations in place or being considered at the international, federal, regional, state and local levels of government that restrict or are reasonably likely to restrict emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause us to incur material costs if we are required to reduce or offset greenhouse gas emissions, or to purchase emission credits or allowances, and may result in a material increase in our energy costs due to additional regulation of power generators. Environmental laws are complex, change frequently and are likely to become more stringent in the future. Because environmental laws and regulations are becoming more stringent and new environmental laws and regulations are continuously being enacted or proposed, such as those relating to greenhouse gas emissions and climate change, the level of expenditures required for environmental matters could increase in the future. Future legislative action and regulatory initiatives could result in changes to operating permits, additional remedial actions, material changes in

operations, increased capital expenditures and operating costs, increased costs of the goods we sell, and decreased demand for our products that cannot be assessed with certainty at this time.

Therefore, our costs of complying with current and future environmental laws, and our liabilities arising from past or future releases of, or exposure to, hazardous substances may adversely affect our business, results of operations and financial condition.

Compliance with existing and proposed climate change laws and regulations, could adversely affect our performance.

Under current European Union legislation, all industrial sites are subject to cap-and-trade programs, by which every facility with carbon emissions is required to purchase in the market emission rights for volumes of emission that exceed a certain allocated level. So far, and until 2020, the allocated level of emissions is such that the potential requirements of emissions rights purchases will have a limited impact on our business. After 2020, however, new regulations may require significant purchases of emissions rights in the market. Also, certain Canadian provinces have implemented cap-and-trade programs. As a result, our facilities in Canada and in the European Union may be required to purchase emission credits in the future (85% of the cost of which may be exempted in the European Union). The requirement to purchase emissions rights in the market could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

In other jurisdictions, including the United States and South Africa, some of the proposals for climate change legislation would require businesses that emit greenhouse gases to buy emission credits from the government, other businesses or through an auction process. While no such requirements applicable to our business have yet been adopted, if any such program were adopted in the future, we may be required to purchase emission credits for greenhouse gas emissions resulting from our operations. Although it is not possible at this time to predict what, if any, climate change laws or regulations will be adopted, any new restrictions on greenhouse gas emissions, including a cap-and-trade program or an emissions tax, could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations and liquidity.

We make a significant portion of our sales to a limited number of customers, and the loss of a portion of the sales to these customers could have a material adverse effect on our revenues and profits.

In the year ended December 31, 2017, Ferroglobe's ten largest customers accounted for approximately 47.1% of Ferroglobe's consolidated revenue and sales corresponding to Dow Corning Corporation, including sales from our joint venture operations, represented 12.2% of our sales. We expect that we will continue to derive a significant portion of our business from sales to these customers.

Some of the contracts with our customers do not provide commitments from our customers to purchase specified or minimum volumes of products for terms longer than one month to one year. Accordingly, with respect to these contracts, we do not benefit from any contractual protection mechanism in case of unexpected reduced demand for our products from such customers as a result of, for instance, downturns in the industries in which these customers operate or any other factor affecting their business, and this could have a material adverse effect on our revenues and profits.

If we were to experience a significant reduction in the amount of sales we make to some or all of these customers and could not replace these sales with sales to other customers, this could have a material adverse effect on our revenues and profits.

Our business benefits from antidumping and countervailing duty orders and laws that protect our products by imposing special duties on unfairly traded imports from certain countries. If these duties or laws change, certain foreign competitors might be able to compete more effectively.

Antidumping and countervailing duty orders are designed to provide relief from imports sold at unfairly low or subsidized prices by imposing special duties on such imports. Such orders normally benefit domestic suppliers and foreign suppliers not covered by the orders. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, antidumping and countervailing duties are in place covering silicon metal imports from China.

The current antidumping and countervailing duty orders may not remain in effect and continue to be enforced from year to year, the products and countries now covered by orders may no longer be covered, and duties may not continue to be assessed at the same rates. In the United States, rates of duty can change as a result of ''administrative reviews'' of antidumping and countervailing duty orders. These orders can also be revoked as a result of periodic ''sunset reviews,'' which determine whether the orders will continue to apply to imports from particular countries. A sunset review of the U.S. antidumping order covering silicon metal imports from China is currently being conducted. Antidumping and countervailing duties in the European Union and Canada are also subject to periodic reviews. In the European Union and in Canada, such reviews can include interim reviews, expiry reviews and other types of proceedings that may result in changes in rates of duty or termination of the duties.

Similarly, export duties imposed by foreign governments that are currently in place may change. For example, duties on Chinese exports of types of ferroalloys produced by Ferroglobe could be reduced.

Changes in any of these factors could adversely affect our business and profitability. Finally, at times, in filing trade actions, we arguably act against the interests of our customers. Certain of our customers may not continue to do business with us as a result.

In December 2016, Ferroglobe subsidiaries in Canada filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is subsidized. In March 2017, Ferroglobe subsidiary Globe Specialty Metals petitioned the U.S. Department of Commerce and the U.S. International Trade Commission to provide relief from dumped and subsidized silicon metal imports from Australia, Brazil, Kazakhstan and Norway. In both cases, the agencies found that imports covered by the cases were unfairly traded, but determined that the domestic industry was not injured by the unfair imports. These injury determinations could adversely affect our business and profitability in the United States and Canada. Such determinations are subject to judicial review. In Canada, an appeal is pending; in the United States, the possibility of an appeal is being evaluated.

In June 2017, Euroalliages (representing European Union producers including Ferroglobe) filed a complaint with DG Trade of the European Commission alleging that ferro-silicon originating in Egypt and Ukraine is dumped. In April 2018, the Commission notified interested parties that the complaint had been withdrawn and that it considered that the investigation should be terminated without measures. The fact that the case is not going to be successful could adversely affect our sales or our relationships with customers in the European Union.

In November 2017, Ferroglobe subsidiaries in the European Union filed a complaint with DG Trade of the European Commission alleging that silicon metal originating in Brazil and Bosnia is dumped. That investigation is ongoing and no findings have been issued yet.

Products we manufacture may be subject to unfair import competition that may affect our profitability.

A number of the products we manufacture, including silicon metal and ferrosilicon, are globally-traded commodities that are sold primarily on the basis of price. As a result, our sales volumes and prices may be adversely affected by influxes of imports of these products that are dumped or are subsidized by foreign governments. Our silicon metal and ferrosilicon operations have been injured by such unfair import competition in the past. The antidumping and countervailing duty laws provide a remedy for unfairly traded imports in the form of special duties imposed to offset the unfairly low pricing or subsidization. However, the process for obtaining such relief is complex and uncertain. As a result, while we have sought and obtained such relief in the past, in some cases we have not been successful. Thus, there is no assurance that such relief will be obtained, and if it is not, unfair import competition could have a material adverse effect on our business, results of operations and financial condition.

Competitive pressure from Chinese steel, aluminum, polysilicon and silicone producers may adversely affect the business of our customers, reducing demand for our products. Our customers may relocate to China, where they may not continue purchasing from us.

China's aluminum, polysilicon and steel producing capacity exceeds local demand and has made China an increasingly large net exporter of aluminum and steel, and the Chinese silicone manufacturing industry is growing. Chinese aluminum, polysilicon, steel and silicone producers — who are unlikely to purchase silicon metal, manganese- and silicon-based alloys and other specialty metals from our plants outside of China due to the ample availability of domestic Chinese production — may gain global market share at the expense of our customers. An increase in Chinese aluminum, steel, polysilicon and silicone industry market share could adversely affect the production volumes, revenue and profits of our customers, resulting in reduced purchases of our products.

Moreover, our customers might seek to relocate or refocus their operations to China or other countries with lower labor costs and higher growth rates. Any that do so might thereafter choose to purchase from other suppliers of silicon metal, manganese- and silicon-based alloys and other specialty metals which in turn could have a material adverse effect on our business, results of operations and financial condition.

We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.

A majority of our employees are members of labor unions. In the future, we may experience protracted negotiations with labor unions, strikes, work stoppages or other industrial actions from time to time. Strikes called by employees or unions could materially disrupt our operations, including productions schedules and delivery times. 2014, there was a strike at our South African subsidiary that required us to reduce production for seven days. We have also experienced strikes by our employees in France from time to time. Any such work stoppage could have a material adverse effect on our business, results of operations and financial condition.

New labor contracts will have to be negotiated to replace expiring contracts from time to time. It is possible that future collective bargaining agreements will contain terms less favorable than the current agreements. Any failure to negotiate renewals of labor contracts on terms acceptable to us,

with or without work stoppages, could have a materially adverse effect on our business, results of operations and financial condition.

Many of our key customers or suppliers are similarly subject to union disputes and work stoppages, which may reduce their demand for our products or interrupt the supply of critical raw materials and impede their ability to fulfil their commitments under existing contracts. In 2016, we temporarily reduced production at one of our plants as a result of a strike affecting one of our customers which resulted in delays in contract shipment dates and led to a decrease in prices for certain of our products.

We are dependent on key personnel.

Our success depends in part upon the retention of key employees. Competition for qualified personnel can be intense. Current and prospective employees may experience uncertainty about the effect of the Business Combination, which may impair our ability to attract, retain and motivate key management, sales, technical and other personnel.

If key employees depart, further integration of our FerroAtlántica and Globe divisions may be more difficult and our overall business may be harmed. We also may have to incur significant costs in identifying, hiring and retaining replacements for departing employees, may lose significant expertise and talent relating to our business and our ability to further realize the anticipated benefits of the Business Combination may be adversely affected. In addition, the departure of key employees could cause disruption or distractions for management and other personnel. Furthermore, we cannot be certain that we will be able to attract and retain replacements of a similar caliber as departing key employees.

The long term success of our Business Combination, which was consummated on December 23, 2015, depends to a significant degree on the continued employment of our core senior management team. In particular, we are dependent on the skills, knowledge and experience of Javier López Madrid, our Executive Chairman, Pedro Larrea Paguaga, our Chief Executive Officer, and Joseph Ragan, our Chief Financial Officer. If these employees are unable to continue in their respective roles, or if we are unable to attract and retain other skilled employees, our business, results of operations and financial condition could be adversely affected. We currently have employment agreements with Messrs. López Madrid, Larrea Paguaga and Ragan. These agreements contain certain non-compete provisions, which may not be fully enforceable by us. Additionally, we are substantially dependent upon key personnel among our financial and information technology staff, who enable us to meet our regulatory, contractual and financial reporting obligations, including reporting requirements under our credit facilities.

In certain circumstances, the members of our Board may have interests that may conflict with yours as a holder of ordinary shares.

Our directors have no duty to us with respect to any information such directors may obtain (i) otherwise than as our directors and (ii) in respect of which directors owe a duty of confidentiality to another person, provided that where a director's relationship with such other person gives rise to a conflict, such conflict has been authorized by our Board in accordance with our articles of association (''Articles''). Our Articles provide that a director shall not be in breach of the general duties directors owe to us pursuant to the UK Companies Act 2006 because such director:

- fails to disclose any such information to our Board, directors or officers; or
- fails to use or apply any such information in performing such director's duties as a director.

In such circumstances, certain interests of the members of our Board may not be aligned with your interests as a holder of ordinary shares and the members of our Board may engage in certain business and other transactions without any accountability or obligation to us.

Shortages of skilled labor could adversely affect our operations.

We depend on skilled labor for the operation of our submerged arc furnaces and other facilities. Some of our facilities are located in areas where demand for skilled personnel often exceeds supply. Shortages of skilled furnace technicians and other skilled workers could restrict our ability to maintain or increase production rates, lead to production inefficiencies and increase our labor costs.

We may not realize the cost savings, synergies and other benefits that we expect to achieve from the Business Combination.

The integration of formerly independent companies is a complex, costly and time-consuming process. We thus are required to devote significant management attention and resources to integrating our business practices and operations. The ongoing integration process may disrupt our business and, if implemented ineffectively, could preclude full realization of the anticipated benefits of the Business Combination. In our efforts to integrate our operations fully and successfully, we may encounter material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and a resulting diversion of management's attention. The challenges of combining the operations of FerroAtlántica and Globe include, among others:

- managing a significantly larger company;
- coordinating geographically separate organizations;
- potential diversion of management focus and resources from ordinary operational matters and future strategic opportunities;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key management and other employees;
- integrating two unique business cultures that are not necessarily compatible;
- the possibility of faulty assumptions underlying expectations of the Business Combination;
- issues in achieving anticipated operating efficiencies, business opportunities and growth prospects;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- issues in integrating information technology, communications and other systems;
- changes in applicable laws and regulations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by the governmental authorities; and
- managing tax costs or inefficiencies associated with integrating our operations.

Many of these factors are outside of our control and any one of them could result in increased costs, decreased revenues and diversion of management's time and energy, which could materially impact our business, results of operations and financial condition. Moreover, even if the operations of FerroAtlántica and Globe are integrated successfully, we may not fully realize the benefits of the Business Combination, including the synergies, cost savings or sales or growth opportunities that

we expect, within the anticipated time frame or at all. As a result, we cannot assure our shareholders that the Business Combination will result in the full realization of the benefits anticipated.

Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

We purchased a Representations and Warranties insurance policy (the ''R&W Policy'') in connection with the Business Combination to insure us against breaches of certain representations and warranties made by Grupo Villar Mir S.A.U. (''Grupo VM'') and FerroAtlántica in the Business Combination Agreement (as defined below). The R&W Policy has a face amount equal to $50,000,000 and is subject to an initial retention amount of $10,000,000, as well as other limitations and conditions. As a result of Grupo VM's ownership of the Company following completion of the Business Combination, the R&W Policy only provides insurance to the extent of approximately 43% of insurable losses incurred by us. Accordingly, the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica. In addition, we will not be able to recover losses attributable to breaches of representations and warranties that are excluded from the R&W Policy (including, for example, any purchase price, net worth or similar adjustment provisions of the Business Combination Agreement (hereinafter ''Business Combination Agreement'' or ''BCA''), transfer pricing, environmental or pollution matters, the intended tax treatment of the Business Combination, etc.), or losses that would result in payments under the R&W Policy in excess of the $50,000,000 face amount of the R&W Policy.

On November 18, 2016, Ferroglobe completed the distribution to the holders of our ordinary shares at the time of beneficial interest units (the ''Trust Units'') in a newly formed Delaware Statutory Trust, Ferroglobe Representation and Warranty Insurance Trust (''Ferroglobe R&W Trust''), to which Ferroglobe had assigned its interest in the R&W Policy. Having assigned the R&W Policy, if we suffer a loss attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica, we will be required to use our existing cash on hand or draws under our credit facility to fund the actual loss incurred to the extent that it is not met by Grupo VM, in the case of a breach by Grupo VM. Losses attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica could have a material adverse effect on our business, financial condition and results of operations.

Any failure to integrate recently acquired businesses successfully or to complete future acquisitions successfully could be disruptive of our business and/or limit our future growth.

From time to time, we expect to pursue acquisitions in support of our strategic goals. In connection with any such acquisition, we could face significant challenges in managing and integrating our expanded or combined operations, including acquired assets, operations and personnel. There can be no assurance that acquisition opportunities will be available on acceptable terms or at all or that we will be able to obtain necessary financing or regulatory approvals to complete potential acquisitions. Our ability to succeed in implementing our strategy will depend to some degree upon the ability of our management to identify, complete and successfully integrate commercially viable acquisitions. Acquisition transactions may disrupt our ongoing business and distract management from other responsibilities.

For example, in February 2018, we completed the acquisition from a wholly-owned subsidiary of Glencore International AG (''Glencore'') of a 100% interest in Glencore's manganese alloys plants in Mo I Rana (Norway) and Dunkirk (France). Although the purchase was made under what we believe to be favorable financial terms and we expect it to result in a 10-20% increase in Company-wide revenue, the acquisition increases the management complexity of our operations, adds a new currency (Norwegian Krone) to our foreign exchange exposure, and will require additional attention from management in order for us to successfully integrate and capture synergies. There can be no assurance that the acquisition will result in the realization of the benefits anticipated.

Grupo VM, our principal shareholder, has significant voting power with respect to corporate matters considered by our shareholders.

Our principal shareholder, Grupo VM, owns shares representing approximately 53% of the aggregate voting power of our capital stock. By virtue of Grupo VM's voting power, as well as Grupo VM's representation on the Board, Grupo VM will have significant influence over the outcome of any corporate transaction or other matters submitted to our shareholders for approval. Grupo VM will be able to block any such matter, including ordinary resolutions, which, under English law, require approval by a majority of outstanding shares cast in the vote. Grupo VM will also be able to block special resolutions, which, under English law, require approval by the holders of at least 75% of the outstanding shares entitled to vote and voting on the resolution, such as an amendment of the Articles or the exclusion of preemptive rights. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our legal and capital structure and our day-to-day operations, as well as the ability to elect and change our management and to approve other changes to our operations.

Grupo VM, which owns approximately 53% of our outstanding shares, has pledged most of its shares to secure its obligations to Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC; if Grupo VM defaults on the underlying loan, we could experience a change in control.

Grupo VM guaranteed its obligations pursuant to a credit agreement (the ''GVM Credit Agreement''), which allows them to borrow up to €415 million (''GVM Loan''). In March 2015, Grupo VM entered into a security and pledge agreement, as amended and restated on February 14, 2018 (the ''GVM Pledge Agreement''), with Crédit Agricole Corporate and Investment Bank, S.A., Banco Santander, S.A., HSBC Bank PLC and Société Générale, S.A. (the ''Lenders''), pursuant to which Grupo VM agreed to pledge most of its shares to the Lenders to secure the outstanding GVM Loan. In the event Grupo VM defaults under the GVM Credit Agreement, the Lenders may foreclose on the shares subject to the pledge. In such case, we could experience a change of control. Upon a change in control, we may be required, among other things, immediately to repay outstanding principal as well as, accrued interest and any other amounts owed by us under one or more of our bank facilities or our other debt. If upon a change of control, we do not have sufficient funds available to make such payments out of our available cash, third party financing would be needed, yet may be impermissible under our other debt agreements. In addition, certain other contracts we are party to from time to time may contain change of control provisions. Upon a change in control, such provisions may be triggered, which could cause our contracts to be terminated or give rise to other obligations, each of which could have a material adverse effect on our business, results of operations and financial condition.

We may engage in related party transactions with affiliates of Grupo VM, our principal shareholder.

Conflicts of interest may arise between our principal shareholder and your interests as a shareholder. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our day-to-day operations, including the pursuit of related party transactions. We have entered, and may in the future enter, into agreements with companies who are affiliates of Grupo VM, our principal shareholder. Such agreements have been approved by, or would be subject to the approval of, the Board. The terms of such agreements may present material risks to our business and results of operations. For example, we recently entered into a series of projects and an agreement in respect of a joint venture with AurinkaPhotovoltaic Group S.L. (''Aurinka'') and Blue Power Corporation S.L. (''Blue Power''), a company partly owned by Mr. Javier López Madrid, our Executive Chairman. We have also entered into a number of other agreements with affiliates of Grupo VM with respect to, among other things, the provision of information technology and data processing services and the management of certain aspects of our hydroelectric plants. See ''Item 7.B. — Major Shareholders and Related Party Transactions — Related Party Transactions.''

We are exposed to significant risks in relation to compliance with anti-bribery and corruption laws, anti-money laundering laws and regulations, and economic sanctions programs.

Doing business on a worldwide basis requires us to comply with the laws and regulations of various jurisdictions. In particular, our international operations are subject to anti-corruption laws, most notably the U.S. Foreign Corrupt Practices Act of 1977 (''FCPA'') and the UK Bribery Act of 2010 (the ''Bribery Act''), international trade sanctions programs, most notably those administered by the U.N., U.S. and European Union, anti-money laundering laws and regulations, and laws against human trafficking and slavery, most notably the UK Modern Slavery Act 2015 (''Modern Slavery Act'').

The FCPA and Bribery Act prohibit offering or providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. We may deal from time to time with both governments and state-owned business enterprises, the employees of which are considered foreign officials for purposes of these laws. International trade sanctions programs restrict our business dealings with or relating to certain sanctioned countries and certain sanctioned entities and persons no matter where located.

As a result of doing business internationally, we are exposed to a risk of violating applicable anti-bribery and corruption (''ABC'') laws, international trade sanctions, and anti-money laundering (''AML'') laws and regulations. Some of our operations are located in developing countries that lack well-functioning legal systems and have high levels of corruption. Our continued expansion and worldwide operations, including in developing countries, our development of joint venture relationships worldwide, and the engagement of local agents in the countries in which we operate tend to increase the risk of violations of such laws and regulations. Violations of ABC laws, AML laws and regulations, and trade sanctions are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts (and termination of existing contracts) and revocations or restrictions of licenses, as well as criminal penalties including possible imprisonment. Moreover, any major violations could have a significant impact on our reputation and consequently on our ability to win future business.

For its part, the Modern Slavery Act requires any commercial organization that carries on a business or part of a business in the United Kingdom which (i) supplies goods or services and (ii) has an annual global turnover of £36 million to prepare a slavery and human trafficking statement for each financial year ending on or after March 31, 2016. In this statement, the

commercial organization must set out the steps it has taken to ensure there is no modern slavery in its own business and its supply chain, or provide an appropriate negative statement. The UK Secretary of State may enforce this duty by means of civil proceedings. Ferroglobe is currently in compliance with the Act, and we believe it will remain so, but the nature of our operations and the regions in which we operate may make it difficult or impossible for us to detect all incidents of modern slavery in certain of our supply chains. Any failure in this regard would not violate the Modern Slavery Act *per se*, but could have a significant impact on our reputation and consequently on our ability to win future business.

We seek to build and continuously improve our systems of internal controls and to remedy any weaknesses identified. As part of our efforts to comply with all applicable law and regulation, we have introduced a global ethics and compliance program. We believe we are devoting appropriate time and resources to its implementation, related training, and to monitoring compliance. Despite these efforts, we cannot be certain that our policies and procedures will be followed at all times or that we will prevent or timely detect violations of applicable laws, regulations or policies by our personnel, partners or suppliers. Any actual or alleged failure to comply with applicable laws or regulations could lead to material liabilities not covered by insurance or other significant losses, which in turn could have a material adverse effect on our business, results of operations, and financial condition.

We operate in a highly competitive industry.

The silicon metal market and the silicon-based and manganese-based alloys markets are global, capital intensive and highly competitive. Our competitors may have greater financial resources, as well as other strategic advantages, to maintain, improve and possibly expand their facilities, and, as a result, they may be better positioned than we are to adapt to changes in the industry or the global economy. Advantages that our competitors have over us from time to time, new entrants that increase competition in our industry, and/or increases in the use of substitutes for certain of our products could have a material adverse effect on our business, results of operations and financial condition.

Though we are not currently operating at full capacity, we have historically operated at near the maximum capacity of our operating facilities. Because the cost of increasing capacity may be prohibitively expensive, we may have difficulty increasing our production and profits.

Our facilities are able to manufacture, collectively, approximately 416,750 tons of silicon metal (including Dow Corning's portion of the capacity of our Alloy, West Virginia and Bécancour, Québec plants), 534,000 tons of silicon-based alloys and 689,000 tons of manganese-based alloys on an annual basis. Our ability to increase production and revenues will depend on expanding existing facilities, acquiring facilities or building new ones. Increasing capacity is difficult because:

- adding 30,000 tons of new production capacity to an existing silicon manufacturing plant would cost approximately $120,000 thousand and take at least 12 to 18 months to complete once permits are obtained;
- a greenfield development project would take at least three to five years to complete and would require significant capital expenditure and, regulatory compliance costs; and
- obtaining sufficient and dependable electric power at competitive rates in areas near the required natural resources is extremely difficult.

We may not have sufficient funds to expand existing facilities, acquire new facilities, or open new ones and may be required to incur significant debt to do so, which could have a material adverse effect on our business and financial condition.

Our actual financial position and results of operations may differ materially from certain of the financial data included in this annual report, and, despite our best efforts, the historical financial information included in this annual report may not be representative of our results for the periods presented or future periods.

Ferroglobe PLC was formed upon the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's ''Predecessor'' for accounting purposes. Therefore, the historical data and results of Ferroglobe for the 2015 fiscal year are composed of the results of:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ending December 31, 2015;
- FerroAtlántica, the Company's ''Predecessor,'' for the twelve-month period ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

The historical data and results of fiscal years before 2015 correspond exclusively to the Predecessor, unless otherwise expressly stated. This affects the comparability of our historical data and results for the year ended December 31, 2015 and any subsequent periods with our historical data and results for any previous periods.

Furthermore, the historical financial information included in this annual report may not be indicative of our future financial performance or our ability to meet our obligations.

We are subject to restrictive covenants under our credit facilities and other financing agreements. These covenants could significantly affect the way in which we conduct our business. Our failure to comply with these covenants could lead to an acceleration of our debt.

We have entered into credit facilities that contain covenants that in certain circumstances, among other things, restrict our ability to sell assets; incur, repay or refinance indebtedness; create liens; make investments; engage in mergers or acquisitions; pay dividends, including dividends by subsidiaries to Ferroglobe PLC; repurchase stock; or make capital expenditures. These credit facilities also require compliance with specified financial covenants, including minimum interest coverage and maximum leverage ratios. We cannot borrow under the credit facilities if the additional borrowings would cause a breach of such financial covenants. Further, a significant portion of our assets are pledged to secure the indebtedness. For example, certain equity interests and assets are pledged to secure the New Revolving Credit Facility.

We have in the past breached certain financial covenants, including financial maintenance covenants under the Old Revolving Credit Facility as of and for the three months ended September 30 and December 31, 2016, certain covenants under our credit facilities. Our ability to comply with applicable debt covenants may be affected by events beyond our control, potentially leading to future breaches. The breach of any of the covenants contained in our credit facilities, unless waived, would constitute an event of default, in turn permitting the lenders to terminate their commitments to extend credit under, and accelerate the maturity of, the credit facilities in question. If in such circumstances we were unable to repay lenders and holders, or obtain waivers from them on acceptable terms or at all, the lenders and holders could foreclose upon the collateral securing the credit facilities and exercise other rights. Such events, should they occur, could have a material adverse effect on our business, results of operations and financial condition. See ''— Risks Related to Our Capital Structure — We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business'' below.

Our insurance costs may increase materially, and insurance coverages may not be adequate to protect us against all risks and potential losses to which we may be subject.

We maintain various forms of insurance covering a number of specified and consequential risks and losses arising from insured events under the policies, including certain business interruptions and claims for damage and loss caused by certain natural disasters, such as earthquakes, floods and windstorms. Our existing property and liability insurance coverage contains various exclusions and limitations on coverage. In some previous insurance policy renewals, we have acceded to larger premiums, self-insured retentions and deductibles. For example, as a result of the explosion at our facility in Chateau Feuillet, France, the applicable property insurance premium increased. We may also be subject to additional exclusions and limitations on coverage in future insurance policy renewals. There can be no assurance that the insurance policies we have in place are or will be sufficient to cover all potential losses we may incur. In addition, due to changes in our circumstances and in the global insurance market, insurance coverage may not continue to be available to us on terms we consider commercially reasonable or be sufficient to cover multiple large claims.

We have operations and assets in the United States, Spain, France, Canada, China, South Africa, Norway, Venezuela, Poland, Argentina, Mauritania and may have operations and assets in other countries in the future. Our international operations and assets may be subject to various economic, social and governmental risks.

Our international operations and sales may expose us to risks that are more significant in developing markets than in developed markets and which could negatively impact future revenue and profitability. Operations in developing countries may not operate or develop in the same way or at the same rate as might be expected in a country with an economy, government and legal system similar to western countries. The additional risks that we may be exposed to in such cases include, but are not limited to:

- tariffs and trade barriers;
- sanctions and other restrictions in our ability to conduct business with certain countries, companies or individuals;
- recessionary trends, inflation or instability of financial markets;
- regulations related to customs and import/export matters;
- tax issues, such as tax law changes, changes in tax treaties and variations in tax laws;
- changes in regulations that affect our business, such as new or more stringent environmental requirements or sudden and unexpected raises in power rates;
- limited access to qualified staff;
- inadequate infrastructure;
- cultural and language differences;
- inadequate banking systems;
- restrictions on the repatriation of profits or payment of dividends;
- crime, strikes, riots, civil disturbances, terrorist attacks or wars;
- nationalization or expropriation of property;
- law enforcement authorities and courts that are weak or inexperienced in commercial matters; and
- deterioration of political relations among countries.

In addition to the foregoing, exchange controls and restrictions on transfers abroad and capital inflow restrictions have limited, and can be expected to continue to limit, the availability of international credit. For example, the results of operations of our subsidiary in Venezuela have been adversely affected by changes to exchange rate policies there, and while Argentina recently lifted its restrictions limiting the ability of companies to buy foreign currency and to make dividend payments abroad, it devalued the peso, which is likely to fuel inflation and increase operating costs.

The critical social, political and economic conditions in Venezuela have adversely affected, and may continue to adversely affect, our results of operations.

Among other policies in recent years, the Venezuelan government has continuously devalued the Bolívar. The resulting inflation has devastated the country, which is experiencing all manner of shortages of basic materials and other goods and difficulties in importing raw materials. In 2016, we idled our Venezuelan operations and sought to determine the recoverable value of the long lived assets there. We concluded that the costs to dispose of the facility exceeded the fair value of the assets, primarily due to political and financial instability in Venezuela. Accordingly, we wrote down the full value of our Venezuelan operations. Our Venezuelan subsidiary has been able to meet its obligations (tax, labor, power costs and others) in the past through the sales of existing stock to customers, while remaining cash neutral in its operation. However, our inability to generate cash in that market may cause us to default on some of our obligations there in the future, which may result in administrative intervention or other consequences. If the social, political and economic conditions in Venezuela continue as they are, or worsen, our business, results of operations and financial condition could be adversely affected.

We are exposed to foreign currency exchange risk and our business and results of operations may be negatively affected by the fluctuation of different currencies.

We transact business in numerous countries around the world and a significant portion of our business entails cross border purchasing and sales. Our sales made in a particular currency do not exactly match the amount of our purchases in such currency. We prepare our consolidated financial statements in U.S. Dollars, while the financial statements of each of our subsidiaries are prepared in the entities functional currency. Accordingly, our revenues and earnings are continuously affected by fluctuations in foreign currency exchange rates. For example, our sales made in U.S. Dollars exceed the amount of our purchases made in U.S. Dollars, such that the appreciation of certain currencies (like the Euro or the South African Rand) against the U.S. Dollar would tend to have an adverse effect on our costs. Such adverse movements in relevant exchange rates could have a material adverse effect on our business, results of operations and financial condition.

We depend on a limited number of suppliers for certain key raw materials. The loss of one of these suppliers or the failure of one of any of them to meet contractual obligations to us could have a material adverse effect on our business.

Colombia and the United States are among the preferred sources for the metallurgical coal consumed in the production of silicon metal and silicon-based alloys, and the vast majority of produces source coal from these two countries. In the year ended December 31, 2017, approximately 71% of our coal was purchased from third parties. Of our third party purchases, approximately 63% came from Colombia. Additionally, the great majority of manganese ore we purchase comes from suppliers located in South Africa and Gabon, which supplied approximately 94% of the manganese ore we purchased in 2017. We do not control these third party suppliers and must rely on them to perform in accordance with the terms of their contracts. If these suppliers fail to provide us with the required raw materials in a timely manner, or at all, or if the quantity or quality of the materials they provide is lower than that contractually agreed, we may not be able to

procure adequate supplies of raw materials from alternative sources on comparable terms, or at all, which could have a material adverse effect on our business, results of operations and financial condition.

Planned investments in the expansion and improvement of existing facilities and in the construction of new facilities may not be successful.

We are engaged in significant capital improvements to our existing facilities to upgrade and add capacity to those facilities. We also may engage in the development and construction of new facilities. Should any such efforts not be completed in a timely manner and within budget, or be unsuccessful otherwise, we may incur additional costs or impairments which could have a material adverse effect on our business, results of operations and financial condition.

If hydrology conditions at our hydropower facilities are unfavorable or below our estimates, our electricity production, and therefore our revenue, may be substantially below our expectations.

The revenues generated by our hydroelectric operations are determined by the amount of electricity generated, which in turn is entirely dependent upon available water flows that may vary significantly over time. Rainfall and resulting hydrology conditions naturally vary from season to season and from year to year and may also change permanently because of climate change or other factors. A material reduction in seasonal rainfall will cause affected hydropower plants to run at a reduced capacity and therefore produce less electricity, adversely impacting revenue and profitability.

Moreover, if too much rainfall occurs at any one time, water may flow too quickly and at volumes in excess of a particular hydropower plant's designated operational levels, requiring the discharge of water through sluice gates rather than the plant's turbines. Such conditions, as well as flooding, lightning strikes, earthquakes, severe storms, wildfires, and other unfavorable weather conditions (including those due to climate change), may adversely impact water flow rates of the rivers on which our hydropower plants depend and require us to bypass turbines or shut down facilities, decreasing electricity production levels and revenues.

Any delay or failure to procure, renew or maintain necessary governmental permits, including environmental permits and concessions to operate our hydropower plants would adversely affect our results of operations.

The operation of our hydropower plants is highly regulated, requires various governmental permits, including environmental permits and concessions, and may be subject to the imposition of conditions by government authorities. We cannot predict whether the conditions prescribed in such permits and concessions will be achievable. The denial of a permit essential to a hydropower plant or the imposition of impractical conditions would impair our ability to operate the plant. If we fail to satisfy the conditions or comply with the restrictions imposed by governmental permits or concessions, or restrictions imposed by other applicable statutory or regulatory requirements, we may face enforcement action and be subject to fines, penalties or additional costs or revocation of such permits or concessions. Any failure to procure, renew or abide by necessary permits and concessions would adversely affect the operation of our hydropower plants.

In Spain, the use and exploitation of the hydropower plants located in Aragón and Galicia are not only subject to the limitations imposed on their concession certificates, but also to the limitations imposed by environmental regulation related to water distribution and flows. Power generation and the use of water at all hydropower plants must meet the requirements set out in the Spanish National Hydrological Plan and the various provisions and acts of the Spanish Water

Administration. Any further restrictions on our ability to use water at these plants would negatively impact our hydropower production and further expose us to increases in power prices in Spain.

Equipment failures may lead to production curtailments or shutdowns and repairing any failure could require us to incur capital expenditures and other costs.

Many of our business activities are characterized by substantial investments in complex production facilities and manufacturing equipment. Because of the complex nature of our production facilities, any interruption in manufacturing resulting from fire, explosion, industrial accidents, natural disaster, equipment failures or otherwise could cause significant losses in operational capacity and could materially and adversely affect our business, results of operations and financial condition.

Our hydropower generation assets and other equipment may not continue to perform as they have in the past or as they are expected. A major equipment failure due to wear and tear, latent defect, design error or operator error, early obsolescence, natural disaster or other force majeure event could cause significant losses in operational capacity. Repairs following such failures could require us to incur capital expenditures and other costs. Such major failures also could result in damage to the environment or damages and harm to third parties or the public, which could expose us to significant liability. Such costs and liabilities could adversely affect our business, results of operations and financial condition.

We depend on proprietary manufacturing processes and software. These processes may not yield the cost savings that we anticipate and our proprietary technology may be challenged.

We rely on proprietary technologies and technical capabilities in order to compete effectively and produce high quality silicon metal and silicon-based alloys, including:

- computerized technology that monitors and controls production furnaces;
- electrode technology and operational know-how;
- metallurgical processes for the production of solar-grade silicon metal;
- production software that monitors the introduction of additives to alloys, allowing the precise formulation of the chemical composition of products; and
- flowcaster equipment, which maintains certain characteristics of silicon-based alloys as they are cast.

We are subject to a risk that:

- we may not have sufficient funds to develop new technology and to implement effectively our technologies as competitors improve their processes;
- if implemented, our technologies may not work as planned; and
- our proprietary technologies may be challenged and we may not be able to protect our rights to these technologies.

Patent or other intellectual property infringement claims may be asserted against us by a competitor or others. Our intellectual property rights may not be enforceable and may not enable us to prevent others from developing and marketing competitive products or methods. An infringement action against us may require the diversion of substantial funds from our operations and may require management to expend efforts that might otherwise be devoted to operations. A successful challenge to the validity of any of our patents may subject us to a significant award of

damages, and may oblige us to secure licenses of others' intellectual property, which could have a material adverse effect on our business, results of operations and financial condition.

We also rely on trade secrets, know-how and continuing technological advancement to maintain our competitive position. We may not be able to effectively protect our rights to unpatented trade secrets and know-how.

Ferroglobe PLC is a holding company whose principal source of revenue is the income received from its subsidiaries.

Ferroglobe PLC is dependent on the income generated by its subsidiaries in order to earn distributable profits and pay dividends to shareholders. The amounts of distributions and dividends, if any, to be paid to us by any operating subsidiary will depend on many factors, including such subsidiary's results of operations and financial condition, limits on dividends under applicable law, its constitutional documents, documents governing any indebtedness, applicability of tax treaties and other factors which may be outside our control. If our operating subsidiaries do not generate sufficient cash flow, we may be unable to earn distributable profits and/or pay dividends on our shares.

Our business operations may be impacted by various types of claims, lawsuits, and other contingent obligations.

We are involved in various legal and regulatory proceedings including those that arise in the ordinary course of our business. We estimate such potential claims and contingent liabilities and, where appropriate, record provisions to address these contingent liabilities. The ultimate outcome of the legal matters currently pending against our Company is uncertain, and although such claims, lawsuits and other legal matters are not expected individually to have a material adverse effect, such matters in the aggregate could have a material adverse effect on our business, results of operations and financial condition. Furthermore, we could, in the future, be subject to judgments or enter into settlements of lawsuits and claims that could have a material adverse effect on our results of operations in any particular period. While we maintain insurance coverage in respect of certain risks and liabilities, we may not be able to obtain such insurance on acceptable terms in the future, if at all, and any such insurance may not provide adequate coverage against such claims. See ''Item 8.A. — Financial Information — Consolidated Statements and Other Financial Information — Legal proceedings'' for additional information regarding legal proceedings to which we are party.

We are exposed to changes in economic conditions where we operate and globally that are beyond our control.

Our industry is affected by changing economic conditions, including changes in national, regional and local unemployment levels, changes in national, regional and local economic development plans and budgets, shifts in business investment and consumer spending patterns, credit availability, and business and consumer confidence. Disruptions in national economies and volatility in the financial markets may and often will reduce consumer confidence, negatively affecting business investment and consumer spending. The outlook for the global economy in the near to medium term is uncertain due to several factors, including geopolitical risks and concerns about global growth and stability. Concerns also remain regarding the sustainability of the European Monetary Union and its common currency, the Euro, in their current form, particularly following the vote in favor of the United Kingdom's exit from the European Union in June 2016 and the UK Prime Minister's formal delivery of a notice of withdrawal from the European Union in March 2017, and in light of elections held, or to be held, in several European countries in 2017 and 2018.

We are not able to predict the timing or duration of periods economic growth in the countries where we operate and/or sell products, nor are we able to predict the timing or duration of any economic downturn or recession that may occur in the future.

Cybersecurity breaches and threats could disrupt our business operations and result in the loss of critical and confidential information.

We rely on the effective functioning and availability of our information technology and communication systems and the security of such systems for the secure processing, storage and transmission of confidential information. The sophistication and magnitude of cybersecurity incidents are increasing and include, among other things, unauthorized access, computer viruses, deceptive communications and malware. Information technology security processes may not effectively detect or prevent cybersecurity breaches or threats and the measures we have taken to protect against such incidents may not be sufficient to anticipate or prevent rapidly evolving types of cyber-attacks. Breaches of the security of our information technology and communication systems could result in destruction or corruption of data, the misappropriation, corruption or loss of critical or confidential information, business disruption, reputational damage, litigation and remediation costs.

Possible new tariffs and duties that might be imposed by certain governments, including the United States, the European Union and others, could have a material adverse effect on our results of operations.

In March 2018, the President of the United States announced import tariffs of 25 percent on steel and 10 percent on aluminum, with exemptions for Canada and Mexico only. In April 2018, the U.S. government released a list of Chinese products (in addition to steel and aluminum) that are subject to new tariffs, including a wide array of raw materials, construction machinery, agricultural equipment, electronics, medical devices, and consumer goods. China has already announced a plan to impose tariffs on a wide range of US products in retaliation for the new US tariffs on steel and aluminum and may impose additional tariffs in response to the new US tariffs on other Chinese products. These and like actions by the United States and China could result in the imposition of new tariffs by other countries. Any resulting ''trade war'' could have a significant adverse effect on world trade and the world economy. To date tariffs have not affected our business to a material degree. It is too early to predict how the recently enacted tariffs on imported aluminum and steel will impact our business.

Our suppliers, customers, agents or business partners may be subject to or affected by export controls or trade sanctions imposed by government authorities from time to time, which may restrict our ability to conduct business with them and potentially disrupt our production or our sales.

The US, EU, UN and other authorities have variously imposed export controls and trade sanctions on certain countries, companies, individuals and products, restricting our ability to trade normally with or in them. At present, compliance with such trade regulation is not affecting our business to a material degree. However, new trade regulations may be imposed at any time that target or otherwise affect our customers, suppliers, agents or business partners or their products. In particular, trade sanctions could be imposed that restrict our ability to do business with one or more critical suppliers and/or require special licenses to do so. Such events could potentially disrupt our production or sales and have a material adverse effect on our business, results of operations and financial condition.

Risks Related to Our Capital Structure

We have recorded a significant amount of goodwill and we may not realize the full value thereof.

We have recorded a significant amount of goodwill. Total goodwill, which represents the excess of the cost of acquisitions over our interest in the net fair value of the assets acquired and liabilities and contingent liabilities assumed, was $205,287 thousand as of December 31, 2017, or 10% of our total assets. Goodwill is recorded on the date of acquisition and, in accordance with IFRS, is tested for impairment annually and whenever there is any indication of impairment. Impairment may result from, among other things, deterioration in our performance, a decline in expected future cash flows, adverse market conditions, adverse changes in applicable laws and regulations (including changes that restrict or otherwise affect our mining and other operating activities) and a variety of other factors. The amount of any impairment must be expensed immediately as a charge to our consolidated income statement. For example, in 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill related to our business unit in Canada, which was recorded as a result of a sustained decline in future estimated sales prices and a decrease in our estimated long-term growth rate that led the Company to revise its expected future cash flows from its Canadian operations. See ''Item 5.A. — Operating and Financial Review and Prospects — Operating Results — Critical Accounting Policies — Goodwill.'' Our forecasts present inevitable elements of uncertainty due to the unpredictability of future events and the characteristics of the relevant market; therefore, our ability to meet forecasts may affect future evaluations, including goodwill impairment assessments. Any future impairment of goodwill may result in material reductions of our income and equity under IFRS.

Our leverage may make it difficult for us to service our debt and operate our business.

We have significant outstanding indebtedness and debt service requirements. Our leverage could have important consequences, including:

- making it more difficult for us to satisfy our obligations to all creditors and holders;
- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thus reducing the availability of our cash flow to fund internal growth through working capital and capital expenditures and for other general corporate purposes;
- increasing our vulnerability to a downturn in our business or economic or industry conditions;
- placing us at a competitive disadvantage compared to our competitors that have less indebtedness in relation to cash flow;
- limiting our flexibility in planning for or reacting to changes in our business and our industry;
- restricting us from investing in growing our business, pursuing strategic acquisitions and exploiting certain business opportunities; and
- limiting, among other things, our and our subsidiaries' ability to incur additional indebtedness or raise equity capital in the future and increasing the costs of such additional financings.

Our ability to service our indebtedness will depend on our future performance and liquidity, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors. Many of these factors are beyond our control. We may not be able to generate enough cash flow from operations or obtain enough capital to service our indebtedness or fund our

planned capital expenditures. If we cannot service our indebtedness and meet our other obligations and commitments, we might be required to refinance our indebtedness, obtain additional financing, delay planned capital expenditures or to dispose of assets to obtain funds for such purpose. We cannot assure you that any refinancing or asset dispositions could be effected on a timely basis or on satisfactory terms, if at all, or would be permitted by the terms of our outstanding debt instruments.

We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business.

Restrictive covenants under our financing agreements, including the Indenture and the New Revolving Credit Facility, may restrict our ability to operate our business. Our failure to comply with these covenants, including as a result of events beyond our control, could result in an event of default that could materially and adversely affect our business, results of operations and financial condition.

In particular, the Indenture and the New Revolving Credit Facility contain negative covenants restricting, among other things, our ability to:

- make certain advances, loans or investments;
- incur indebtedness or issue guarantees;
- create security;
- sell, lease, transfer or dispose of assets;
- merge or consolidate with other companies;
- transfer all or substantially all of our assets;
- make a substantial change to the general nature of our business;
- pay dividends and make other restricted payments;
- create or incur liens;
- agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions;
- engage in sales of assets and subsidiary stock;
- enter into transactions with affiliates;
- amend organizational documents;
- enter into sale-leaseback transactions; and
- enter into agreements that contain a negative pledge.

All of these limitations are subject to significant exceptions and qualifications.

The restrictions contained in our financing agreements could affect our ability to operate our business and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect our ability to finance our operations, make strategic acquisitions, investments or alliances, restructure our organization or finance our capital needs. Additionally, our ability to comply with these covenants and restrictions may be affected by events beyond our control. These include prevailing economic, financial and industry conditions. If we breach any of these covenants or restrictions, we could be in default under our financing agreements.

If there were an event of default under any of our debt instruments that is not cured or waived, the holders of the defaulted debt could terminate their commitments thereunder and declare all amounts outstanding with respect to such indebtedness due and payable immediately, which, in turn, could result in cross-defaults under our other outstanding debt instruments. Any such actions could force us into bankruptcy or liquidation.

We may not be able to generate sufficient cash to pay our accounts payable, meet our debt service obligations or meet our obligations under other financing agreements, in which case our creditors could declare all amounts owed to them due and payable, leading to liquidity constraints.

Our ability to make interest payments and to meet our other debt service obligations, or to refinance our debt, depends on our future operating and financial performance, which, in turn, depends on our ability to successfully implement our business strategies and plans as well as general economic, financial, competitive, regulatory and other factors beyond our control. If we cannot generate sufficient cash to meet our debt service requirements, we may, among other things, need to refinance all or a portion of our debt to obtain additional financing, delay planned capital expenditures or investments or sell material assets.

If we are not able to refinance any of our debt, obtain additional financing or sell assets on commercially reasonable terms or at all, we may not be able to satisfy our debt obligations. If we are also unable to satisfy our obligations on other financing arrangements, we could be in default under our existing financing agreements or other relevant financing agreements that we may enter into in the future. In the event of certain defaults under existing agreements, the lenders under the respective facilities or financing instruments could take certain actions, including terminating their commitments and declaring all principal amounts outstanding under our credit facilities and other indebtedness due and payable, together with accrued and unpaid interest. Such a default, or a failure to make interest payments, could mean that borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may, as a result, also be accelerated and become due and payable. If the debt under any of the material financing arrangements that we have entered into or will subsequently enter into were to be accelerated, our assets may be insufficient to repay the outstanding debt in full. Any such actions could force us into bankruptcy or liquidation, and we might not be able to repay our obligations under our financing agreements in such an event.

Risks Related to Our Ordinary Shares

Our share price may be volatile, and purchasers of our ordinary shares could incur substantial losses.

Our share price has been volatile in the recent past and may be so in the future. Moreover, stock markets in general experience periods of extreme volatility that are often unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell our ordinary shares at or above the price at which you purchase them. The market price for our shares may be influenced by many factors, including:

- the success of competitive products or technologies;
- regulatory developments in the United States and other countries;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel;

- quarterly or annual variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the industries in which we compete and issuance of new or changed securities analysts' reports or recommendations;
- the failure of securities analysts to cover our ordinary shares or changes in financial estimates by analysts;
- the inability to meet the financial estimates of analysts who follow our ordinary shares;
- investor perception of our Company and of the industries in which we compete; and
- general economic, political and market conditions.

If securities or industry analysts do not publish or cease publishing research reports about us, if they adversely change their recommendations regarding our ordinary shares, or if our operating results do not meet their expectations, the price of our ordinary shares could decline.

The trading market for our ordinary shares will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. Securities and industry analysts currently publish limited research on us. If there is limited or no securities or industry analyst coverage of us, the market price and trading volume of our ordinary shares would likely be negatively impacted. Moreover, if any of the analysts who may cover us downgrade our ordinary shares or provide relatively more favorable recommendations concerning our competitors, or if our operating results or prospects do not meet their expectations, the market price of our ordinary shares could decline. If any of the analysts who may cover us were to cease coverage or fail regularly to publish reports about our Company, we could lose visibility in the financial markets, which, in turn, could cause our share price or trading volume to decline.

As a foreign private issuer and ''controlled company'' within the meaning of the rules of NASDAQ, we are subject to different U.S. securities laws and NASDAQ governance standards than domestic U.S. issuers of securities. These may afford relatively less protection to holders of our ordinary shares, and you may not receive all corporate and company information and disclosures that you are accustomed to receiving or in a manner in which you are accustomed to receiving it.

As a foreign private issuer, the rules governing the information that we disclose differ from those governing U.S. corporations pursuant to the U.S. Securities Exchange Act of 1934, as amended (''U.S. Exchange Act''). Although we intend to report periodic financial results and certain material events, we are not required to file quarterly reports on Form 10 Q or provide current reports on Form 8 K disclosing significant events within four days of their occurrence. In addition, we are exempt from the SEC's proxy rules, and proxy statements that we distribute will not be subject to review by the SEC. Our exemption from Section 16 rules requiring the reporting of beneficial ownership and sales of shares by insiders means that you will have less data in this regard than shareholders of U.S. companies that are subject to this part of the U.S. Exchange Act. As a result, in deciding whether to purchase our shares, you may not have all the data that you are accustomed to having when making investment decisions with respect to domestic U.S. public companies.

As a ''controlled company'' within the meaning of the corporate governance standards of NASDAQ, we may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our Board consist of independent directors;

- the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board's independent directors in a vote in which only independent directors participate, or (2) a nominations committee composed solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

We may utilize these exemptions for as long as we continue to qualify as a ''controlled company.'' While exempt, we will not be required to have a majority of independent directors, our nominations and compensation committees will not be required to consist entirely of independent directors and such committees will not be subject to annual performance evaluations.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as our Company, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to U.K. requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of U.S. companies that are subject to all of the corporate governance requirements of NASDAQ.

We have identified material weaknesses in our internal control over financial reporting. Failure to remediate the identified material weakness or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations, which could also impact the market price of our shares or our ability to remain listed on NASDAQ.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. We are required under Section 404(a) of the Sarbanes-Oxley Act to furnish a report by management on, among other things, the effectiveness of our internal controls over financial reporting. This assessment includes disclosure of any material weaknesses identified by our management in our internal controls over financial reporting. A material weakness is a control deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis.

In connection with the preparation of our consolidated financial statements for the year ended December 31, 2017, we and our independent auditor carried out an evaluation of the effectiveness of our internal controls over financial reporting and concluded that there were material weaknesses in relation to the principles of the COSO framework with; i) deficiencies associated with control activities for the Company and ii) deficiencies in the control environment in respect of our legacy administration office in Spain, who are responsible for internal control over financial reporting of FerroAtlántica and its subsidiaries . This resulted in a number of deficiencies which when taken in aggregate, resulted in the conclusion that there were material weaknesses in the design and operating effectiveness of our internal controls as at December 31, 2017. These material weaknesses are described in ''Item 15.B. — Controls and Procedures — Management's annual

report on internal control over financial reporting'' below. However, all these significant identified misstatements were corrected in the financial statements as of December 31, 2017 and, notwithstanding these material weaknesses and management's assessment that internal control over financial reporting was ineffective as of December 31, 2017, our management believes that the consolidated financial statements included in this annual report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

We are taking, and will continue to take, measures to remediate the causes of these material weaknesses. However, failure to remediate these material weaknesses effectively or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations. This, in turn, could negatively impact our business, operating results, financial condition, the market price of our shares and our ability to remain listed on NASDAQ.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses.

We could cease to be a foreign private issuer if a majority of our outstanding voting securities are directly or indirectly held of record by U.S. residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. In that event, the regulatory and compliance costs we would incur as a domestic registrant may be significantly higher than we incur as a foreign private issuer, which could have a material adverse effect on our business, operating results and financial condition.

If Grupo VM's share ownership falls below 50%, we may no longer be considered a ''controlled company'' within the meaning of the rules of NASDAQ.

In the event Grupo VM sells shares in our Company to such an extent that it thereafter owns less than 50% of the total voting rights in our shares, we would no longer be considered a ''controlled company'' within the meaning of the corporate governance standards of NASDAQ. Under NASDAQ rules, a company that ceases to be a controlled company must comply with the independent board committee requirements as they relate to the nominating and corporate governance and compensation committees on the following phase-in schedule: (1) one independent committee member at the time it ceases to be a controlled company, (2) a majority of independent committee members within 90 days of the date it ceases to be a controlled company, and (3) all independent committee members within one year of the date it ceases to be a controlled company. Additionally, NASDAQ rules provide a 12 month phase-in period from the date a company ceases to be a controlled company to comply with the majority independent board requirement. If, within the phase-in periods, we are not able to recruit additional directors who would qualify as independent, or otherwise fail to comply with applicable NASDAQ rules, we may be subject to delisting by NASDAQ. Furthermore, a change in our board of directors and committee membership may result in a change in corporate strategy and operation philosophies including deviation from our current growth strategy, which could have a material adverse effect on our business, results of operations and financial condition.

As an English public limited company, certain capital structure decisions require shareholder approval, which may limit our flexibility to manage our capital structure.

English law provides that a board of directors may only allot shares (or rights or convertible into shares) with the prior authorization of shareholders, such authorization being up to the aggregate nominal amount of shares and for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. The Articles authorize the allotment of additional shares for a period of five years from October 26, 2017 (being the date of the adoption of

the Articles), which authorization will need to be renewed upon expiration (*i.e.*, at least every five years) but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally provides shareholders with preemptive rights when new shares are issued for cash. However, it is possible for the articles of association, or for shareholders acting in a general meeting, to exclude preemptive rights. Such an exclusion of preemptive rights may be for a maximum period of up to five years from the date of adoption of the articles of association, if the exclusion is contained in the articles of association, or from the date of the shareholder resolution, if the exclusion is by shareholder resolution. In either case, this exclusion would need to be renewed by our shareholders upon its expiration (*i.e.*, at least every five years). The Articles exclude preemptive rights for a period of five years from October 26, 2017, which exclusion will need to be renewed upon expiration (*i.e.*, at least every five years) to remain effective, but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally prohibits a public company from repurchasing its own shares without the prior approval of shareholders by ordinary resolution, such being a resolution passed by a simple majority of votes cast, and other formalities. As an English company listed on NASDAQ, we may not make on-market purchases of our shares and may make off-market purchases only for the purposes of or pursuant to an employees' share scheme where our shareholders have approved our doing so by ordinary resolution (and with a maximum duration of such approval of five years) or with the prior consent of our shareholders by ordinary resolution to the proposed contract for the purchase of our shares.

English law requires that we meet certain financial requirements before we declare dividends or repurchases.

Under English law, we may only declare dividends, make distributions or repurchase shares out of distributable reserves of the Company or distributable profits. ''Distributable profits'' are a company's accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made, as reported to the Companies House. In addition, as a public company, we may only make a distribution if the amount of our net assets is not less than the aggregate amount of our called-up share capital and undistributable reserves and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate amount. The Articles permit declaration of dividends by ordinary resolution of the shareholders, provided that the directors have made a recommendation as to its amount. The dividend shall not exceed the amount recommended by the directors. The directors may also decide to pay interim dividends if it appears to them that the profits available for distribution justify the payment. When recommending or declaring the payment of a dividend, the directors will be required under English law to comply with their duties, including considering our future financial requirements.

The enforcement of shareholder judgments against us or certain of our directors may be more difficult.

Because we are a public limited company incorporated under English law, and because most of our directors and executive officers are non-residents of the United States and substantially all of the assets of such directors and executive officers are located outside of the United States, our shareholders could experience more difficulty enforcing judgments obtained against our Company or our directors in U.S. courts than would currently be the case for U.S. judgments obtained against a U.S. public company or U.S. resident directors. In addition, it may be more difficult (or impossible) to assert some types of claims against our Company or its directors in courts in

England, or against certain of our directors in courts in Spain, than it would be to bring similar claims against a U.S. company and/or its directors in a U.S. court.

The United States is not currently bound by a treaty with Spain or the United Kingdom providing for reciprocal recognition and enforcement of judgments rendered in civil and commercial matters with Spain or the United Kingdom, other than arbitral awards. There is, therefore, doubt as to the enforceability of civil liabilities based upon U.S. federal securities laws in an action to enforce a U.S. judgment in Spain or the United Kingdom. In addition, the enforcement in Spain or the United Kingdom of any judgment obtained in a U.S. court based on civil liabilities, whether or not predicated solely upon U.S. federal securities laws, will be subject to certain conditions. There is also doubt that a court in Spain or the United Kingdom would have the requisite power or authority to grant remedies in an original action brought in Spain or the United Kingdom on the basis of U.S. federal securities laws violations.

Risks Related to Tax Matters

The application of Section 7874 of the Code, including under recent IRS guidance, and/or changes in law could affect our status as a foreign corporation for U.S. federal income tax purposes.

We believe that, under current law, we should be treated as a foreign corporation for U.S. federal income tax purposes. However, the U.S. Internal Revenue Service (the ''IRS'') may assert that we should be treated as a U.S. corporation for U.S. federal income tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended (the ''Code''). Under Section 7874 of the Code, we would be treated as a U.S. corporation for U.S. federal income tax purposes if, after the Business Combination, (i) at least 80% of our ordinary shares (by vote or value) were considered to be held by former holders of common stock of Globe by reason of holding such common stock, as calculated for Section 7874 purposes, and (ii) our expanded affiliated group did not have substantial business activities in the United Kingdom (the ''80% Test''). (The percentage (by vote and value) of our ordinary shares considered to be held by former holders of common stock of Globe immediately after the Business Combination by reason of their holding common stock of Globe is referred to in this disclosure as the ''Section 7874 Percentage.'')

Determining the Section 7874 Percentage is complex and, with respect to the Business Combination, subject to legal uncertainties. In that regard, the IRS and U.S. Department of the Treasury (''U.S. Treasury'') recently issued new rules (the ''Temporary Regulations''), which include a rule that applies to certain transactions in which the Section 7874 Percentage is at least 60% and the parent company is organized in a jurisdiction different from that of the foreign target corporation (the ''Third Country Rule''). This rule applies to transactions occurring on or after November 19, 2015, which date is prior to the closing of the Business Combination. If the Third Country Rule were to apply to the Business Combination, the 80% Test would be deemed met and we would be treated as a U.S. corporation for U.S. federal income tax purposes. While we believe the Section 7874 Percentage is less than 60% such that the Third Country Rule does not apply to us, we cannot assure you that the IRS will agree with this position and/or would not successfully challenge our status as a foreign corporation. If the IRS successfully challenged our status as a foreign corporation, significant adverse tax consequences would result for us and could apply to our shareholders.

In addition to the final rules to be promulgated with respect to the Temporary Regulations, changes to Section 7874 of the Code, the U.S. Treasury Regulations promulgated thereunder, or to other relevant tax laws (including under applicable tax treaties) could adversely affect our status or treatment as a foreign corporation, and the tax consequences to our affiliates, for U.S. federal income tax purposes, and any such changes could have prospective or retroactive application.

Recent legislative proposals have aimed to expand the scope of U.S. corporate tax residence, including by potentially causing us to be treated as a U.S. corporation if the management and control of us and our affiliates were determined to be located primarily in the United States, or by reducing the Section 7874 Percentage at or above which we would be treated as a U.S. corporation such that it would be lower than the threshold imposed under the 80% Test.

Recent IRS guidance and/or changes in law could affect our ability to engage in certain acquisition strategies and certain internal restructurings.

Even if we are treated as a foreign corporation for U.S. federal income tax purposes, the Temporary Regulations materially changed the manner in which the Section 7874 Percentage will be calculated in certain future acquisitions of U.S. businesses in exchange for our equity, which may affect the tax efficiencies that otherwise might be achieved in transactions with third parties. For example, the Temporary Regulations would impact certain acquisitions of U.S. companies for our Ordinary Shares (or other stock) in the 36 month period beginning December 23, 2015, by excluding from the Section 7874 Percentage the portion of Ordinary Shares that are allocable to former holders of common stock of Globe. This new rule would generally have the effect of increasing the otherwise applicable Section 7874 Percentage with respect to our future acquisition of a U.S. business. The Temporary Regulations also may more generally limit the ability to restructure the non-U.S. members of our Company to achieve tax efficiencies.

Recent IRS proposed regulations and/or changes in laws or treaties could affect the expected financial synergies of the Business Combination.

The IRS and the U.S. Treasury also recently issued rules that provide that certain intercompany debt instruments issued on or after April 5, 2016, will be treated as equity for U.S. federal income tax purposes, therefore limiting U.S. tax benefits and resulting in possible U.S. withholding taxes. As a result of these rules, we may not be able to realize a portion of the financial synergies that were anticipated in connection with the Business Combination, and such rules may materially affect our future effective tax rate. While these new rules are not retroactive, they could impact our ability to engage in future restructurings if such transactions cause an existing debt instrument to be treated as reissued. Furthermore, under certain circumstances, recent treaty proposals by the U.S. Treasury, if ultimately adopted by the United States and relevant foreign jurisdictions, could reduce the potential tax benefits for us and our affiliates by imposing U.S. withholding taxes on certain payments from our U.S. affiliates to related and unrelated foreign persons.

We are subject to tax laws of numerous jurisdictions and our interpretation of those laws is subject to challenge by the relevant governmental authorities.

We and our subsidiaries are subject to tax laws and regulations in the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. These laws and regulations are inherently complex and we and our subsidiaries are (and have been) obligated to make judgments and interpretations about the application of these laws and regulations to us and our subsidiaries and their operations and businesses. The interpretation and application of these laws and regulations could be challenged by the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material.

We intend to operate so as to be treated exclusively as a resident of the United Kingdom for tax purposes, but the relevant tax authorities may treat us as also being a resident of another jurisdiction for tax purposes.

We are a company incorporated in the United Kingdom. Current U.K. tax law provides that we will be regarded as being a U.K. resident for tax purposes from incorporation and shall remain so unless (i) we were concurrently resident of another jurisdiction (applying the tax residence rules of that jurisdiction) that has a double tax treaty with the United Kingdom and (ii) there is a tiebreaker provision in that tax treaty which allocates exclusive residence to that other jurisdiction.

Based upon our anticipated management and organizational structure, we believe that we should be regarded solely as resident in the United Kingdom from our incorporation for tax purposes. However, because this analysis is highly factual and may depend on future changes in our management and organizational structure, there can be no assurance regarding the final determination of our tax residence. Should we be treated as resident in a country or jurisdiction other than the United Kingdom, we could be subject to taxation in that country or jurisdiction on our worldwide income and may be required to comply with a number of material and formal tax obligations, including withholding tax and reporting obligations provided under the relevant tax law, which could result in additional costs and expenses.

We may not qualify for benefits under the tax treaties entered into between the United Kingdom and other countries.

We intend to operate in a manner such that, when relevant, we are eligible for benefits under the tax treaties entered into between the United Kingdom and other countries. However, our ability to qualify and continue to qualify for such benefits will depend upon the requirements contained within each treaty and the applicable domestic laws, as the case may be, on the facts and circumstances surrounding our operations and management, and on the relevant interpretation of the tax authorities and courts.

Our or our subsidiaries' failure to qualify for benefits under the tax treaties entered into between the United Kingdom and other countries could result in adverse tax consequences to us and our subsidiaries and could result in certain tax consequences of owning or disposing of our ordinary shares differing from those discussed below.

Future changes to domestic or international tax laws or to the interpretation of these laws by the governmental authorities could adversely affect us and our subsidiaries.

The U.S. Congress, the U.K. Government, the Organization for Economic Co-operation and Development and other government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational corporations. One example is in the area of ''base erosion and profit shifting'' (or ''BEPS''), in which payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. Thus, the tax laws in the United States, the United Kingdom or other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could adversely affect us. Furthermore, the interpretation and application of domestic or international tax laws made by us and our subsidiaries could differ from that of the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material. Related developments include signing of the OECD's so-called ''Multi Lateral Instrument'' by more than 70 countries impacting over 1,100 double tax treaties and the adoption of the Anti Tax Avoidance Directives (known as ''ATAD 1 & 2'') by the European Union.

Further developments are to be seen in areas such as the ''making tax digital — initiatives'' allowing authorities to monitor multinationals' tax position on a more real time basis and the contemplated introduction of new taxes, such as revenue based taxes aimed at technology companies, but which may impact traditional businesses as well.

We may become subject to income or other taxes in jurisdictions which would adversely affect our financial results.

We and our subsidiaries are subject to the income tax laws of the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. Our effective tax rate in any period is impacted by the source and the amount of earnings among our different tax jurisdictions. A change in the division of our earnings among our tax jurisdictions could have a material impact on our effective tax rate and our financial results. In addition, we or our subsidiaries may be subject to additional income or other taxes in these and other jurisdictions by reason of the management and control of our subsidiaries, our activities and operations, where our production facilities are located or changes in tax laws, regulations or accounting principles. Although we have adopted guidelines and operating procedures to ensure our subsidiaries are appropriately managed and controlled, we may be subject to such taxes in the future and such taxes may be substantial. The imposition of such taxes could have a material adverse effect on our financial results.

We may incur current tax liabilities in our primary operating jurisdictions in the future.

We expect to make current tax payments in some of the jurisdictions where we do business in the normal course of our operations. Our ability to defer the payment of some level of income taxes to future periods is dependent upon the continued benefit of accelerated tax depreciation on our plant and equipment in some jurisdictions, the continued deductibility of external and intercompany financing arrangements and the application of tax losses prior to their expiration in certain tax jurisdictions, among other factors. The level of current tax payments we make in any of our primary operating jurisdictions could adversely affect our cash flows and have a material adverse effect on our financial results.

Changes in tax laws may result in additional taxes for us.

We cannot assure you that tax laws in the jurisdictions in which we reside or in which we conduct activities or operations will not be changed in the future. Such changes in tax law could result in additional taxes for us.

U.S. federal income tax reform could adversely affect us.

Legislation commonly known as the Tax Cuts and Jobs Act (the ''TCJA'') was enacted on December 22, 2017 in the United States. The TCJA made significant changes to the U.S. federal tax code, including a reduction in the U.S. federal corporate statutory tax rate from 35% to 21%. The TCJA also made changes to the U.S. federal taxation of foreign earnings and to the timing of recognition of certain revenue and expenses and the deductibility of certain business expenses. We continue to examine the impact the TCJA may have on our business. Our net deferred tax assets and liabilities have been revalued at the newly enacted U.S. corporate rate, and the impact has been recognized in our tax expense in the year of enactment. The Company has not completed its accounting for the tax effects of enactment of the Tax Reform Act. However, as described below, the Company was able to make a reasonable estimate of the impact of the most relevant changes that affect the Company. The material impact of the TCJA on the Company's 2017 position was a deferred tax credit of $31.2 million representing the re-measurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018. In addition, a one-off tax charge of

$1.7 million has been included, representing the Company's best estimate of its liability for the one-time transition tax imposed by the TCJA on certain of its historic non-U.S. earnings. During 2018, the Company plans to complete its analysis in the aforementioned areas. Accordingly, the ultimate impact of adopting the TCJA may differ due to, among other things, changes in estimates resulting from the receipt or calculation of final data, changes in interpretations of the TCJA, and additional regulatory guidance that may be issued. The accounting for the impact of the TCJA is expected to be completed during the period ending October 15, 2018, when the Company's 2017 U.S. federal corporate income tax return is expected to be filed. This annual report does not discuss in detail the TCJA or the manner in which it might affect us or our stockholders. We urge you to consult with your own legal and tax advisors with respect to the Tax Reform Act and the potential tax consequences of investing in our shares.

Our transfer pricing policies are open to challenge from taxation authorities internationally.

Tax authorities have been increasingly focused on transfer pricing in recent years. Due to our international operations and an increasing number of inter-company cross-border transactions, we are open to challenge from tax authorities with regard to the pricing of such transactions. A successful challenge by tax authorities may lead to a reallocation of taxable income to a different tax jurisdiction and may potentially lead to a higher tax bill overall for us.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Ferroglobe PLC

Ferroglobe PLC, initially named VeloNewco Limited, was incorporated under the U.K. Companies Act 2006 as a private limited liability company in the United Kingdom on February 5, 2015, as a wholly-owned subsidiary of Grupo VM. On 16 October 2015 VeloNewco Limited re-registered as a public limited company. As a result of the Business Combination, which was completed on December 23, 2015, FerroAtlántica and Globe merged through corporate transactions to create Ferroglobe PLC, one of the largest producers worldwide of silicon metal and silicon- and manganese-based alloys. To effect the Business Combination, Ferroglobe acquired from Grupo VM all of the issued and outstanding ordinary shares, par value €1,000 per share, of Grupo FerroAtlántica in exchange for 98,078,161 newly issued Class A Ordinary Shares, nominal value $7.50 per share, of Ferroglobe, after which FerroAtlántica became a wholly-owned subsidiary of Ferroglobe. Immediately thereafter, Gordon Merger Sub, Inc., a wholly-owned subsidiary of Ferroglobe, merged with and into Globe Specialty Metals, Inc., and each outstanding share of common stock, par value $0.0001 per share, was converted into the right to receive one newly-issued ordinary share, nominal value $7.50 per share, of Ferroglobe. After these steps, Ferroglobe issued, in total, 171,838,153 shares, out of which 98,078,161 shares were issued to Grupo VM and 73,759,992 were issued to the former Globe shareholders. Our ordinary shares are currently traded on the NASDAQ under the symbol ''GSM.''

On June 22, 2016, we completed a reduction of our share capital, as a result of which the nominal value of each share was reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to distributable reserves.

On November 18, 2016, our Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe R& W Trust to certain Ferroglobe shareholders. Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

Our FerroAtlántica division's history dates back to 1992, with the acquisition by Grupo VM of the ferroalloys division of Grupo Carburos Metálicos, a Spanish industrial gas and chemical products producer. Our Globe division's history dates back to 2006, with the acquisition by Globe (previously known as International Metals Enterprises, Inc.) of Globe Metallurgical Inc., the owner and operator of a plant in Selma, Alabama with two furnaces for silicon metal production, a plant in Niagara Falls, New York, with two furnaces for silicon metal and ferroalloys production, and a plant in Beverly, Ohio with five furnaces for silicon metal, specialty alloys and ferroalloys production, all located in the United States.

Significant milestones in our history are as follows:

- **1996:** acquisition of the Spanish company Hidro Nitro Española, S.A. (''Hidro Nitro Española''), operating in the ferroalloys and hydroelectric power businesses, and start of the quartz mining operations through the acquisition of Cuarzos Industriales S.A. from Portuguese cement manufacturer Cimpor;
- **1998:** expansion of our manganese- and silicon-based alloy operations through the acquisition of 80% of the share capital of FerroAtlántica de Venezuela (currently FerroVen, S.A.) from the Government of Venezuela in a public auction;

- **2000:** acquisition of 67% of the share capital of quartz mining company Rocas, Arcillas y Minerales, S.A. from Elkem, a Norwegian silicon metal and manganese- and silicon-based alloy producer;
- **2005:** acquisition of Pechiney Electrométallurgie, S.A., now renamed FerroPem, S.A.S., a silicon metal and silicon-based alloys producer with operations in France, along with its affiliate Silicon Smelters (Pty) Ltd. in South Africa;
- **2005:** acquisition of the metallurgical manufacturing plant in Alloy, West Virginia, and Alabama Sand and Gravel, Inc. in Billingsly, Alabama, both in the U.S.;
- **2006:** acquisition of Globe Metallurgical Inc., the largest merchant manufacturer of silicon metal in North America and largest specialty ferroalloy manufacturer in the United States;
- **2006:** acquisition of Stein Ferroaleaciones S.A., an Argentine producer of silicon-based specialty alloys, and its Polish affiliate, Ultracore Polska;
- **2007:** creation of Grupo FerroAtlántica, S.A.U., the holding company of our FerroAtlántica Group;
- **2007:** acquisition of Camargo Correa Metais S.A., a major Brazilian silicon metal manufacturer;
- **2008:** acquisition of Rand Carbide PLC, a ferrosilicon plant in South Africa, from South African mining and steel company Evraz Highveld Steel and Vanadium Limited, and creation of Silicio FerroSolar, S.L., which conducts research and development activities in the solar grade silicon sector;
- **2008:** acquisition of 81% of Solsil, Inc., a producer of high-purity silicon for use in photovoltaic solar cells
- **2008:** acquisition of a majority stake in Ningxia Yonvey Coal Industry Co., Ltd., a producer of carbon electrodes (the remaining stake subsequently purchased in 2012);
- **2009:** creation of French company Photosil Industries, S.A.S., which conducts research and development activities in the solar grade silicon sector;
- **2009:** sale of interest in Camargo Correa Metais S.A. in Brazil to Dow Corning Corporation and formation of a joint venture with Dow Corning at the Alloy, West Virginia facility;
- **2010:** acquisition of Core Metals Group LLC, one of North America's largest and most efficient producers and marketers of high-purity ferrosilicon and other specialty metals;
- **2010:** acquisition of Chinese silicon metal producer MangShi Sinice Silicon Industry Company Limited;
- **2011:** acquisition of Alden Resources LLC, North America's leading miner, processor and supplier of specialty metallurgical coal to the silicon and silicon-based alloy industries;
- **2012:** acquisition of SamQuarz (Pty) Ltd, a South African producer of silica, with quartz mining operations;
- **2012:** acquisition of a majority stake (51%) in Bécancour Silicon, Inc., a silicon metal producer in Canada, operated as a joint venture with Dow Corning as the holder of the minority stake of 49%;
- **2014:** acquisition of Silicon Technology (Pty) Ltd. (''Siltech''), a ferrosilicon producer in South Africa; and

- **2018:** acquisition from a subsidiary of Glencore PLC of a 100% interest in manganese alloys plants in Mo i Rana, Norway and Dunkirk, France, through newly-formed subsidiaries Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France, SAS.

Corporate and Other Information

Our operating headquarters and registered office are located at 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London W1J 6ER, United Kingdom and 5 Fleet Place, London EC4M 7RD, United Kingdom, respectively. Our telephone number is +44 (0)203 129 2420.

B. Business Overview

We are a global leader in the growing silicon and specialty metals industry with an expansive geographical reach, established through Globe's predominantly North American-centered footprint and FerroAtlántica's predominantly European-centered footprint.

Ferroglobe is one of the world's largest producers of silicon metal, silicon-based alloys and manganese-based alloys. Additionally, Ferroglobe currently has quartz mining activities in Spain, the United States, Canada, South Africa and Mauritania, low-ash metallurgical quality coal mining activities in the United States, and interests in hydroelectric power in Spain and France. Ferroglobe controls a meaningful portion of most of its raw materials and captures, recycles and sells most of the by-products generated in its production processes.

We sell our products to a diverse base of customers worldwide. These products include aluminum, silicone compounds used in the chemical industry, ductile iron, automotive parts, photovoltaic (solar) cells, electronic semiconductors and steel and are key elements in the manufacture of a wide range of industrial and consumer products.

We are able to supply our customers with the broadest range of specialty metals and alloys in the industry from our production centers in North America, Europe, South America, Africa and Asia. Our broad manufacturing platform and flexible capabilities allow us to optimize production and focus on products that enhance profitability, including the production of customized solutions and high purity metals to meet specific customer requirements. We also benefit from low operating costs, resulting from our ownership of sources of critical raw materials and the flexibility derived from our ability to alternate production at certain of our furnaces between silicon metal and silicon base alloy products.

In the following description of Ferroglobe's business, we include all of Ferroglobe's assets as of December 31, 2017 or December 31, 2016. However, data referring to activity in 2015 (for example, production levels, revenues or revenue breakdown) refers to FerroAtlántica as the Predecessor for Ferroglobe's past fiscal years.

Industry and Market Data

The statements and other information contained below regarding Ferroglobe's competitive position and market share are based on the reports periodically published by a leading metals industry consultant and leading metals industry publications and information centers, as well as on the estimates of Ferroglobe's management.

Competitive Strengths and Strategy of Ferroglobe

Competitive Strengths

Leading market positions in silicon metal, silicon-based alloys and manganese-based alloys

We are a leading global producer in our core products based on merchant production capacity and hold the leading market share in a majority of our products. With total global silicon metal production capacity of 416,750 metric tons (which includes 51% of our attributable joint venture capacity), we have approximately 78% of the merchant production capacity market share in North America and approximately 30% of the global market share (all of the world excluding China), according to management estimates for our industry. Our scale and global presence across five continents allows us to offer a wide range of products to serve a variety of end-markets, including those which we consider to be dynamic, such as the solar, automotive, consumer electronic products, semiconductors, construction and energy industries. As a result of our market leadership and breadth of products, we possess critical insight into market demand allowing for more efficient use of our resources and operating capacity. Our ability to supply critical sources of high quality raw materials from within our Company provides us with operational and financial stability and reduces the need for us to compete with our competitors for supply. We believe this also provides a competitive advantage, allowing us to deliver an enhanced product offering with consistent quality on a cost-efficient basis to our customers.

Global production footprint and reach

Our diversified production base consists of production facilities across North America, Europe, South America, South Africa and Asia. We have the capability to produce our core products at multiple facilities, providing a competitive advantage when reacting to changing global demand trends and customer requirements. Furthermore, this broad base ensures reliability to our customers that value timely delivery and consistent product quality. Our diverse production base also enables us to optimize our production plans and shift production to the lowest cost facilities. Most of our production facilities are located close to sources of principal raw materials, key customers or major transport hubs to facilitate delivery of raw materials and distribution of finished products. This enables us to service our customers globally, while optimizing our working capital, as well as enabling our customers to optimize their inventory levels.

Diverse base of high quality customers across growing industries

We sell our products to customers in over 30 countries, with our largest customer concentration in North America and in Europe. Our products are used in end products spanning a broad range of industries, including solar, personal care and healthcare products, automobile parts, carbon and stainless steel, water pipe, solar, semiconductor, oil and gas, infrastructure and construction. Although some of these end-markets have growth drivers similar to our own, others are less correlated and offer the benefits of diversification. This wide range of products, customers and end-markets provides significant diversity and stability to our business.

Many of our customers, we believe, are leaders in their end-markets and fields. We have built long-lasting relationships with customers based on the breadth and quality of our product offerings and our ability to produce products that meet specific customer requirements. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years. For the year ended December 31, 2017 and December 31, 2016, Ferroglobe's ten largest customers accounted for approximately 47% and 42%, respectively, of Ferroglobe's consolidated revenue. Our customer relationships provide us with stability and visibility into our future volumes and earnings, though we are not reliant on any individual customer or end-market. Our customer relationships, together with our diversified product

portfolio, provide us with opportunities to cross sell new products; for example, by offering silicon-based or manganese-based alloys to existing steelmaking customers. Our largest global customer, Dow Corning, is also a 49% minority owner in our Alloy, West Virginia and Bécancour, Québec facilities.

Flexible and low cost structure

We believe we have an efficient and flexible cost structure, enhanced over time by vertical integration through strategic acquisitions and by the integration of our FerroAtlántica and Globe divisions following the completion of the Business Combination in December 2015. The largest components of our cost base are raw materials and power. Our relatively low operating costs are primarily a result of our ownership of, and proximity to, sources of raw materials, our access to attractively priced power supplies and skilled labor and our efficient production processes.

We believe our vertically integrated business model and ownership of sources of raw materials provides us with a cost advantage over our competitors. Moreover, such ownership and the fact that we are not reliant on any single supplier for the remainder of our raw materials needs generally ensures stable, long term supply of raw materials for our production processes, thereby enhancing operational and financial stability. Transportation costs can be significant in our business; our proximity to sources of raw materials and customers improves logistics and represents another cost advantage. The proximity of our facilities to our customers also allows us to provide just in time delivery of finished goods and reduces the need to store excess inventory, resulting in more efficient use of working capital. Additionally, we believe we have competitive power supply contracts in place that provide us with reliable, long term access to power at reasonable rates. We capture, recycle and sell most of the by-products generated in our production processes, which further reduces our costs.

We operate with a largely variable cost of production and our diversified production base allows us to shift our production and distribution between facilities and products in response to changes in market conditions over time. Additionally, the diversity of our currency and commodity exposures provides, to a degree, a natural hedge against FX and pricing volatility. Our production costs are mostly dependent on local factors while our product prices are influenced more by global factors. Depreciation of local, functional currencies relative to the U.S. Dollar, when it occurs, reduces the costs of our operations, offering an increased competitive edge in the international market.

We believe our scale and global presence enables us to sustain our operations throughout periods of economic downturn, volatile commodity prices and demand fluctuations.

Stable supply of critical, high quality raw materials

In order to ensure reliable supplies of high quality raw materials for the production of our metallurgical products, we have invested in strategic acquisitions of sources that supply a meaningful portion of the inputs our manufacturing operations consume. Specifically, we own and operate specialty, low ash, metallurgical quality coal mines in the United States, high purity quartz quarries in the United States, Canada, Spain, South Africa and Mauritania, timber farms and charcoal production units in South Africa, and our Yonvey production facility for carbon electrodes in Ningxia, China. For raw materials needs our subsidiaries cannot meet, we have qualified multiple suppliers in each operating region for each raw material, helping to ensure reliable access to high quality raw materials.

Efficient and environmentally friendly by-product usage

We utilize or sell most of the by-products of our manufacturing process, which reduces cost and the environmental impact of our operations. We have developed markets for the by-products generated by our production processes and have transformed our manufacturing operations so that little solid waste disposal is required. By-products not recycled in the manufacturing process are generally sold to companies, which process them for use in a variety of other applications. These materials include: silica fume (also known as microsilica), used as a concrete additive, refractory material and oil well conditioner; fines — the fine material resulting from crushing lumps; and dross, which results from the purification process during smelting.

Pioneer in innovation with focus on technological advances and development of next generation products

Our talented workforce has historically developed proprietary technological capabilities and next generation products in-house, which we believe give us a competitive advantage. In addition to a dedicated R&D division that coordinates all of our R&D activities, we have cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Our R&D achievements include:

- ELSA electrode — We have internally developed a patented technology for electrodes used in silicon metal furnaces, which we have sold to several major silicon producers globally. This technology, known as the ELSA electrode technology, improves energy efficiency in the production process of silicon metal and significantly reduces iron contamination. It enables us to run our furnaces with fewer stoppages, minimizing the consumption of power, which is one of the largest cost components in the smelting process. The ELSA electrode technology and related know how is unique and has no proven alternative worldwide. The ELSA electrode technology nearly halves the cost of the utilization of electrodes, relative to prebaked electrodes. Furthermore, ELSA is a key technology in running high capacity silicon furnaces (the size and capacity of silicon furnaces is limited by the size of its electrodes, and the ELSA technology allows us to reduce this bottleneck), improving our productivity and lowering our unit cost.
- Solar Grade Silicon — Ferroglobe's solar grade silicon involves the production of upgraded metallurgical grade (UMG) type solar grade silicon metal with a purity above 99.9999% through a new, potentially cost effective, electrometallurgical purification process in place of the traditional chemical process for the production of solar grade polycrystalline silicon, which tends to be costly and involves high energy consumption and potential environmental hazards. The new technology, developed by Ferroglobe at its research and development facilities, aims to reduce the costs and energy consumption associated with the production of solar grade silicon. We have commenced production of such UMG solar grade silicon through this new process at a prototype factory, and we currently sell the small amounts we produce to manufacturers of solar wafers. The construction of a larger greenfield facility is currently underway and expected to produce 1,500 tons of solar grade silicon annually. In 2016, we entered into an agreement with Aurinka providing for the formation and operation of a joint venture for the purpose of producing upgraded metallurgical grade (UMG) solar silicon. See ''— Research and Development (R&D) — Solar grade silicon'' below.

Experienced management team and centralized location at global center of metals and mining industry

We have a seasoned and experienced management team with extensive knowledge of the global metals and mining industry, operational and financial expertise and a track record of

developing and managing large-scale operations. Our management team is committed to responding quickly and effectively to macroeconomic and industry developments, to identifying and delivering growth opportunities and to improving our performance by way of a continuous focus on operational cost control and a disciplined, value-based approach to capital allocation. Our management team is complemented by a skilled operating team with solid technical knowledge of production processes and strong relationships with key customers. Additionally, following the Business Combination, we moved our headquarters to London, one of the global centers for the metals and specialized materials industries. We believe being London-based offers senior management easy access to our facilities, customers, suppliers and the financial markets, in turn providing us with a competitive advantage.

Business Strategy

Maintain and leverage industry leading position in core businesses and pursue long-term growth

We intend to maintain and leverage our position as a leading global producer of silicon metal and one of the leading global producers of ferroalloys based on production capacity. We believe we will achieve our goals through developing our existing strengths and pursuing long-term growth. We plan to achieve organic growth by continually expanding and enhancing our production capabilities as well as by developing new generation products to further diversify our portfolio of products and expand our customer base. We intend to focus our production and sales efforts on high-margin products and end-markets that we consider to have the highest potential for profitability and growth, such as the solar industry. We will continue to capitalize on our global reach and the diversity of our production base to adapt to changes in market demands, shifting our production and distribution across facilities and between different products as necessary in order to remain competitive and maximize profitability. We aim to obtain further direct control of key raw materials to secure our long-term access to scarce reserves, which we believe will allow us to continue delivering enhanced products while maintaining our low-cost position. Additionally, we will continue regularly to review our customer contracts in an effort to improve their terms and to optimize the balance between selling under long-term agreements and retaining some exposure to spot markets. We intend to maintain pricing that appropriately reflects the value of our products and our level of customer service and, in light of commodity prices and demand fluctuations, may decide to move away from contracts with index-based prices in favor of contracts with fixed prices, particularly at prices which ensure a profit throughout the cycle.

Maintain low cost position while controlling inputs

We believe we have an efficient cost structure and, going forward, we will seek to further reduce costs and improve operational efficiency through a number of initiatives. We plan to focus on controlling the cost of our raw materials through our captive sources and long term supply contracts and on lowering our fixed costs in order to reduce the unit costs of our silicon metal and ferroalloy production. We aim to improve our internal processes and further integrate our FerroAtlántica and Globe divisions in order to realize additional operating synergies from the Business Combination, such as benefits from value chain optimization, including enhancements in raw materials procurement and materials management; adoption of best practices and technical and operational know how across our platform; reduced freight costs from improved logistics as well as savings through the standardization of monitoring and reporting procedures, technology, systems and controls. We intend to enhance our production process through R&D and targeted capital expenditure and leverage our geographic footprint to shift production to the most cost effective and appropriate facilities and regions for such products. We will continue to regularly review our power supply contracts with a view to improving their terms, such as the inclusion of interruptibility capacity, which provides us with additional profitability, and more competitive tariff

structures. In addition, we will seek to maximize the value derived from the utilization and sale of by-products generated in our production processes.

Continue to focus on innovation to develop next generation products

We believe we differentiate ourselves from our competitors on the basis of our technical expertise and innovation, which allow us to deliver new high quality products to meet our customers' needs. We intend to keep using these capabilities in the future to retain existing customers and cultivate new business. We plan to leverage the expertise of our dedicated team of specialists to advance and to develop next generation products and technologies that fuel organic growth. In particular, we intend to continue investing in our FerroSolar Project, which involves the production of solar grade silicon metal with a purity level above 99.9999% through a new electrometallurgical process that may prove to be more cost-effective than the traditional chemical process. We also aim to further develop our specialized foundry products, such as value-added inoculants and customized nodularizers, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Maintain financial discipline to facilitate ongoing operations and support growth

We believe maintaining financial discipline will provide us with the ability to manage the volatility in our business resulting from changes in commodity prices and demand fluctuations. We intend to preserve a strong and conservative balance sheet, with sufficient liquidity and financial flexibility to facilitate all of our ongoing operations, to support organic and strategic growth and to finance prudent capital expenditure programs aimed at placing us in a better position to generate increased revenues and cash flows by delivering a more comprehensive product mix and optimized production in response to market circumstances. We plan to become even more efficient in our working capital management through various initiatives aimed at optimizing inventory levels and accounts receivables. We will also seek to repay indebtedness from free cash flow and retain low leverage for maximum free cash flow generation.

Pursue strategic opportunities

We have a proven track record of disciplined acquisitions of complementary businesses and successfully integrating them into existing operations while retaining a targeted approach through appropriate asset divestitures. Our past acquisitions have increased the vertical integration of our activities, allowing us to deliver an enhanced product offering on a cost-efficient basis. We regularly consider and evaluate strategic opportunities for our business and will continue to do so in the future with the objective of expanding our capabilities and leveraging our products and operations. In particular, we intend to pursue complementary acquisitions and other investments at appropriate valuations for the purpose of increasing our capacity, increasing our access to raw materials and other inputs, further refining existing products, broadening our product portfolio and entering new markets. We will consider such strategic opportunities in a disciplined fashion while maintaining a conservative leverage position and strong balance sheet. We will also seek to evaluate our core business strategy on an ongoing basis and may divest certain non-core and lower margin businesses to improve our financial and operational results. For example, we have recently completed the acquisition from a wholly-owned subsidiary of Glencore International AG (''Glencore'') of a 100% interest in Glencore's manganese alloys plants in Mo I Rana (Norway) and Dunkirk (France). The acquisition of these plants has doubled our global manganese alloy production capacity, allowing us to become one of the world's largest producers of manganese alloys by production capacity. Simultaneously with the acquisition, we entered into an exclusive

agency arrangement with Glencore for the marketing of our manganese alloys worldwide and the procurement of manganese ores to supply our plants, in both cases for a period of ten years.

Facilities and Production Capacity

The following chart shows, as of December 31, 2017, the location of our assets and our production capacity, including 51% of the capacity of our joint ventures, by geography, of silicon, silicon-based alloys (ferrosilicon/foundry alloys), manganese-based alloys and other silicon-based alloys.

Ferroglobe Assets

1 Bécancour, Canada	20 Venezuela (Mining)
2 La Malbaie, Quebec	21 Esmeralda, Spain
3 Niagara Falls, NY	22 SamQuarz, South Africa
4 Beverly, OH	23 Venezuela (Metallurgy)
5 Alloy, WV	24 eMalahleni, South Africa
6 Corbin, KY (Alden Resources)	25 Polokwane, South Africa
7 Aurora, IN	26 Laudun, France
8 Billingsley, AL	27 Boo, Spain
9 Bridgeport, AL	28 Cee, Spain
10 Selma, AL	29 Dumbria, Spain
11 Mendoza, Argentina	30 Sabon, Spain
12 Ningxia, China ("Yonvey")	31 Monzon, Spain
13 Police, Poland	32 Pierrefitte, France
14 New Castle, South Africa	33 Anglefort, France
15 Hydro Plants, Spain	34 Les Clavaux, France
16 Hydro Plants, France	35 Montricher, France
17 Serrabal, Spain	36 Chateau Feuillet, France
18 Sonia, Spain	37 Dunkirk, France
19 Conchitina, Spain	38 Mo I Rana, Norway
	39 Vadel, Mauritania

Legend: Electrometallurgy; Energy; Mining

Global Footprint Spanning Five Continents

Capacity by Geography[1]

(000, mt)	Europe	North America	South America	Africa	Asia	Total
Silicon	218	127	0	72	0	417[2]
Ferrosilicon / Foundry Alloys	172	104	109	112	0	497
Manganese-based Alloys	655	0	34	0	0	689[3]
Other Silicon-Based Alloys	27	0	10	0	0	37
Total						1,640

[1] Based on company estimates.
[2] Includes pro rata share (51%) of attributable joint-venture capacity
3 Includes 269,000 Mt of additional capacity from the acquisition of the Glencore plants as at February 1, 2018

Our production facilities are strategically spread worldwide across the United States, Spain, France, South Africa, Canada, Norway, Venezuela, Argentina, Poland, China and Mauritania. We operate quartz mines located in Spain, South Africa, Canada, the United States and Mauritania and timber farms and charcoal production units in South Africa. Additionally, we operate low-ash, metallurgical quality coal mines in the United States.

From time to time, in response to market conditions and to manage operating expenses, facilities are fully or partially idled. Due to current market conditions, facilities in Venezuela, South Africa and China are partially or fully idled.

Ferroglobe's total installed power capacity in Spain is 192 megawatts, with an average annual electric output of approximately 583,000 megawatt hours. In 2017, electric output was approximately 283,600 megawatt hours due to exceptionally low precipitation levels.

Products

For the years ended December 31, 2017, 2016 and 2015, Ferroglobe's consolidated sales by product were as follows:

	Year ended December 31,		
($ thousands)	2017	2016	2015
Silicon metal	739,618	751,508	592,458
Manganese-based alloys	363,644	223,451	260,371
Ferrosilicon	266,862	242,788	228,830
Other silicon-based alloys	188,183	173,901	105,702
Silica fume	36,338	37,480	29,660
Byproducts and other	147,048	146,909	99,569
Total Sales	**1,741,693**	**1,576,037**	**1,316,590**

Silicon metal

Ferroglobe is a leading global silicon metal producer based on production capacity, with a total production capacity of approximately 416,750 Metric Tons (including 51% of the joint venture capacity attributable to us) tons per annum in several facilities in the United States, France, South Africa, Canada, Spain and China. For the years ended December 31, 2017, 2016 and 2015, Ferroglobe's revenues generated by silicon metal sales accounted for 42.5%, 47.7% and 45.0%, respectively, of Ferroglobe's total consolidated revenues.

Silicon metal is used by primary and secondary aluminum producers, who require silicon metal with certain requirements to produce aluminum alloys. For the year ended December 31, 2017, sales to aluminum producers represented approximately 40% of silicon metal revenues. The addition of silicon metal reduces shrinkage and the hot cracking tendencies of cast aluminum and improves the castability, hardness, corrosion resistance, tensile strength, wear resistance and weldability of the aluminum end products. Aluminum is used to manufacture a variety of automotive components, including engine pistons, housings, and cast aluminum wheels and trim, as well as high tension electrical wire, aircraft parts, beverage containers and other products which require aluminum properties.

Silicon metal is also used by several major silicone chemical producers. For the year ended December 31, 2017 sales to chemical producers represented approximately 49% of silicon metal revenues. Silicone chemicals are used in a broad range of applications, including personal care items, construction-related products, health care products and electronics. In construction and equipment applications, silicone chemicals promote adhesion, act as a sealer and have insulating properties. In personal care and health care products, silicone chemicals add a smooth texture, protect against ultraviolet rays and provide moisturizing and cleansing properties. Silicon metal is an essential component of the manufacture of silicone chemicals, accounting for approximately 20% of the cost of production.

In addition, silicon metal is the core material needed for the production of polysilicon, which is most widely used to manufacture solar cells and semiconductors. For the year ended December 31, 2017 sales to polysilicon producers represented approximately 11% of silicon metal revenues. Producers of polysilicon employ processes to further purify the silicon metal and grow ingots from which wafers are cut. These wafers are the base material to produce solar cells, to convert sunlight to electricity. Individual solar cells are soldered together to make solar modules.

Manganese-based alloys

With 330,500 tons of annual silicomanganese production capacity and 358,500 tons of annual ferromanganese production capacity in our factories in Spain, Norway, France and Venezuela, Ferroglobe is among the leading global manganese-based alloys producers based on production capacity. Of the 330,500 tons of annual silicomanganese production capacity and 358,500 tons of annual ferromanganese production capacity, 125,000 tons of siliconmanganese and 144,000 tons of ferromanganese were added as part of the acquisition of Glencore assets completed on February 1, 2018. During the year ended December 31, 2017, Ferroglobe sold 274,119 tons of manganese-based alloys. For the years ended December 31, 2017, 2016, and 2015, Ferroglobe's revenues generated by manganese-based alloys sales accounted for 20.9%, 14.2% and 19.8%, respectively, of Ferroglobe's total consolidated revenues.

Over 90% of the global manganese-based alloys produced are used in steel production, and all steelmakers use manganese and manganese alloys in their production processes. Manganese alloys improve the hardness, abrasion resistance, elasticity and surface condition of steel when rolled. Manganese alloys are also used for deoxidation and desulphurization in the steel manufacturing process.

Ferroglobe produces two types of manganese alloys, silicomanganese and ferromanganese.

Silicomanganese is used as deoxidizing agent in the steel manufacturing process. Silicomanganese is also produced in the form of refined silicomanganese, or silicomanganese AF, and super-refined silicomanganese, or silicomanganese LC.

Ferromanganese is used as a deoxidizing, desulphurizing and degassing agent in steel to remove nitrogen and other harmful elements that are present in steel in the initial smelting process, and to improve the mechanical properties, hardenability and resistance to abrasion of steel. The three types of ferromanganese that Ferroglobe produces are:

- high-carbon ferromanganese used to improve the hardenability of steel;
- medium-carbon ferromanganese, used to manufacture flat and other steel products; and
- low-carbon ferromanganese used in the production of stainless steel, steel with very low carbon levels, rolled steel plates and pipes for the oil industry.

Ferrosilicon

Ferroglobe is among the leading global ferrosilicon producers based on production output in recent years. During the year ended December 31, 2017, Ferroglobe sold 185,952 tons of ferrosilicon and had 446,000 tons of annual ferrosilicon production capacity. For the years ended December 31, 2017, 2016 and 2015, Ferroglobe's revenues generated by ferrosilicon sales accounted for 15.3%, 15.4% and 17.4%, respectively, of Ferroglobe's total consolidated revenues.

Ferrosilicon is an alloy of iron and silicon (normally approximately 75% silicon). Ferrosilicon products are used to produce stainless steel, carbon steel, and various other steel alloys and to manufacture electrodes and, to a lesser extent, in the production of aluminum. Approximately 88% of ferrosilicon produced is used in steel production.

Ferrosilicon is generally used to remove oxygen from the steel and as alloying element to improve the quality and strength of iron and steel products. Silicon increases steel's strength and wear resistance, elasticity and scale resistance, and lowers the electrical conductivity and magnetostriction of steel.

Other silicon-based alloys

In addition to ferrosilicon, Ferroglobe produces various different silicon-based alloys, including silico calcium and foundry products, which comprise inoculants and nodularizers. Ferroglobe produces more than 20 specialized varieties of foundry products, several of which are custom made for its customers. Demand for these specialty metals is increasing and, as such, they are becoming more important components of Ferroglobe's product offering. Ferroglobe's combined annual production capacity in connection with these other silicon-based alloys is approximately 80,000 tons (excluding ferrosilicon). During the year ended December 31, 2017, Ferroglobe sold 56,822 tons of silicon-based alloys (excluding ferrosilicon). For the years ended December 31, 2017, 2016 and 2015, Ferroglobe's revenues generated by silicon-based alloys (excluding ferrosilicon) accounted for 10.8%, 11.0% and 8.0%, respectively, of Ferroglobe's total consolidated revenues.

The primary use for silico calcium is the deoxidation and desulfurization of liquid steel. In addition, silico calcium is used to control the shape, size and distribution of oxide and sulfide inclusions, improving fluidity, ductility, and the transverse mechanical and impact properties of the final product. Silico calcium is also used in the production of coatings for cast iron pipes, in the welding process of powder metal and in pyrotechnics.

The foundry products that Ferroglobe manufactures include nodularizers and inoculants, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Silica fume

For the years ended December 31, 2017, 2016 and 2015, Ferroglobe's revenues generated by silica fume sales accounted for 2.1%, 2.4% and 2.3%, respectively, of Ferroglobe's total consolidated sales.

Silica fume is a by-product of the electrometallurgical process of silicon metal and ferrosilicon. This dust-like material, collected through Ferroglobe factories' air filtration systems, is mainly used in the production of high-performance concrete and mortar. The controlled addition of silica fumes to these products results in increased durability, improving their impermeability from external agents, such as water. These types of concrete and mortar are used in large-scale projects such as bridges, viaducts, ports, skyscrapers and offshore platforms.

Services

Energy

Ferroglobe's total installed power capacity in Spain is 192 megawatts, with an average annual electric output of approximately 583,000 megawatt hours. In 2017, the electric output was approximately 283,600 megawatt hours, due to exceptionally low precipitation levels. For the years ended December 31, 2017, 2016 and 2015, Ferroglobe recognized a loss as a result of the Spanish hydroelectric operations, in the amounts of $1,229 thousand, $3,065 thousand and $196 thousand, respectively.

Hydroelectric power stations produce energy from the flow of water through channels or pipes to a turbine, causing the shaft of the turbine to rotate. An alternator or generator, which is connected to the rotating shaft of the turbine, converts the motion of the shaft into electrical energy.

In Spain, Ferroglobe sells all of the power it produces in the wholesale energy market that has been in place in Spain since 1998. Prior to 2013, Ferroglobe benefitted from a feed-in tariff support scheme, pursuant to which Ferroglobe was legally entitled to feed its electric production into the Spanish grid in exchange for a fixed applicable feed-in-tariff over a fixed period, and therefore

received a higher price than the market price. However, the new regulatory regime introduced in Spain in 2013 eliminated the availability of the feed-in tariff support scheme for most of Ferroglobe's facilities. Ferroglobe has been able to partly mitigate this reduction in prices through the optimization of its power generation such that it operates in peak-price hours, as well as through participation in the ''ancillary services'' markets whereby Ferroglobe agrees to generate power as needed to balance the supply and demand of energy in the markets in which it operates. See ''— Regulatory Matters — Energy and electricity generation'' below.

Villar Mir Energía, S.L. (''VM Energía''), a Spanish company controlled by Grupo VM, advises in the day-to-day operations of Ferroglobe's hydroelectric facilities in the Spanish wholesale market under a strategic advisory services contract. Operating in the Spanish wholesale market requires specialized trading skills that VM Energía can provide because of the broad base of both generating facilities and customers that it manages. For more information on the contractual arrangements between Ferroglobe and VM Energía, see ''Item 7.B. — Major Shareholders and Related Party Transactions — Related Party Transactions'' below.

Ferroglobe also owns and operates 20 megawatts of hydroelectric power capacity in two plants in France. Given the small size of these operations and the specifics of the regulatory regime under which they operate, the results of operations and financial position with respect to these plants are included within our French operations.

Raw Materials, Logistics and Power Supply

The largest components of Ferroglobe's cost base are raw materials and power used for smelting at our facilities. In the year ended December 31, 2017, Ferroglobe's power consumption, represented approximately 29% of Ferroglobe's total consolidated cost of sales.

The primary raw materials Ferroglobe uses to produce its electrometallurgy products are carbon reductants (primarily coal, but also charcoal, metallurgical and petroleum coke, anthracite and wood) and minerals (manganese ore and quartz). Other raw materials used to produce Ferroglobe's electrometallurgy products include electrodes (consisting of graphite and electrode paste), slags and limestone, as well as certain specialty additive metals. Ferroglobe procures coal, manganese ore, quartz, petroleum and metallurgical coke, electrodes and most additive metals centrally under the responsibility of its purchasing and logistics manager, whereas responsibility for the procurement of other raw materials rests with each country's raw materials procurement manager or the individual plant managers.

Manganese ore

The global supply of manganese ore comprises standard- to high-grade manganese ore, with 35% to 56% manganese content, and low-grade manganese ore, with lower manganese content. Manganese ore production comes mainly from eight countries: South Africa, Australia, China, Gabon, Brazil, Ukraine, India and Ghana. However, the production of high-grade manganese ore is concentrated in Australia, Gabon, South Africa and Brazil.

The vast majority of the manganese ore Ferroglobe purchased in 2017 came from suppliers located in South Africa (48.1% of total purchases) and Gabon (45.7% of total purchases). In 2017, key suppliers of manganese ore to Ferroglobe supplied 93.8% of the manganese ore Ferroglobe utilized while the remaining 6.2% was procured on the international spot market from other suppliers. In 2017, Ferroglobe has contractual arrangements with two main suppliers (located in South Africa and Gabon), expressed in U.S. Dollars, which depend primarily on spot prices.

Global manganese ore prices are mainly driven by manganese demand from India and China. Potential disruption of supply from South Africa, Australia, Brazil or Gabon due to logistical, labor or other reasons may have an impact on the availability and the pricing of manganese ore.

Coal

Coal is the major carbon reductant in silicon and silicon alloys production. Only washed and/or screened coal with ash content below 10% and with specific physical properties may be used for production of silicon alloys. Colombia and the United States are the best source for the required type of coal and the vast majority of the silicon alloys industry, including Ferroglobe, is dependent on supply from these two countries.

Approximately 62.9% of the coal Ferroglobe purchased in 2017 for its facilities in Europe, South Africa and Venezuela was sourced from one mining supplier in Colombia while the remaining 37.1% came from other Colombian mines, as well as from Poland and South Africa. Ferroglobe has a long-standing relationship with the coal washing plants that process Colombian coal in Europe, which price coal using spot, quarterly, semi-annual or annual contracts, based on market outlook. International coal prices, which are denominated in U.S. Dollars, are mainly based on API 2, the benchmark price reference for coal imported into northwest Europe. Prices reflect also currency fluctuation, labor issues and transportation situation in Colombia and South Africa, as well as sea-freights.

Ferroglobe also owns Alden Resources LLC (''Alden'') in the United States. Alden provides a stable and long-term supply of low ash metallurgical grade coal by fulfilling a substantial portion of our requirements to our North American operations.

See ''— Mining Operations'' below for further information.

Quartz

Quartz is required to manufacture silicon-based alloys and silicon metal.

Ferroglobe has secured access to quartz from its quartz mines in Spain, South Africa, the United States, Mauritania and Canada (see ''— Mining Operations''). For the year ended December 31, 2017 approximately 69.6% of Ferroglobe's total consumption of quartz was self-supplied. Ferroglobe purchases quartz from third-party suppliers on the basis of contractual arrangements with terms of up to four years. Ferroglobe's quartz suppliers typically have operations in the same countries where Ferroglobe factories are located, or in close proximity, which minimizes logistical costs.

Ferroglobe controls quartzite mining operations located in Alabama, United States and a concession to mine quartzite in Saint-Urbain, Québec, Canada (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Other raw materials

Wood is needed for the production of silicon-based alloys. It is used directly in furnaces as woodchips or cut to produce charcoal, which is the major source of carbon reductant for Ferroglobe's plants in South Africa. In South Africa, charcoal is a less expensive substitute for imported coal and provides desirable qualities to the silicon-based alloys it is used to produce.

In the other countries where Ferroglobe operates, Ferroglobe purchases wood chips locally or logs for on-site wood chipping operations from a variety of suppliers.

Petroleum coke, carbon electrodes, slag, limestone and additive metals are other relevant raw materials Ferroglobe utilizes to manufacture its electrometallurgy products. Procurement of these raw materials is either managed centrally or with each country's raw materials procurement manager or plant manager and the materials purchased at spot prices or under contracts of a year or less.

Logistics

Logistical operations are managed centrally and at the local level. Sea-freight operations are centralized at the corporate level, while rail logistics is centralized at the country level. Vehicle transport is managed at the plant level with centralized coordination in multi-site countries. Contractual commitments in respect of transportation and logistics match, to the extent possible, Ferroglobe's contracts for raw materials and customer contracts.

Power

In Spain, Ferroglobe mainly acquires energy at the spot price through daily auction processes and is, therefore, exposed to market price volatility. Ferroglobe seeks to reduce its energy costs by stopping production at its factories during times of peak power prices and operating its factories in the hours of the day with lower energy prices. Additionally, Ferroglobe receives a rebate on a portion of its energy costs in Spain and France in exchange for an agreement to interrupt production, and thus power usage, upon request by the grid operator. Ferroglobe uses derivative financial instruments to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem, S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff (''Tarif Vert''), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019, and is currently negotiating long-term supply contracts with suppliers in the market place. Recently enacted regulation enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing to limit its access to the network, interrupt production and respond to surges in demand, as well as paying compensation for indirect CO2 costs under the EU Emission Trading System (ETS) regulation. Furthermore, the new arrangements allow FerroPem, S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months in each year as required under the Tarif Vert.

Ferroglobe's production of energy in Spain and France through its hydroelectric power plants partially mitigates its exposure to increases in power prices in these two countries, as an increase in energy prices has a positive impact on Ferroglobe revenues from electricity generation.

In the United States, we enter into long-term electric power supply contracts. Our power supply contracts result in stable, favorably priced, long-term commitments of power at reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rest of our power needs in West Virginia, Ohio and Alabama are primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced at market rates. At our Niagara Falls, New York plant, we have been granted a public-sector package including 18.4 megawatts of hydropower through to 2021, which was effective from June 1, 2016.

In South Africa, energy prices are regulated by the NERSA and price increases are publicly announced in advance.

The level of power consumption of our submerged electric arc furnaces is highly dependent on which products are being produced and typically fall in the following ranges: (i) manganese-based alloys require between 2.0 and 3.8 megawatt hours to produce one ton of product,

(ii) silicon-based alloys require between 3.5 and 8 megawatt hours to produce one ton of product and (iii) silicon metal requires approximately 12 megawatt hours to produce one ton of product. Accordingly, consistent access to low cost, reliable sources of electricity is essential to our business.

Mining Operations

Reserves

Reserves are defined by SEC Industry Guide 7 as the part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination. Proven, or measured, reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes, and grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established. Probable, or indicated, reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance for probable reserves, although lower than that for proven reserves, is high enough to assume continuity between points of observation. Reserve estimates were made by independent third party consultants, based primarily on dimensions revealed in outcrops, trenches, detailed sampling and drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of Ferroglobe's reserve estimates.

The following table sets forth summary information on Ferroglobe's mines which were in production as of December 31, 2017.

Mine	Location	Mineral	Annual capacity kt	Production in 2017 kt	Mining Recovery	Proven reserves Mt[1]	Probable reserves Mt[1]	Mining Method	Reserve grade	Btus per lb.	Life[2]	Expiry date[3]
Sonia	Spain (Mañón)	Quartz	150	135	0.4	2.03	0.8	Open-pit	Metallurgical	N/A	19	2069
Esmeralda	Spain (Val do Dubra)	Quartz	50	29	0.4	0.09	0.14	Open-pit	Metallurgical	N/A	10	2029
Serrabal.	Spain (Vedra & Boqueixón)	Quartz	330	246	0.2	3.60	1.9	Open-pit	Metallurgical	N/A	19	2038
SamQuarz	South Africa (Delmas)	Quartzite	1,000	988	0.7	7.03	19.5	Open-pit	Metallurgical & Glass	N/A	39	2039
Mahale	South Africa (Limpopo)	Quartz	60	12	0.5	—	2.4	Open-pit	Metallurgical	N/A	15	2035
Roodepoort	South Africa (Limpopo)	Quartz	50	12	0.5	—	0.04	Open-pit	Metallurgical	N/A	1	2028
Fort Klipdam	South Africa (Limpopo)	Quartz	100	10	0.6	—	0.2	Open-pit	Metallurgical	N/A	2	2019[4]
AS&G Meadows Pit	United States (Alabama)	Quartzite	360	56	0.4	3.60	—	Surface	Metallurgical	N/A	10	2027
AS&G Mims Pit	United States (Alabama)	Quartzite	120	90	0.4	0.25	—	Surface	Metallurgical	N/A	3	2020
			2,220	**1,578**		**16.60**	**24.98**					
Maple Creek Springtown	United States (Kentucky)	Coal	400	399	0.7	0.6		Surface	Metallurgical	14,000	2	2020
Imperial Hollow	United States (Kentucky)	Coal	200	50	0.7	0.8		Surface	Metallurgical	14,000	3	2020
Log Cabin No. 5	United States (Kentucky)	Coal	60	12	0.6	0.2		Underground	Metallurgical	14,000	5	2023
Bain Branch No. 3	United States (Kentucky)	Coal	60	74	0.5	3.6	2.9	Underground	Metallurgical	14,000	25	2042
Harpes Creek 4A	United States (Kentucky)	Coal	100	96	0.6	1.2	1.3	Underground	Metallurgical	14,000	12	2029
			820	**631**		**6.40**	**4.20**					

(1) The estimated recoverable proven and probable reserves represent the tons of product that can be used internally or sold to metallurgical or glass grade customers. The mining recovery is based on historical yields at each particular site. We estimate our permitted mining life based on the number of years we can sustain average production rates under current circumstances.

(2) Current estimated mine life in years.

(3) Expiry date of Ferroglobe's mining concession.

(4) The expiry date relates to three mining permits relating to an area within Fort Klipdam, outside the area covered by the mining right. The mining right is currently subject to an administrative proceeding with the relevant mining authority. See ''— South African mining rights — Fort Klipdam'' below for further information on Fort Klipdam.

Ferroglobe considers its Conchitina and Conchitina Segunda mines as a single mining project legally supported by the formation of Coto Minero, formally approved by the Mining Authority in March 2018. In addition, Ferroglobe currently holds all necessary permits to start production at its Conchitina mines. Although Ferroglobe has not received formal approval from the Spanish Mining Authority over its 2018 Annual Mining Plan, we are not legally prevented from commencing mining operations in the area based on the fully-authorized 2017 Annual Mining Plan.

Reserves for the Conchitina mine are, accordingly, considered to be probable reserves, and the following table sets forth summary information on the Conchitina and Conchitina Segunda mines:

				Recoverable Reserves			
Mine	Location	Mineralization	Mining Recovery	Proven MT[1]	Probable MT[1]	Reserve Grade	Mining Method
Conchitina and Conchitina Segunda	Spain (O Vicedo)	Quartz	0.35	—	1.15	Metallurgical	Open-pit

(1) Estimates of recoverable probable reserves represent the tons of product that can be used internally or which are of metallurgical grade and can be delivered to Ferroglobe's customers.

Ferroglobe has additional mining rights in Spain (Cristina, Trasmonte and Merlán), but none of these mines are currently producing or undergoing mine development activities as the Spanish Mining Authority started cancelling mining rights for Merlán and Trasmonte in September 2015 and February 2017, respectively. The Spanish Mining Authority started the cancellation process for our mining rights for Cristina in December 2017. Ferroglobe does not consider certain Venezuelan mines to be mining assets (La Candelaria, El Manteco and El Merey) as the minerals are fully-depleted and because it will be difficult to obtain new mining rights at these locations given the current economic and political environment in Venezuela.

Spanish mining concessions

Sonia

The Sonia mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired Cuarzos Industriales S.A.U., which is the owner of the properties currently mined at Sonia, along with the Sonia mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The surface area covered by the Sonia mining concession is 387 hectares. The concession is due to expire in 2069.

Esmeralda

The original Esmerelda mining concession was granted in 1999 to Cuarzos Industriales, S.A.U., the owner of the properties currently mined at Esmeralda, after proper mining research had been conducted and the mining potential of the area had been demonstrated to the relevant public authority. The surface area covered by the Esmeralda mining concession is 84 hectares. The concession is due to expire in 2029.

Serrabal

The Serrabal mining concession was originally granted in 1978 to Rocas, Arcillas y Minerales S.A. Ferroglobe acquired control of this company, which is the owner of the properties currently mined at Serrabal, along with the Serrabal mining concession, in 2000. Rocas, Arcillas y Minerales, S.A. has applied for the renewal of the concession. Pursuant to an interim measure approved by the applicable mining authority, Rocas Arcillas y Minerales S.A. is permitted to

continue mining operations in Serrabal indefinitely until a final decision on the renewal of the concession has been made. If the renewal is granted, the concession will expire in 2038. The surface area covered by Serrabal mining concession is 861 hectares.

Conchitina

The Conchitina mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired this company, along with Conchitina mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The Conchitina Segunda mining concession was granted to Cuarzos Industriales S.A.U. in 1997 for a 30-year term after proper mining research had been conducted and the mining potential of the area had been demonstrated. The Conchitina concession expired in 2009 and Cuarzos Industriales S.A.U. applied for its renewal, also requesting the competent authority to consolidate the concession with that of Conchitina Segunda. The legal support for the consolidation request was that both mining rights apply over a unique quartz deposit. Approval was formally granted by the authority in March 2018. Cuarzos Industriales S.A.U. is the owner of the properties currently mined at Conchitina. The surface area covered by Conchitina concessions is 497 hectares.

Cabanetas

The mining right granting process and tax regulations applicable to the Cabanetas limestone quarry slightly differ from those applicable to other Ferroglobe mines in Spain because Cabanetas is classified as a quarry, rather than a mine. Ferroglobe is currently operating the Cabanetas quarry pursuant to a permit resolution, which authorized the extension of the original mining concession, issued in 2013 by the competent mining authority. The extension is for a period of 30 years and, consequently, the concession will expire in 2043. Limestone extracted from the Cabanetas quarry was intended to be used by the Hidro Nitro Española S.A. electrometallurgy plant. However, because new metallurgical techniques require low consumption of this product, most of the Cabanetas limestone is generally sold to the civil engineering and construction industries. The production level of the Cabanetas quarry has fallen considerably in recent years, mainly due to difficulties in the local construction industry.

The land on which the mining property is located is owned by Mancomunidad de Propietarios de Fincas Las Sierras and the plot containing the mining property is leased to Hidro Nitro Española S.A. pursuant to a lease agreement entered into in 1950, which was subsequently restated in 2000 and due to expire in 2020. The lease agreement may be extended until 2050. To retain the lease, Hidro Nitro Española S.A. pays the landlord an annual fee currently equal to €0.15 per ton of limestone quarried out of the mine. The quarry covers a surface area of approximately 180 hectares. The area affected by the planned exploitation during the current extension of the concession area is 6.9 hectares.

For further information regarding Spanish regulations applicable to mining concessions, as well as environmental and other regulations, see ‘‘— Laws and regulations applicable to Ferroglobe’s mining operations — Spain.’’

South African mining rights

SamQuarz

The SamQuarz mining rights were transferred from the original owners, Glass South Africa Holdings (Pty) Ltd and Samancor Limited, to SamQuarz (Pty) Ltd in 1997. Our FerroAtlántica division acquired control of SamQuarz, along with the SamQuarz mining rights, in 2012. In 2009, the Minister of Mineral Resources converted the then-existing SamQuarz mining rights into new mining rights due to expire after 30 years in 2039. At the end of 2014, SamQuarz mining rights

were transferred from SamQuarz (Pty) Ltd to its sole shareholder, Thaba Chueu Mining (Pty) Ltd, one of our subsidiaries (''Thaba''). SamQuarz (Pty) Ltd is the owner of the properties currently mined in Delmas. The total surface area covered by SamQuarz mine is 118.1 hectares.

Mahale

Mahale is state-owned land, lawfully occupied by the Mahale community. Thaba currently leases the land pursuant to an agreement with the Majeje Traditional Authority and runs mining operations on the area pursuant to mining rights owned by the state and licensed to it. The latest mining right license was granted by the Department of Mineral Resources in December 2014 and registered at the mining titles deeds office in early 2016. The license is for a 20 year period and will expire in 2035. The total surface area covered by Mahale mine is 329.7 hectares. The lease agreement between Thaba and the Majeje Traditional Authority will be in force for the entire duration of the mining right or as long as it is economically viable for the lessee to mine. Under the lease agreement, a monthly rent of ZAR 1,500 is paid to the lessor, which is reviewed annually to reflect increases in the consumer price index. A general authorization has been granted to Thaba by the Water Affairs Department to allow the company to use the water at the site, provided usage does not exceed 10,000 cubic meters per month.

Roodepoort

The Roodepoort mining right is held by Silicon Smelters (Pty.), Ltd., Ferroglobe's subsidiary, and will expire in 2028. In 2009, Silicon Smelters (Pty.), Ltd. applied for a conversion of the mining right into a new mining right under the South African Mineral and Petroleum Resources Development Act (the ''MPRDA''), which came into force in 2004. The new mining right has been granted and is valid for the continuation of our mining activities at the Rooderport mine until. Silicon Smelters (Pty) Ltd is currently in the process of transferring this mining right to its mining subsidiary, Thaba, in order that all licenses and permits in South Africa are held under this entity.

The total surface area covered by Roodepoort mine is 17.6 hectares. The mining area covers the cobble and block areas. The land in which Roodepoort mine is located is owned by Alpha Sand, which also conducts all mining operations as a contractor for Silicon Smelters (Pty.), Ltd. An agreement is in place whereby Alpha Sand operates the mine and Silicon Smelters (Pty.), Ltd. purchases the quartz mined from Alpha Sand based on the quartz requirements of Silicon Smelters (Pty.), Ltd. and at prices that are reviewed annually on the basis of increases in production costs and diesel fuel. The agreement with Alpha Sand will terminate at the expiry of the mining right or when it is no longer economically viable to mine quartz in the area.

Fort Klipdam

The land on which Fort Klipdam is located is owned by Silicon Smelters (Pty.), Ltd. Silicon Smelters (Pty.), Ltd. filed a mining right application that was rejected on the basis of the alleged inadequacy of the mine social and labor plan. An appeal has been filed by Silicon Smelters (Pty.), Ltd. As the appeal process has been unsuccessful to date, mining operations can only be conducted in areas specified under valid permits that have been obtained on the land. Additional permits were also obtained by the mining contractor on the adjacent property and their materials are brought to Fort Klipdam for processing and stockpiling. The total surface area covered by the Fort Klipdam farm portion is 640.9 hectares. The mining permits and mining rights only relates to an area of 136.1 hectares.

For further information regarding South African regulations applicable to mining concessions, as well as environmental and other regulations, see ''— Laws and regulations applicable to Ferroglobe's mining operations — South Africa.''

French mining rights

Soleyron

FerroPem, S.A.S., a subsidiary of Ferroglobe, owns 7.5 hectares of the overall Soleyron mine area. The Saint-Hippolyte de Montaigu Municipality owns the remaining 12.9 hectares. In February 2015, FerroPem, S.A.S. entered into a lease and royalty agreement with the municipality, which is valid for five years. The effective date of the agreement and the relevant term coincide with the effective date and term of the prefectural authorization renewal, which was granted to FerroPem, S.A.S. in March 2015 and is due to expire in 2020. Pursuant to this agreement, FerroPem, S.A.S. pays to the municipality on an annual basis: (i) a fixed allowance for the lease of the land, and (ii) variable royalties on the basis of tons of quartz produced. In addition, FerroPem, S.A.S. provided financial guarantees through an insurance company for an amount of €146 thousand. Such amount has been defined in the prefectural authorization as the amount needed for the land remediation.

United States and Canadian mining rights

Coal

As of December 31, 2017, we had five active coal mines (two surface mines and three underground mines) located in Kentucky. We also had six inactive permitted coal mines available for extraction located in Kentucky and Alabama. All of our coal mines are leased and the remaining term of the leases range from 2 to 40 years. The majority of the coal production is consumed internally in the production of silicon metal and silicon-based alloys. As of December 31, 2017, we estimate our proven and probable reserves to be approximately 17,400,000 tons with an average permitted life of approximately 35 years at present operating levels. Present operating levels are determined based on a three-year annual average production rate. Reserve estimates were made by our geologists, engineers and third parties based primarily on drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of our reserve estimates.

We currently have two coal processing facilities, one of which is inactive. The active facility processes approximately 720,000 tons of coal annually, with a capacity of 2,500,000 tons. The average coal processing recovery rate is approximately 65%.

Quartzite

We have an open-pit quartz mining operation in Billingsly, Alabama, and one in Londesboro, Alabama. Each has its own wash-plant facilities. We also have a concession to mine quartzite in Saint-Urbain, Québec (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Mauritania mining rights

In 2013, the Company signed an option to purchase two exploration permits for Quartz over a 2,000 square kilometer area located in northern Mauritania, approximately 250 kilometers from Nouadhibou harbor. After a successful exploration program and the granting of the right to acquire mining rights pursuant to both exploration permits at the Vadel 1 and Vadel 2 Mines respectively, Ferroglobe exercised the purchase option on June 30, 2016. The mining at the Vadel 1 and Vadel 2 Mines are held by Ferroquartz Mauritania SARL, a subsidiary of Ferroglobe, and will expire in 2031. The total surface area covered by Vadel 1 Mine is 195 square kilometers and by Vadel 2 Mine is 240 square kilometers. The construction of the mining facilities was completed during 2017 and the

Company has started to test the production in Vadel 2. The Company made the first shipment from Vadel 2 at the beginning of 2018 and plan is to start production in Vadel 1 in 2020.

Laws and regulations applicable to Ferroglobe's mining operations

Spain

In Spain, mining concessions have an average term of 30 years and are extendable for additional 30-year terms, up to a maximum of 90 years. In order to extend the concession term, the concessionaire must file an application with the competent public authority. The application, which must be filed three years prior to the expiration of the concession term, must be accompanied by a detailed report demonstrating the continuity of mineral deposits and the technical ability to extract such deposits, as well as reserve estimates, an overall mining plan for the term of the concession and a detailed description of extraction and treatment techniques. The renewal process is straightforward for a mining company that has been mining the concession regularly. The main impediments to renewal are a lack of mining activity and legal conflicts. Every year in January, in order to maintain the validity of the mining concession, an annual mining plan must be submitted to the competent public authority. This document must detail the work to be developed during the year.

Regarding the environmental requirements applicable to Ferroglobe's mining operations in Spain, each of Serrabal, Esmeralda, Conchitina and Conchitina Segunda is subject to an ''environmental impact statement'' (or ''EIS''), issued by the relevant environmental authority and specifically tailored to the environmental features of the relevant mine. The EIS requires compliance with high environmental standards and is based on the environmental impact study performed by the mining concession applicant in connection with each mining project. It is the result of a consultation process involving several public administrations, including cultural, archaeology, landscape, urbanistic, health, agriculture, water and industrial administrations. The EIS sets forth all conditions to be fulfilled by the applicant, including in connection with the protection of air, water, soil, flora and fauna, landscape, cultural heritage, restoration and the interaction of such elements. The EIS covers mining activities, auxiliary facilities and heaps carried out in a determined perimeter of each mine and includes a program of surveillance and environmental monitoring. The relevant authority regularly verifies compliance with it.

Sonia is subject to a ''restoration plan'' which provides for less stringent environmental requirements than an EIS and is mainly aimed at ensuring that the new areas generated as a result of the mining activity are properly restored in an environmentally friendly manner. The restoration plan is submitted by the mining concession applicant for the approval of the relevant authority together with the mining project for the area. Information about the exploitation project, including area of operation, annual production, method and operating system, and designed top and bottom level of the pit is included in the restoration plan.

All mines, with the exception of Cabanetas, also need to obtain from the relevant public administration an authorization for the discharge of the water used at the mine. This authorization is subject to certain conditions, including analyzing the water before any such discharge is made. In addition, when presenting to the competent mining authorities its annual mining plans, Ferroglobe must include an environmental report describing all environmental actions carried out during the year. Authorities are able to oversee such actions upon their annual inspections. Because Cabanetas is classified as a quarry and not as a mine, environmental requirements are generally less stringent and an environmental report is not required. The environmental license for Cabanetas is included in the mining permit and is formalized in the annual work plan and the annual restoration plan approved by the mining authority.

The main recurring payment obligation in connection with Ferroglobe's mines in Spain relates to a tax payable annually, calculated on the basis of the budget included in the relevant annual mining plan provided to the authority. In addition, with the exception of Cabanetas, a small surface tax is paid annually to the administration on the basis of the mine property extension. A levy also applies to water consumption at each mine property, which is paid at irregular intervals whenever the relevant public administration requires it.

South Africa

In South Africa, mining rights are valid for a maximum of 30 years and may be renewed for further periods of up to 30 years per renewal. Prior to granting and renewing a mining right, the competent authority must be satisfied with the technical and financial capacity of the intended mining operator and the mining work program according to which the operator intends to mine. In addition, a species rescue, relocation and re-introduction plan must be developed and implemented by a qualified person prior to the commencement of excavation, a detailed vegetation and habitat and rehabilitation plan must be developed by a qualified person and a permit must be obtained from the South African Heritage Resource Agency prior to the commencement of excavations. The mining right holder must also compile a labor and social plan for its mining operations and comply with certain additional regulatory requirements relating to, among other things, human resource development, employment equity, housing and living conditions and health and safety of employees, and the usage of water, which must be licensed.

It is a condition of the mining right that the holder disposes of all minerals and products derived from exploitation of the mineral at competitive market prices, which means, in all cases, non-discriminatory prices or non-export parity prices. If the minerals are sold to any entity which is an affiliate or non-affiliate agent or subsidy of the mining right holder, or is directly or indirectly controlled by the holder, such purchaser must unconditionally undertake in writing to dispose of the minerals and any products from the minerals and any products produced from the minerals, at competitive market prices. The mining right, a shareholding, an equity, an interest or participation in the right or joint venture, or a controlling interest in a company, close corporation or joint venture, may not be encumbered, ceded, transferred, mortgaged, let, sublet, assigned, alienated or otherwise disposed of without the written consent of the Minister of Mineral Resources, except in the case of a change of controlling interest in listed companies.

Environmental requirements applicable to mining operations in South Africa are mostly set out in the MPRDA. Pursuant to the MPRDA, in order to obtain reconnaissance permissions as well as actual mining rights, applicants must have in place an approved environmental management plan, pursuant to which, among other things, all boreholes, excavations and openings sunk or made during the duration of the mining right must be sealed, closed, fenced and made safe by the mining operator. Further environmental requirements apply in connection with health and safety matters, waste management and water usage. The MPRDA further requires mining right applicants to conduct an environmental impact assessment on the area of interest and submit an environmental management programme setting forth, among other things, baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives, and describing the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation, contain or remedy the cause of pollution or degradation and migration of pollutants and comply with any prescribed waste standard or management standards or practices. In addition, applicants must provide sufficient insurance, bank guarantees, trust funds or cash to ensure the availability of sufficient funds to undertake the agreed work programmes and for the rehabilitation, management and remediation of any negative environmental impact on the interested areas. Holders of a mining right must conduct continuous monitoring of the environmental management

plan, conduct performance assessments of the plan and compile and submit a performance assessment report to the competent authority, the frequency of which must be as approved in the environmental management programme, or every two years or as otherwise agreed by the authority in writing. Mine closure costs are evaluated and reported on an annual basis, but are typically only incurred at mine closure.

The mining right holder must also be in compliance with an important governmental regulation called Black Economic Empowerment (''BEE''), a program launched by the South African government to redress certain racial inequalities. In order for a mining right to be granted, a mining company must agree on certain BEE-related conditions with the Department of Mineral and Petroleum Resources. Such conditions relate to, among other things, the company's ownership and employment equity and require the submission of a social and labor plan. Failure to comply with any of these BEE conditions may have an impact on, among other things, the ability of the mining company to retain the mining right or obtain its renewal upon expiry. In addition, companies subject to BEE must conduct, on an annual basis, a BEE rating audit on several aspects of the business, including black ownership, management control, employment equity, skills development, preferential procurement, enterprise development and socio-economic development. Poor performance on the BEE rating audit may have a negative impact on the company's ability to do business with other companies, to the extent that a company's low rating is likely to reduce the rating of its business partners.

Mining rights are subject to payments of royalties to the tax authority, the South African Revenue Services. Such payments are generally made by June 30 and December 31 each year and upon the approval of the concessionaire's annual financial statements.

France

In France, mining rights are subject to a prefectural authorization. The authorization provides details of all requirements, including environmental requirements, which the mining operator and its subcontractors must comply with to operate the mine. Such requirements mainly concern archaeology, water protection, air pollution, control of noise, visual impact and safety matters. The authorization also contains the requirements relating to the remediation of the land after the end of the mining operations, including the provision of adequate financial guarantees by the mining operator. Mines are regularly inspected by the administration and local environmental commissions, comprising representatives of the relevant municipality, administration, several associations and the mining operator, which must meet at least once a year.

United States

The Coal Mine Health and Safety Act of 1969 and the Federal Mine Safety and Health Act of 1977 impose stringent safety and health standards on all aspects of mining operations. Also, the state of Kentucky, in which we operate underground and surface coal mines, has state mine safety and health regulations. The Mine Safety and Health Administration (the ''MSHA'') inspects mine sites and enforces safety regulations and the Company must comply with ongoing regulatory reporting to the MSHA. Numerous governmental permits, licenses or approvals are required for mining operations. In order to obtain mining permits and approvals from state regulatory authorities, we must submit a reclamation plan for restoring, upon the completion of mining operations, the mined property to its prior or better condition, productive use or other permitted condition. We are also required to establish performance bonds, consistent with state requirements, to secure our financial obligations for reclamation, including removal of mining structures and ponds, backfilling and regrading and revegetation.

Customers and Markets

The following table details the breakdown of Ferroglobe's revenues by geographic end market for the years ended December 31, 2017, 2016 and 2015.

	Year ended December 31,		
($ thousands)	2017	2016	2015
United States of America	547,309	563,619	208,412
Europe			
Spain	253,991	201,403	221,558
Germany	245,152	241,046	230,996
Italy	94,590	90,267	120,016
Rest of Europe	340,877	236,746	314,078
Total revenues in Europe	934,610	769,462	886,648
Rest of the World	259,774	242,956	221,530
Total	1,741,693	1,576,037	1,316,590

Customer base

We have a diversified customer base across our key product categories. We have built long-lasting relationships with our customers based on the breadth and quality of our product offerings and our ability to frequently offer lower-cost and more reliable supply options than our competitors who do not have production facilities located near the customers' facilities or production capabilities to meet specific customer requirements. We sell our products to customers in over 30 countries across six continents, though our largest customer concentration is in the United States and Europe. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years.

For the year ended December 31, 2017, Ferroglobe's ten largest customers accounted for approximately 47.1% of Ferroglobe's consolidated sales. The Company had one customer, Dow Corning Corporation, that accounted for more than 10% of consolidated sales during the years ended December 31, 2017 and 2016. Sales corresponding to Dow Corning Corporation represented 12.2% and 13.7% of the Company's sales for the years ended December 31, 2017 and 2016, respectively.

For the year ended December 31, 2017, approximately 53.6% of our metallurgical segment sales were to customers in Europe, approximately 31.5% were to customers in the United States and approximately 14.9% were to the rest of the world.

Customer contracts

Our contracting strategy seeks to lock in significant revenue while remaining flexible to benefit from any price increases. Historically, we have targeted to contract approximately 80% of our silicon metal and manganese-based ferroalloys production and approximately 75% of our silicon-based ferroalloy production in the fourth quarter for the following calendar year. Our silicon metal is typically sold under annual contracts, whereas our manganese-based ferroalloys and silicon-based ferroalloys tend to be sold under both annual and quarterly contracts. Approximately 50% of contracted production has fixed prices whereas the other 50% are indexed to benchmarks.

The remaining 20% of our silicon metal and manganese-based ferroalloys production and 25% of our silicon-based ferroalloy production are sold on a spot basis. By selling on a spot basis, we are able to take advantage of premiums for prompt delivery. We believe that our diversified contract portfolio allows us to lock in a significant amount of revenues while also allowing us to remain flexible and benefit from unexpected price and demand upticks. Given spot price and current market dynamics, we are looking to enter into contracts for 2018 with short terms in order to benefit from expected price increases.

Sales and Marketing Activities

Ferroglobe generally sells the majority of its products under annual contracts for silicone producers, and between three months to one year for steel and aluminum producing customers. All contracts generally include a volume framework and price formula based on the spot market price and other elements, including production costs and premiums. Ferroglobe also makes spot sales to customers with whom it does not have a contract as well as through quarterly agreements at prices that generally reflect market spot prices. In addition, Ferroglobe sells certain high quality products at prices that are not directly correlated with the market prices for the metals or alloys from which they are composed. Some of Ferroglobe's customer contracts contain provisions relating to the purchase of minimum volumes of products.

The vast majority of Ferroglobe's products are sold directly by its own sales force located in Spain, France, the United States and Germany, as well as in all of the countries in which Ferroglobe operates. Prior to the Business Combination with Globe, almost all sales in the United States were intermediated through local exclusive agents pursuant to standardized contractual arrangements. Some sales to primary and secondary aluminum manufacturers and silicone producers were direct.

Ferroglobe maintains credit insurance for the majority of its customer receivables to mitigate collection risk.

Ferroglobe's Spanish hydroelectric operations deliver all the electricity produced to the Spanish national grid for sale in the Spanish wholesale market.

On February 1, 2018, Ferroglobe completed the acquisition from a wholly-owned subsidiary of Glencore International AG (''Glencore'') of a 100% interest in Glencore's manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France). Simultaneously with the acquisition, Glencore and Ferroglobe entered into an exclusive agency arrangement for the marketing of Ferroglobe's manganese alloys products worldwide, and for the procurement of manganese ores to supply Ferroglobe's plants, in both cases for a period of ten years. For Ferroglobe, the partnership facilitates access to Glencore's global clients in the steel industry, and provides a broader sales and procurement network that will enhance our own capabilities. For our customers and suppliers, it provides access to an extended volume and range of products that will add value to our commercial relationships.

Competition

The most significant factor on which players in the silicon metal, manganese- and silicon-based alloys and specialty metals markets compete is price. Other factors include consistency of the chemical and physical specifications over time and reliability of supply.

The silicon metal, manganese- and silicon-based alloys and specialty metals markets are highly competitive, global markets, in which suppliers are able to reach customers across different geographies, and in which local presence is generally a minor advantage. In the silicon metal market, Ferroglobe's primary competitors include Chinese producers, which have production capacity that exceeds total global demand. Aside from Chinese producers, Ferroglobe's

competitors include Elkem, a Norwegian manufacturer of silicon metal, ferrosilicon, foundry products, silica fumes, carbon products and energy, Dow Corning, an American company specializing in silicone and silicon-based technology, Rusal, a Russian company that is a leading global aluminum and silicon metal producer, Rima, a Brazilian silicon metal and ferrosilicon producer, Liasa, a Brazilian producer of silicon, Wacker, a German chemical business which manufactures silicon and Simcoa Operations, an Australian company specializing in the production of silicon.

In the manganese and silicon alloys market, Ferroglobe's competitors include Privat Group, a Ukrainian company with operations in Australia, Ghana and Ukraine, Eramet, a French mining and metallurgical group, CHEMK Industrial Group, a Russian conglomerate which is one of the largest silicon-based alloy producers in the world, South 32 (formerly BHP Billiton), a global mining company with operations in Australia and South Africa and Vale, a mining and metals group based in Brazil and Elkem.

In the silica fumes market, Ferroglobe's competitors include Elkem and Dow Corning.

Ferroglobe strives to be a highly efficient, low-cost producer, offering competitive pricing and engaging in manufacturing processes that capture most of its production by-products for reuse or resale. Additionally, through the vertical integration of its quartz mines in Spain, the United States, Canada and South Africa, its metallurgical coal mines in the United States and tree plantations in South Africa to obtain wood with which to produce charcoal, Ferroglobe has ensured access to some of the high quality raw materials that are essential in the silicon metal, manganese- and silicon-based alloy and specialty metals production process and has been able to gain a competitive advantage over some of its competitors because it has reduced the contribution of these raw materials to its cost base.

Research and Development (R&D)

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2017, 2016 and 2015, Ferroglobe invested $4.5 million, $6.2 million and $11.1 million, respectively, on research and development projects and activities. Set forth below is a description of Ferroglobe's significant ongoing research and development projects.

ELSA electrode

Ferroglobe has internally developed a patented technology for electrodes used in silicon metal furnaces, which it has been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in the production process of silicon metal and eliminates contamination with iron. Ferroglobe has granted these producers the right to use the ELSA electrode against payment to Ferroglobe of royalties.

Solar grade silicon

Ferroglobe's solar grade silicon involves the production of solar grade silicon metal with a purity above 99.9999% through a new, potentially cost-effective, electrometallurgical process. The traditional chemical process tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by Ferroglobe at an earlier stage at its research and development facilities aims to reduce the costs and energy consumption associated with the production of solar grade silicon.

In 2016, FerroAtlántica entered into a project with Aurinka Photovoltaic Group, S.L. (''Aurinka'') for a feasibility study and basic engineering for an upgraded metallurgical grade (''UMG'') solar silicon manufacturing plant. On December 20, 2016, Grupo FerroAtlántica, S.A.U. along with wholly-owned subsidiaries FerroAtlántica, S.A. and Silicio Ferrosolar, S.L.U., entered into a joint venture agreement (the ''Solar JV Agreement'') with Blue Power Corporation, S.L. (''Blue Power'') and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. Under the Solar JV Agreement, FerroAtlántica indirectly owns 75% of the operating companies formed as part of the joint venture and 51% of the company formed as part of the joint venture to hold the intellectual property rights and know how contributed by Aurinka and Ferroglobe to the joint venture. See ''Item 7.B. — Major Shareholders and Related Party Transactions — Related Party Transactions''.

Pursuant to the Solar JV Agreement, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately €51 million over the next two years, which, together with €21 million of capital expenditures invested in prior years, constitute the first phase of the project contemplated by the Solar JV Agreement to build a factory with production capacity of 1,500 tons per year. Plans for and financing of further phases are subject to agreement and approval by the parties to the Solar JV Agreement pursuant to specified procedures. To the extent the project continues into further phases, we would expect to commit, in the future and subject to appropriate approval and authorization, to incur approximately €44million in joint venture-related capital expenditures in the first year of the second phase to reach a production capacity of approximately 3,000 tons per year. FerroAtlántica has obtained a loan, with a principal amount of approximately €45 million, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

Proprietary Rights and Licensing

The majority of Ferroglobe's intellectual property consists of proprietary know-how and trade secrets. Ferroglobe's intellectual property strategy is focused on developing and protecting proprietary know-how and trade secrets, which are maintained through employee and third-party confidentiality agreements and physical security measures. Although Ferroglobe has some patented technology, Ferroglobe believes that its businesses and profitability do not rely fundamentally upon patented technology and that the publication implicit in the patenting process may in certain instances be detrimental to Ferroglobe's ability to protect its proprietary information.

Regulatory Matters

Environmental and health and safety

Ferroglobe operates facilities worldwide, which are subject to foreign, national, regional, provincial and local environmental, health and safety laws and regulations, including, among others, those requirements governing the discharge of materials into the environment, the generation, use, storage and disposal of hazardous substances, the extraction and use of water, land use, reclamation and remediation and the health and safety of Ferroglobe's employees. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its regulated activities, which permits may be subject to modification or revocation by such authorities.

Ferroglobe may not be at all times in complete compliance with such laws, regulations and permits, although Ferroglobe is not aware of any material past or current noncompliance. Failure to comply with these laws, regulations and permits may result in the assessment of administrative, civil and criminal penalties or other sanctions by regulators, the imposition of obligations to conduct remediation or upgrade or install pollution or dust control equipment, the issuance of injunctions

limiting or preventing Ferroglobe's activities, legal claims for personal injury or property damages, and other liabilities.

Under these laws, regulations and permits, Ferroglobe could also be held liable for any consequences arising out of human exposure to hazardous substances or environmental damage Ferroglobe may cause or that relates to its current or former operations or properties. Environmental, health and safety laws are likely to become more stringent in the future. Ferroglobe purchases insurance to cover these potential liabilities, but the costs of complying with current and future environmental, health and safety laws, and its liabilities arising from past or future releases of, or exposure to, hazardous substances, may exceed insured, budgeted or reserved amounts and adversely affect Ferroglobe's business, results of operations and financial condition.

There are a variety of laws and regulations in place or being considered at the international, national, regional, provincial and local levels of government that restrict or are reasonably likely to result in limitations on, or additional costs related to, emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause Ferroglobe to incur material costs to reduce the greenhouse gas emissions from its operations (through additional environmental control equipment or retiring and replacing existing equipment) or to obtain emission allowance or credits, or result in the incurrence of material taxes, fees or other governmental impositions on account of such emissions. In addition, such developments may have indirect impacts on Ferroglobe's operations, which could be material. For example, they may impose significant additional costs or limitations on electricity generators, which could result in a material increase in energy costs.

Some environmental laws assess liability on current or previous owners or operators of real property for the cost of removal or remediation of hazardous substances. In addition to cleanup, cost recovery or compensatory actions brought by foreign, national, provincial and local agencies, neighbors, employees or other third parties could make personal injury, property damage or other private claims relating to the presence or release of hazardous substances. Environmental laws often impose liability even if the owner or operator did not know of, or did not cause, the release of hazardous substances. Persons who arrange for the disposal or treatment of hazardous substances also may be responsible for the cost of removal or remediation of these substances. Such persons can be responsible for removal and remediation costs even if they never owned or operated the disposal or treatment facility. In addition, such owners or operators of real property and persons who arrange for the disposal or treatment of hazardous substances can be held responsible for damages to natural resources.

For a summary of regulatory matters applicable to Ferroglobe's mining operations, see ''— Laws and regulations applicable to Ferroglobe's mining operations.''

Energy and electricity generation

Ferroglobe operates hydroelectric plants in Spain and France, which are subject to energy, environmental, health and safety laws and regulations, including those governing the health and safety of Ferroglobe's employees, the generation of electricity and the use of water and river basins. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its activities, which permits may be subject to modification or revocation by these authorities.

Additionally, Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and a new regulatory framework was established through the enactment of Royal Decree-Law 9/2013 of July 13, taking certain urgent measures to guarantee the financial stability of the Spanish electrical

system. The development of this new framework continued with the passing of the new Electricity Industry Law 24/2013 in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 of June 6, which regulates electricity generation activities using renewable energy sources, co-generation and waste, and Order IET/1045/2014 of June 16, approving the compensation parameters for standard facilities applicable to certain production facilities based on renewable energy sources, co-generation and waste. This regulation established a new compensation scheme based on two concepts: remuneration for investments based on installed capacity, and remuneration for operation based on the energy produced. The first one guarantees a ''reasonable return'' on the investments, and the second one covers the operating cost of those technologies for which operating cost exceeds market revenues. As a result, since July 2013, Ferroglobe has sold the electricity it generates in Spain at market prices rather than at guaranteed prices that provided a premium above market prices, with the exception of energy generated by the Novo Pindo plant in Galicia, which continues to receive a premium that is considerably lower than the premium it received under the prior regulatory framework. It is expected that new regulations will allow Ferroglobe to continue to participate in ''ancillary services'' markets.

Trade

Ferroglobe benefits from antidumping and countervailing duty orders and laws that protect its products by imposing special duties on unfairly traded imports from certain countries. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, there are antidumping and countervailing duties in effect covering silicon metal imports from China. These orders are subject to revision, revocation or rescission as a result of periodic reviews.

A sunset review of the U.S. antidumping order covering silicon metal imports from China is currently being conducted, which may result in the removal of the duties on such imports. If the duties are removed, our sales in the United States may be adversely affected.

In December 2016, Ferroglobe's subsidiaries in Canada filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is subsidized. In March 2017, Ferroglobe's subsidiary Globe Specialty Metals petitioned the United States Department of Commerce and the United States International Trade Commission to provide relief from dumped and subsidized silicon metal imports from Australia, Brazil, Kazakhstan and Norway. In both cases, the agencies found that imports covered by the cases were unfairly traded, but determined that the relevant domestic industry was not injured by the unfair imports. The fact that the cases were not successful may adversely affect our sales or our relationships with customers in the United States and Canada.

Seasonality

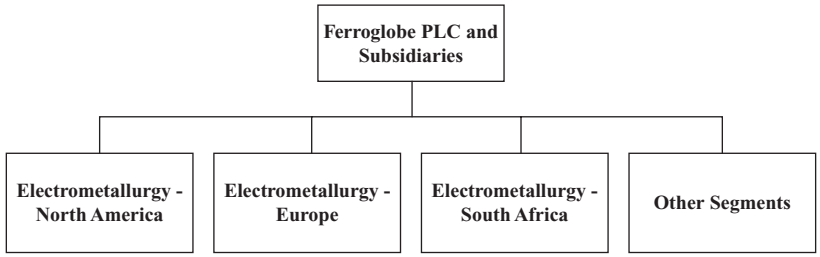
Electrometallurgy

Due to the cyclicality of energy prices and the energy-intensive nature of the production processes for silicon metal, manganese- and silicon-based alloys and specialty metals, Ferroglobe does not operate its electrometallurgy plants during certain periods or times of day when energy prices are at their peak. Demand for Ferroglobe's manganese- and silicon-based alloy and specialty metals products is lower during these periods as its customers also suspend their energy-intensive production processes involving Ferroglobe's products. As a result, sales within particular geographic regions are subject to seasonality.

Energy

Ferroglobe's hydroelectric power generation is dependent on the amount of rainfall in the regions in which its hydropower projects are located, which varies considerably from season to season.

C. Organizational structure.



For a list of subsidiaries and ownership structure see Note 2 in the Consolidated Financial Statements.

D. Property, Plant and Equipment.

See ''Item 4.B. — Information on the Company — Business Overview.''

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

Introduction

The following ''management's discussion and analysis'' should be read in conjunction with the Consolidated Financial Statements of Ferroglobe as of December 31, 2017 and 2016 and for the years ended December 31, 2017, 2016 and 2015, which are included in this annual report. This discussion includes forward-looking statements, which, although based on assumptions that Ferroglobe considers reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. See ''Cautionary Statements Regarding Forward-Looking Statements.'' For a discussion of risks and uncertainties facing Ferroglobe, see ''Item 3.D. — Key Information — Risk Factors.''

In accordance with IAS 21 — The Effects of Changes in Foreign Exchange Rates, Ferroglobe's consolidated income statements and consolidated statement of financial position have been translated from the functional currency of each subsidiary, which is determined by the primary economic environment in which each subsidiary operates, into the reporting currency of the Company that is U.S. Dollars.

The Company's business started with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's ''Predecessor'' for accounting purposes. Therefore, the results of the Company for the 2015 fiscal year were composed of the results of:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's ''Predecessor,'' for the year ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

Principal Factors Affecting Our Results of Operations

Sale prices

Ferroglobe's operating performance is highly correlated to sales prices, which are influenced by several different factors that vary across Ferroglobe's segments.

Silicon metal pricing slowly increased throughout 2017 due to market supply and demand dynamics as well as favorable foreign exchange movements. Our customers businesses appeared to be at strong levels in the chemical, aluminum and solar markets during 2017.

Manganese-based alloy prices have shown a significant correlation with the price of manganese ore, which allows us to pass increases in the cost of manganese ore through to our customers, but also results in a decrease in prices for our manganese-based alloys when the price of manganese ore decreases. During 2017, due to market supply and demand dynamics, we saw manganese-based alloys market pricing increase considerably during the first three quarters of 2017 which was sustained during the fourth quarter. Our customers' businesses appeared at strong levels for steel mill production in 2017.

Our Ferrosilicon business pricing likewise continued to improve as we moved through 2017 and finished at high levels. This was mostly due to supply and demand dynamics in Europe for our customers whose businesses were in steel production.

Under Ferroglobe's pricing policy, which is aimed at reducing dependence on spot market prices, prices applied to its term contracts have a diversity of formulas ranging from prices related

to spot market prices to annual or quarterly fixed prices. Ferroglobe sells certain high quality products for which pricing is not directly correlated to spot market prices.

Cost of raw materials

The key raw materials sourced by Ferroglobe are quartz, manganese ore, coal, wood and charcoal. Manganese ore is the largest component of the cost base for manganese-based alloys. In 2017, approximately 95% of Ferroglobe's total $137.9 million expense with respect to manganese ore fell under contractual agreements with producers of manganese ore with terms of one to three years, while the remaining manganese ore was procured from the international spot market. Coal meeting certain standards for ash content and other physical properties is used as a major carbon reductant in silicon-based alloy production. In 2017, coal represented a $173.1 million expense for Ferroglobe. Wood is both an important element for the production of silicon alloys and used to produce charcoal, which is used as a carbon reductant at Ferroglobe's South African subsidiary Silicon Smelters (Pty.), Ltd. Ferroglobe's wood expense amounted to $55.3 million in 2017. The FerroAtlántica subsidiaries of Ferroglobe source approximately 56.6% of their quartz needs from FerroAtlántica's mines in Spain and South Africa, and Globe subsidiaries source approximately 69.6% of their quartz needs from Globe's mines in the United States and Canada. Total quartz consumption in 2017 represented an expense of $105.0 million.

Power

Power constitutes one of the single largest expenses for most of Ferroglobe's products other than manganese-based alloys. Ferroglobe focuses on minimizing energy prices and unit consumption throughout its operations by concentrating its silicon and manganese-based alloy production during periods when energy prices are lower. In 2017, Ferroglobe's total power consumption was 8,735 gigawatt hours with power contracts that vary across its operations. In Spain, South Africa and China (which, collectively, represents 32% of Ferroglobe's total power consumption in 2017), power prices are mostly spot or daily prices with important seasonal fluctuations, whereas in France and Venezuela, Ferroglobe has power contracts that provide for flat or near-flat rates for most of the year.

In Spain and France, FerroAtlántica receives a rebate on a portion of its energy costs in exchange for an agreement to interrupt production, and thus power usage, upon request. FerroAtlántica has power contracts to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff (''Tarif Vert''), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019, and is currently negotiating long-term supply contracts with suppliers in the market place. Recently enacted regulation enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing to limit its access to the network, interrupt production and respond to surges in demand, as well as paying compensation for indirect CO2 costs under the EU Emission Trading System (ETS) regulation. The new arrangements allow FerroPem S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months due to the Tarif Vert. We believe that the new arrangements will provide power prices comparable to past levels and with some degree of predictability going forward.

In the United States, we enter into long-term electric power supply contracts. Our power supply contracts have in the past resulted in stable, long-term commitments of power at what we believe to be reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rate of our power needs in West Virginia, Ohio and Alabama are

primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts and hydro power through to 2021, effective June 1, 2016.

In South Africa, we have an ''evergreen'' supply agreement with Eskom, the parastatal electricity supplier, for both our Polokwane and eMalahleni plants. Eskom's energy prices are regulated by the National Energy Regulator (NERSA) and price increases are publicly announced in advance. A specific agreement has been approved by NERSA in 2018 for silicon production in Polokwane for three furnaces and in eMalahleni for one furnace. In order to promote silicon production in South Africa, Polokwane and eMalahleni have been offered a two year discount over the public tariffs on the electricity consumed to produce silicon.

Foreign currency fluctuation

Ferroglobe has a diversified production base consisting of production facilities across the United States, Europe, South America, South Africa and Asia. Ferroglobe production costs are mostly dependent on local factors, with the exception of the cost of manganese ore and coal, which are dependent on global commodity prices. The relative strength of the functional currencies of Ferroglobe's subsidiaries influences its competitiveness in the international market, most notably in the case of Ferroglobe's Venezuelan and South African operations, which have historically exported a majority of their production to the U.S. and the European Union. For additional information see ''Item 11. — Quantitative and Qualitative Disclosures About Market Risk — Foreign Exchange Rate Risk.''

Regulatory changes

Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and the foundation for a new framework was established through the enactment of Royal Decree-Law 9/2013. The development of this new framework continued with the passing of the Electricity Industry Law in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 and Order IET/1045/2014.

As a result, since July 2013, the subsidiary FerroAtlántica, S.A.U. has sold the electricity it generates at market prices, optimizing its generation by operating during peak price hours and participating in the ''ancillary services'' markets rather than at guaranteed prices that provided a premium above market prices, with the exception of energy generated by the Novo Pindo plant in Galicia, which continues to receive a premium. It is expected that new regulations will allow FerroAtlántica to continue to participate in ''ancillary services'' markets. New power supply arrangements that were entered into in 2016 for our French plants managed to avoid this seasonal interruption.

Critical Accounting Policies

The discussion and analysis of Ferroglobe's financial condition and results of operations is based upon its Consolidated Financial Statements, which have been prepared in accordance with IFRS. The preparation of those financial statements requires Ferroglobe to make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, the disclosure of contingent assets and liabilities and related disclosure at the date of its financial statements. The estimates and related assumptions are based on available information at the date of preparation of the financial statements, on historical experience and on other relevant factors.

Actual results may differ from these estimates under different assumptions and conditions. Critical accounting policies are those that reflect significant judgments of uncertainties and potentially result in materially different results under different assumptions and conditions. The principal items affected by estimates are income taxes, business combinations, inventories, goodwill, and impairment of long-lived assets. The following are Ferroglobe's most critical accounting policies, because they generally involve a comparatively higher degree of judgment in their application. For a description of all of Ferroglobe's principal accounting policies, see Note 4 to the Consolidated Financial Statements of Ferroglobe included elsewhere in this annual report.

Business combinations

Ferroglobe subsidiaries have completed a number of significant business acquisitions over the past several years. Our business strategy contemplates that we may pursue additional acquisitions in the future. When we acquire a business, the purchase price is allocated based on the fair value of tangible assets and identifiable intangible assets acquired and liabilities assumed. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Goodwill as of the acquisition date is measured as the residual of the excess of the consideration transferred, plus the fair value of any non-controlling interest in the acquiree at the acquisition date, over the fair value of the identifiable net assets acquired. We generally engage independent third-party appraisal firms to assist in determining the fair value of assets acquired and liabilities assumed. Such a valuation requires management to make significant estimates, especially with respect to intangible assets. These estimates are based on historical experience and information obtained from the management of the acquired companies. These estimates are inherently uncertain and may impact reported depreciation and amortization in future periods, as well as any related impairment of goodwill or other long lived assets.

See Note 5 to the accompanying audited Consolidated Financial Statements for detailed disclosures related to our acquisitions.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over fair values attributed to underlying net tangible assets and identifiable intangible assets. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units (or groups of cash generating units) that is expected to benefit from the synergies of the combination. A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

The valuation of the Company's cash generating units requires significant judgment in evaluation of, among other things, recent indicators of market activity and estimated future cash flows, discount rates and other factors. The estimates of cash flows, future earnings, and discount rate are subject to change due to the economic environment and business trends, including such factors as raw material and product pricing, interest rates, expected market returns and volatility of markets served, as well as our future manufacturing capabilities, government regulation and technological change. We believe that the estimates of future cash flows, future earnings, and fair value are reasonable; however, changes in estimates, circumstances or conditions could have a

significant impact on our fair valuation estimation, which could then result in an impairment charge in the future.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

During the year ended December 31, 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000 thousand related to the partial impairment of goodwill in North America, that was recorded as a result of Business Combination, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from its North American business operations.

Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis.

Long-lived assets (excluding goodwill)

In order to ascertain whether its assets have become impaired, Ferroglobe compares their carrying amount with their recoverable amount if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, Ferroglobe estimates the recoverable amount of the cash-generating unit to which the asset belongs. Recoverable amount is the higher of fair value and value in use, which is the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a pre-tax rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under ''net impairment losses'' in the consolidated income statement. Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment is recognized as ''other income'' in the consolidated income statement. The basis for depreciation or amortization is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

During 2016, the Company determined due to market conditions that our facility in Venezuela was to be idled. Since the cash flows from the cash generating unit were uncertain, the Company tested the long-lived assets for impairment. The recoverable amount of the cash generating unit was determined based on the fair value of the assets less costs to dispose. The Company concluded that the costs to dispose exceed the fair value of the assets, primarily due to political and financial instability in Venezuela. As a result, the Company fully impaired the long-lived assets and took an impairment charge of $58,472 thousand for property, plant and equipment.

During 2016, the Company recognized an impairment charge of $9,176 thousand related to the Company's mining assets in South Africa, comprising goodwill impairment of $1,612 thousand, impairment of property, plant and equipment of $7,334 thousand (including associated translation differences) and impairment of other intangible assets of $230 thousand.

Inventories

Cost of inventories is determined by the average cost method. Inventories are valued at the lower of cost or market value. Circumstances may arise (e.g., reductions in market pricing, obsolete, slow moving or defective inventory) that require the carrying amount of our inventory to be written down to net realizable value. We estimate market and net realizable value based on current and future expected selling prices, as well as expected costs to complete, including utilization of parts and supplies in our manufacturing process. We believe that these estimates are reasonable; however, future market price decreases caused by changing economic conditions, customer demand, or other factors could result in future inventory write-downs that could be material.

Income taxes

The current income tax expense incurred by Ferroglobe subsidiaries on an individual basis is determined by applying the applicable tax rate to the taxable profit for the year, calculated on the basis of accounting profit before tax, increased or decreased, as appropriate, by the permanent differences arising from the application of tax legislation and by the elimination of any tax consolidation adjustments, taking into account tax relief and tax credits. The consolidated income tax expense is calculated by adding together the expense recognized by each of the consolidated subsidiaries, increased or decreased, as appropriate, as a result of the tax effect of consolidation adjustments for accounting purposes.

Ferroglobe's deferred tax assets and liabilities include temporary differences measured at the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled. Deferred tax liabilities are recognized for all taxable temporary differences, except for those arising from the initial recognition of goodwill. Deferred tax assets are recognized to the extent that it is considered probable that Ferroglobe will have taxable profits in the future against which the deferred tax assets can be utilized. The deferred tax assets and liabilities recognized are reassessed at each reporting date in order to ascertain whether they still exist, and the appropriate adjustments are made on the basis of the findings of the analyses performed.

Significant judgment is required in determining income tax provisions and tax positions. Ferroglobe may be challenged upon review by the applicable taxing authorities, and positions taken may not be sustained. The accounting for uncertain income tax positions requires consideration of timing and judgments about tax issues and potential outcomes and is a subjective estimate. In certain circumstances, the ultimate outcome of exposures and risks involves significant uncertainties. If actual outcomes differ materially from these estimates, they could have a material impact on Ferroglobe's results of operations and financial condition. Interest and penalties related to uncertain tax positions are recognized in income tax expense.

Results of Operations — Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

($ thousands)	Year ended December 31, 2017	2016
Sales	1,741,693	1,576,037
Cost of sales	(1,043,395)	(1,043,412)
Other operating income	18,199	26,215
Staff costs	(301,963)	(296,399)
Other operating expense	(239,926)	(243,946)
Depreciation and amortization charges, operating allowances and write-downs	(104,529)	(125,677)
Operating profit (loss) before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**70,079**	**(107,182)**
Impairment losses	(30,957)	(268,089)
Net gain due to changes in the value of assets	7,504	1,891
(Loss) gain on disposal of non-current assets	(4,316)	340
Other losses	(2,613)	(40)
Operating profit (loss)	**39,697**	**(373,080)**
Finance income	3,708	1,536
Finance costs	(65,412)	(30,251)
Financial derivative loss	(6,850)	—
Exchange differences	8,214	(3,513)
Loss before tax	**(20,643)**	**(405,308)**
Income tax benefit	14,821	46,695
Loss for the year	**(5,822)**	**(358,613)**
Loss attributable to non-controlling interests	5,144	20,186
Loss attributable to the Parent	**(678)**	**(338,427)**

Sales

Sales increased $165,656 thousand or 10.5%, from $1,576,037 thousand for the year ended December 31, 2016 to $1,741,693 thousand for the year ended December 31, 2017, primarily due to an increase in average selling prices across all major products (excluding by-products). The average selling price for silicon metal increased by 3.1% to $2,270/MT in 2017, as compared to $2,201/MT in 2016; the average selling price for silicon-based alloys increased by 14.9% to $1,608/MT in 2017, as compared to $1,400/MT in 2016; and the average selling price for manganese-based alloys increased by 60.7% to $1,327/MT in 2017, as compared to $826/MT in 2016. The increase in average selling prices reflects an upward pricing trend in the markets for silicon metal and silicon-based alloys.

The increase in average selling prices were partially offset by a 2.9% decrease in sales volumes across all major products. Silicon metal sales volume decreased by 4.5% and silicon-based alloys sales volume decreased by 4.9%, while manganese-based alloys sales volume increased by 2.9%.

Cost of sales

Cost of sales decreased $17 thousand, from $1,043,412 thousand for the year ended December 31, 2016 to $1,043,395 thousand for the year ended December 31, 2017, primarily due to a decrease in sales volumes. This decrease was offset by an increase in our cost of production, mainly due to furnace overhauls in North America and in Europe which mainly impacted our silicon metal costs. An increase in energy costs in Europe impacted our costs for silicon-based alloys and an increase in the purchase price of manganese ore impacted our costs for manganese-based alloys.

Other operating income

Other operating income decreased $8,016 thousand, or 30.6%, from $26,215 thousand for the year ended December 31, 2016 to $18,199 thousand for the year ended December 31, 2017, primarily due to an exceptional sale of products manufactured by a third party in 2016. These products were initially purchased for use in Ferroglobe's plants but were ultimately sold to another third party, resulting in non-recurrent other operating income in 2016.

Staff costs

Staff costs increased $5,564 thousand, or 1.9%, from $296,399 thousand for the year ended December 31, 2016 to $301,963 thousand for the year ended December 31, 2017, primarily due to a provision related to labor claims that are ongoing as well as an increase in variable wages and benefits driven by the Company's financial performance in 2017 as compared to 2016. Staff costs also increased due to an increase in head count primarily needed for the restart of our Selma, Alabama facility.

Other operating expense

Other operating expense decreased $4,020 thousand, or 1.6%, from $243,946 thousand for the year ended December 31, 2016 to $239,926 thousand for the year ended December 31, 2017, primarily due to a lower cost structure in our facilities. Selling, general and administrative expenses for our factories and our global and local headquarters decreased year over year, primarily due to a reduction of contracting of external services as well as synergies recognized from the Business Combination.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $21,148 thousand or 16.8%, from $125,677 thousand for the year ended December 31, 2016 to $104,529 thousand for the year ended December 31, 2017, primarily due to a decrease in depreciation and amortization relating to fully depreciated and amortized fixed assets at the end of 2016. Additionally, there was a decrease in write-downs of trade receivables allowance in 2017 due to lower uncollectable receivable rates associated with improved risk management.

Impairment losses

Impairment losses decreased $237,132 thousand, from a loss of $268,089 thousand for the year ended December 31, 2016 to a loss of $30,957 thousand for the year ended December 31, 2017. During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations. During the year ended

December 31, 2016, the Company recognized an impairment charge of $193,000 thousand related to the partial impairment of goodwill at the U.S. and Canada, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from Globe's business operations. The impairment associated with the U.S. cash-generating units was $178,900 thousand and the amount that is associated with Canadian cash-generating units was $14,100 thousand. Additionally, during the year ended December 31, 2016 the Company recognized an impairment of non-current operational assets located in Venezuela, totaling $58,472 thousand.

Net gain due to changes in the value of assets

Net gain due to the changes in the value of assets primarily relates to the remeasured fair value of the Company's timber farms in South Africa as of December 31, 2017.

(Loss) gain on disposal of non-current assets

A net loss of $4,316 thousand for the year ended December 31, 2017 relates primarily to the disposals certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination but were subsequently disposed of during scheduled furnace overhauls in 2017.

Finance income

Finance income increased $2,172 thousand, or 141.4%, from $1,536 thousand for the year ended December 31, 2016 to $3,708 thousand for the year ended December 31, 2017, primarily due to the accounts receivable securitization program that was entered into in July 2017, which resulted in $1,935 thousand of interest income.

Finance costs

Finance costs increased $35,161 thousand, or 116.2%, from $30,251 thousand for the year ended December 31, 2016 to $65,412 thousand for the year ended December 31, 2017, primarily as a result of the issuance of Senior Notes in February 2017, which resulted in $28,961 thousand of finance costs.

Financial derivative loss

Financial derivative loss of $6,850 thousand resulted from our cross currency swap entered into in May 2017. The loss is related to the portion of the notional amount of the cross currency swap that is not designated as a cash flow hedge.

Exchange differences

Exchange differences decreased $11,727 thousand, from a loss of $3,513 thousand for the year ended December 31, 2016 to income of $8,214 thousand for the year ended December 31, 2017, primarily due to the fluctuation of foreign exchange rates, mainly the exchange rate between the Euro and the U.S. Dollar.

Income tax benefit

Income tax benefit decreased $31,874 thousand, or 68.3%, from an income tax benefit of $46,695 thousand for the year ended December 31, 2016 to an income tax benefit of $14,821 thousand for the year ended December 31, 2017, primarily due to higher taxable income in 2017 than in 2016. The decrease was offset by the impact of U.S. tax reform enacted in 2017 which

resulted in an income tax benefit of $31.2 million representing the remeasurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018, which was offset by income tax expense on taxable income.

Segment operations

During 2017, upon further evaluation of the management reporting structure as a result of the integration of the operations of FerroAtlántica and Globe we have concluded that our Venezuela operations are no longer significant as an operating and reportable segment due to the decision to significantly reduce these operations in 2016. As such, in 2017 we have included our Venezuela operations as part of ''Other Segments''. The comparative prior periods have been restated to conform to the 2017 reportable segment presentation.

Operating segments are based upon the Company's management reporting structure. As such, we report our results in accordance with the following segments:

- Electrometallurgy — North America;
- Electrometallurgy — Europe;
- Electrometallurgy — South Africa; and
- Other Segments.

Electrometallurgy — North America

	Year ended December 31,	
($ thousands)	2017	2016
Sales	541,143	521,192
Cost of sales	(303,096)	(325,254)
Other operating income	2,701	362
Staff costs	(90,802)	(82,032)
Other operating expense	(68,537)	(64,606)
Depreciation and amortization charges, operating allowances and write-downs	(66,789)	(73,530)
Operating profit (loss) before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**14,620**	**(23,868)**

Sales

Sales increased $19,951 thousand, or 3.8%, from $521,192 thousand for the year ended December 31, 2016 to $541,143 thousand for the year ended December 31, 2017, primarily due to a 4.9% increase in sales volumes partially offset by a 1.1% decrease in the average selling price of silicon metal and a 0.9% decrease in average selling price of silicon-based alloys.

Cost of sales

Cost of sales decreased $22,158 thousand, or 6.8%, from $325,254 thousand for the year ended December 31, 2016 to $303,096 thousand for the year ended December 31, 2017, primarily due to a $10,022 thousand step-up in the fair value of U.S. inventory as part of price accounting

associated with the Business Combination, being released into cost of sales as the inventory was sold throughout 2016. Unplanned downtime at our silicon-based alloys production plant due to breaker failure contributed to the increase in costs in 2016. In 2017, the Company implemented cost reduction initiatives in our U.S. and Canadian facilities which helped improve costs in 2017.

Staff costs

Staff costs increased $8,770 thousand, or 10.7%, from $82,032 thousand for the year ended December 31, 2016 to $90,802 thousand for the year ended December 31, 2017, primarily due to an increase in U.S. head count needed for the restart of our Selma, Alabama facility.

Other operating expense

Other operating expense increased $3,931 thousand, or 6.1%, from $64,606 thousand for the year ended December 31, 2016 to $68,537 thousand for the year ended December 31, 2017, primarily due to a $2,200 thousand increase in legal expenses associated with the trade cases in the U.S. and Canada.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $6,741 thousand, or 9.2%, from $73,530 thousand for the year ended December 31, 2016 to $66,789 thousand for the year ended December 31, 2017, primarily due to full amortization of computer software as well as property, plant and equipment becoming fully depreciated at the end of 2016.

Electrometallurgy — Europe

	Year ended December 31,	
($ thousands)	2017	2016
Sales	1,083,200	949,547
Cost of sales	(690,589)	(672,026)
Other operating income	12,681	25,908
Staff costs	(147,595)	(132,440)
Other operating expense	(107,130)	(118,269)
Depreciation and amortization charges, operating allowances and write-downs	(27,404)	(31,730)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**123,163**	**20,990**

Sales

Sales increased $133,653 thousand or 14.1%, from $949,547 thousand for the year ended December 31, 2016 to $1,083,200 thousand for the year ended December 31, 2017, primarily due to a 21.9% increase in average selling prices for all primary products as well as a foreign exchange impact which increased sales by $21,862 thousand.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing increased 2.6%, 14.1% and 56.8%, respectively, primarily due to higher market index pricing in Europe. The sales volume of primary products was relatively consistent year-over-year,

with an increase of 2.7% for the year ended December 31, 2017 compared to the year ended December 31, 2016.

Cost of sales

Cost of sales increased $18,563 thousand, or 2.8%, from $672,026 thousand for the year ended December 31, 2016 to $690,589 thousand for the year ended December 31, 2017, primarily due to an increase in the price of raw material. In addition, there was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $13,924 thousand.

Other operating income

Other operating income decreased $13,227 thousand, or 51.1%, from $25,908 thousand for the year ended December 31, 2016 to $12,681 thousand for the year ended December 31, 2017, primarily is due to an exceptional sale of products manufactured by a third entity in 2016 (products which were initially purchased for use in Ferroglobe plants). There was a favorable foreign exchange impact, which increased Euro-denominated incomes by $256 thousand.

Staff costs

Staff costs increased $15,155 thousand or 11.4%, from $132,440 thousand for the year ended December 31, 2016 to $147,595 thousand for the year ended December 31, 2017, primarily due to an increase in variable wages and benefits driven by financial performance for employees in France and in Spain. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $2,982 thousand.

Other operating expense

Other operating expense decreased $11,139 thousand, or 9.4%, from $118,269 thousand for the year ended December 31, 2016 to $107,130 thousand for the year ended December 31, 2017, primarily due to a reduction of non-recurring transaction costs related to the Business Combination, which were incurred in 2016. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $2,162 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $4,326 thousand, or 13.6%, from $31,730 thousand for the year ended December 31, 2016 to $27,404 thousand for the year ended December 31, 2017, primarily due to a decrease in write-downs of trade receivables allowances of $5,963 thousand as we reduced our exposure to customers that entered delinquency in 2016. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $553 thousand.

Electrometallurgy — South Africa

($ thousands)	Year ended December 31, 2017	2016
Sales	122,504	142,160
Cost of sales	(81,744)	(99,124)
Other operating income	2,868	3,422
Staff costs	(23,495)	(23,589)
Other operating expense	(24,462)	(28,834)
Depreciation and amortization charges, operating allowances and write-downs	(5,788)	(4,732)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(10,117)**	**(10,697)**

Sales

Sales decreased $19,656 thousand, or 13.8%, from $142,160 thousand for the year ended December 31, 2016 to $122,504 thousand for the year ended December 31, 2017, primarily due to a 63.9% decrease in silicon metal sales volumes, as a result of furnaces 1 and 3 of Polokwane plant being idle during 2017. This decrease was partly offset by a 22.8% increase in silicon-based alloy sales volumes due to an improvement in demand in the domestic market. Average selling prices of all primary products increased 4% in 2017 compared to 2016, and there was a positive foreign exchange impact, which increased sales by $2,489 thousand.

Cost of sales

Cost of sales decreased $17,380 thousand, or 17.5%, from $99,124 thousand for the year ended December 31, 2016 to $81,744 thousand for the year ended December 31, 2017, primarily due to a 63.9% decrease in silicon metal sales volumes from 2016 to 2017, partially offset by an increase of 22.8% in silicon-based alloy sales volumes, as well as an unfavorable foreign exchange impact which increased cost of sales by $1,667 thousand.

Other operating income

Other operating income decreased $554 thousand, or 16.2%, from $3,422 thousand for the year ended December 31, 2016 to $2,868 thousand for the year ended December 31, 2017, primarily due to a decrease in by-product sales as a result of weak demand in the domestic market as well as a reduction of other services provided to third parties. There was a favorable foreign exchange impact, which increased Euro-denominated income by $57 thousand.

Staff costs

Staff costs decreased $94 thousand or 0.4%, from $23,589 thousand for the year ended December 31, 2016 to $23,495 thousand for the year ended December 31, 2017, due to the staffing adjustments carried out in 2017 in connection with furnaces 1 and 3 of Polokwane plant, which were idle during 2017. This decrease was partially offset by a foreign exchange impact, which increased staff costs by $474 thousand.

Other operating expense

Other operating expense decreased $4,372 thousand, or 15.2%, from $28,834 thousand for the year ended December 31, 2016 to $24,462 thousand for the year ended December 31, 2017, primarily due to lower variable, selling, and administrative costs during 2017 when the plant was idled or operating at a reduced production level. This decrease was partially offset by a foreign exchange impact, which increased other operating expense by $482 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $1,056 thousand, or 22.3%, from $4,732 thousand for the year ended December 31, 2016 to $5,788 thousand for the year ended December 31, 2017. This change is primarily attributable to higher lower capital expenditures as well as a foreign exchange impact which increased depreciation and amortization charges by $117 thousand.

Other segments

	Year ended December 31,	
($ thousands)	2017	2016
Sales	60,199	90,337
Cost of sales	(33,616)	(79,912)
Other operating income	15,619	4,713
Staff costs	(39,851)	(58,577)
Other operating expense	(55,955)	(37,964)
Depreciation and amortization charges, operating allowances and write-downs	(4,557)	(12,818)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(58,161)**	**(94,221)**

Sales

Sales decreased $30,138 thousand, or 33.4%, from $90,337 thousand for the year ended December 31, 2016 to $60,199 for the year ended December 31, 2017, primarily due to the idling of operations at FerroVen, S.A. during 2016, which resulted in a $20,353 thousand decrease in sales during 2017.

Cost of sales

Cost of sales decreased $46,296 thousand, or 57.9%, from $79,912 thousand for the year ended December 31, 2016 to $33,616 thousand for the year ended December 31, 2017, primarily due to the idling of operations at FerroVen, S.A. during 2016, which decreased cost of sales as a result of reduced sales volumes. The devaluation of Venezuelan local currency resulted in a $28,979 thousands decrease in cost of sales. A decrease of $8,134 thousand resulted from Mangshi being idled in 2017. Decreases were partially offset by a $2,616 thousand increase at Metales as we operated with an additional furnace and a $2,668 thousand increase at Yonvey as we resumed production of electrodes.

Other operating income

Other operating income increased $10,906 thousand, or 231.4%, from $4,713 thousand for the year ended December 31, 2016 to $15,619 thousand for the year ended December 31, 2017, primarily due to at chargeback of services by Ferroglobe PLC to its subsidiaries.

Staff costs

Staff costs decreased $18,726 thousand or 32.0%, from $58,577 thousand for the year ended December 31, 2016 to $39,851 thousand for the year ended December 31, 2017, as a result of executive severance payments of approximately $21,000 thousand in 2016. The decrease was partially offset by an increase in variable wages resulting from an improved financial performance in 2017.

Other operating expense

Other operating expense increased $17,991 thousand, or 47.4%, from $37,964 thousand for the year ended December 31, 2016 to $55,955 for the year ended December 31, 2017, primarily due to the accrual of $12,444 thousand for accrual of contingent liabilities.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $8,261 thousand, or 64.4%, from $12,818 thousand for the year ended December 31, 2016 to $4,557 thousand for the year ended December 31, 2017, primarily due to a $4,025 thousand decrease at FerroVen, S.A. and a $2,625 thousand decrease in Energy.

Results of Operations — Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

($ thousands)	Year ended December 31, 2016	2015
Sales	1,576,037	1,316,590
Cost of sales	(1,043,412)	(818,736)
Other operating income	26,215	15,751
Staff costs	(296,399)	(205,869)
Other operating expense	(243,946)	(200,296)
Depreciation and amortization charges, operating allowances and write-downs	(125,677)	(67,050)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(107,182)**	**40,390**
Impairment losses	(268,089)	(52,042)
Net gain (loss) due to changes in the value of assets	1,891	(912)
Gain (loss) on disposal of non-current assets	340	(2,214)
Other losses	(40)	(347)
Operating loss	**(373,080)**	**(15,125)**
Finance income	1,536	1,096
Finance costs	(30,251)	(30,405)
Exchange differences	(3,513)	35,904
Loss before tax	**(405,308)**	**(8,530)**
Income tax benefit (expense)	46,695	(49,942)
Loss for the year	**(358,613)**	**(58,472)**
Loss attributable to non-controlling interests	20,186	15,204
Loss attributable to the Parent	**(338,427)**	**(43,268)**

The financial information for the year ended December 31, 2016 includes the consolidated results for the full year ended December 31, 2016, whereas the financial information for the year ended December 31, 2015 includes the results of Globe for only the eight-day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $259,447 thousand or 19.7%, from $1,316,590 thousand for the year ended December 31, 2015 to $1,576,037 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe sales in 2016 of $545,264 thousand as compared to the inclusion of only eight days of Globe sales in 2015. This increase was offset by a 20.3% decrease in average selling prices (prices based in euros) of all primary products and a 0.4% decrease in sales volumes at FerroAtlántica.

Excluding Globe, average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased by 16.0%, 9.2% and 18.2%, respectively, primarily due to lower European market index pricing.

Excluding Globe, silicon metal sales volume decreased 7.5%, primarily due to lower demand driven by pricing pressure from imports. This decrease was partially offset by slight increases in sales volumes of silicon-based alloys and manganese alloys, of 3.5% and 2.4%, respectively.

In summary, since late 2014, we have experienced a sharp decrease in silicon metal prices, our main product produced and sold, which adversely affected our sales for the year ended December 31, 2016, as compared to the sales of FerroAtlántica and Globe for the year ended December 31, 2015. This effect was particularly pronounced in relation to the sales of our European business.

Cost of sales

Cost of sales increased $224,676 thousand, or 27.4%, from $818,736 thousand for the year ended December 31, 2015 to $1,043,413 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe cost of sales in 2016 of $340,617 thousand as compared to the inclusion of only eight days of Globe cost of sales in 2015. This increase was offset by a 14.2% decrease in the cost of sales of FerroAtlántica due to manufacturing cost improvement initiatives, including lower raw material and energy costs.

Other operating income

Other operating income increased $10,464 thousand, or 66.4%, from $15,751 thousand for the year ended December 31, 2015 to $26,215 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating income in 2016 of $2,986 thousand as compared to the inclusion of only eight days of Globe other operating income in 2015. In addition, the increase in other operating income is attributable to an increase in sales of fines, silica fume and other by-products.

Staff costs

Staff costs increased $90,530 thousand, or 44.0%, from $205,869 thousand for the year ended December 31, 2015 to $296,399 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $121,251 thousand as compared to the inclusion of only eight days of Globe staff costs in 2015. This increase was offset by a decrease in FerroAtlántica staff costs of approximately $30,000 thousand due to a decrease in variable-based compensation expense reflecting annual company performance.

Other operating expense

Other operating expense increased $43,650 thousand, or 21.8%, from $200,296 thousand for the year ended December 31, 2015 to $243,946 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating expense in 2016 of $63,065 thousand as compared to the inclusion of only eight days of Globe other operating expense in 2015. This increase was offset by a decrease in due diligence expenses related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $58,627 thousand or 87.4%, from $67,050 thousand for the year ended December 31, 2015 to $125,677 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe depreciation and amortization charges, operating allowances and write-downs in 2016 of $73,525 thousand as compared to the inclusion of only eight days of Globe depreciation and amortization charges, operating allowances and write-downs in 2015.

Impairment losses

Net impairment losses increased $216,047 thousand, from a loss of $52,042 thousand for the year ended December 31, 2015 to a loss of $268,089 thousand for the year ended December 31, 2016. The increase in impairment losses is primarily due to the impairment of goodwill in relation to our North American assets of $193,000 thousand, the impairment of non-current operational assets located in Venezuela, South Africa and France, totaling $58,472 thousand, $9,176 thousand, and $1,178 thousand, respectively, and the impairment of non-current financial assets amounting $5,623 thousand.

Finance income

Finance income increased $440 thousand, or 40.1%, from $1,096 thousand for the year ended December 31, 2015 to $1,536 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance income in 2016 of $676 thousand as compared to the inclusion of only eight days of Globe finance income in 2015.

Finance costs

Finance costs decreased $154 thousand, or 0.5%, from $30,405 thousand for the year ended December 31, 2015 to $30,251 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance costs in 2016 of $5,714 thousand as compared to the inclusion of only eight days of Globe finance income in 2015. This increase was offset by a reduction in FerroAtlántica's outstanding debt and, therefore incurred lower finance costs, as well as a decrease in interest rates year-over-year.

Exchange differences

Exchange differences decreased $39,417 thousand, from a gain of $35,904 thousand for the year ended December 31, 2015 to a loss of $3,513 thousand for the year ended December 31, 2016, partially due to the inclusion of a full year of Globe exchange differences in 2016 of $4,567 thousand related to the devaluation of the Argentine Peso, as compared to the inclusion of only eight days of Globe exchange differences in 2015.

Income tax

Income tax expense decreased $96,637 thousand, or 193.5%, from an income tax expense of $49,942 thousand for the year ended December 31, 2015 to an income tax benefit of $46,695 thousand for the year ended December 31, 2016. This decrease is primarily attributable to the inclusion of a full year of Globe income tax benefit in 2016 of $30,598 thousand as compared to the inclusion of eight days of Globe income tax expense in 2015. In addition, FerroAtlántica operations generated losses in 2016, which further increased the income tax benefit for the year ended December 31, 2016.

Electrometallurgy — North America

($ thousands)	Year ended December 31, 2016	2015
Sales	521,192	10,062
Cost of sales	(325,254)	(6,200)
Other operating income	362	17
Staff costs	(82,032)	(1,983)
Other operating expense	(64,606)	(276)
Depreciation and amortization charges, operating allowances and write-downs	(73,530)	(1,183)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(23,868)**	**437**

The Electrometallurgy — North America segment comprises of only Globe subsidiaries. As a result, the segment information for the year ended December 31, 2016 includes the segment information for the full year ended December 31, 2016, whereas the segment information for the year ended December 31, 2015 includes the segment information for only the eight-day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $511,130 thousand, from $10,062 thousand for the year ended December 31, 2015 to $521,192 thousand for the year ended December 31, 2016, primarily due to the inclusion of the full year of sales in 2016 as compared to the inclusion of only eight days of sales in 2015 following the Business Combination. On a pro-forma basis, sales for the segment decreased $165,655 thousand, or 24%, from $686,847 thousand in 2015 to $521,192 thousand in 2016. The decrease was primarily attributable to a 12% decrease in average selling prices coupled with a 15% decrease in tons sold. Silicon metal pricing decreased 14%, primarily due to lower index pricing, which resulted in lower pricing on annual calendar 2016 contracts and index-based contracts. Silicon-based alloys pricing decreased 10% as a result of lower index pricing. Silicon metal volume decreased 10%, primarily due to lower demand driven by pricing pressure from imports. Silicon-based alloys volume decreased 24% due to a weaker end market and lower customer demand.

Cost of sales

Cost of sales increased by $319,054 thousand, from $6,200 thousand for the year ended December 31, 2015 to $325,254 thousand for the year ended December 31, 2016. On a pro-forma basis, cost of sales decreased in line with the 15% decrease in sales volumes, offset by higher stand-down costs associated with the idling of the Selma, Alabama plant in February 2016 without any corresponding production.

Staff costs

Staff costs increased by $80,049 thousand, from $1,983 thousand for the year ended December 31, 2015 to $82,032 thousand for the year ended December 31, 2016. On a pro-forma basis, staff costs decreased by approximately 18%, due to lower variable-based compensation expense reflecting annual company performance year-over-year.

Other operating expense

Other operating expense increased by $64,330 thousand, from $276 thousand for the year ended December 31, 2015 to $64,606 thousand for the year ended December 31, 2016, primarily due to a full twelve months of other operating expense in 2016 as compared to only eight days of Globe other operating expense in 2015. On a pro-forma basis, other operating expense decreased due to lower non-recurring transaction costs during 2015 related to the Business Combination.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased by $72,347 thousand, from $1,183 thousand for the year ended December 31, 2015 to $73,530 thousand for the year ended December 31, 2016. On a pro-forma basis, depreciation and amortization charges, operating allowances and write-downs increased by approximately 50%. This increase is attributable to the increased depreciable asset balance during 2016 as a result of the use of the acquisition -method treatment of Globe's non-current assets associated with the Business Combination, as all acquired assets and liabilities were stepped up to fair value as of the closing date of the Business Combination.

Electrometallurgy — Europe

	Year ended December 31,	
($ thousands)	2016	2015
Sales	949,547	1,174,968
Cost of sales	(672,026)	(811,114)
Other operating income	25,908	52,211
Staff costs	(132,440)	(148,652)
Other operating expense	(118,269)	(142,867)
Depreciation and amortization charges, operating allowances and write-downs	(31,730)	(35,255)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**20,990**	**89,291**

Sales

Sales decreased $225,421 thousand, or 19.2%, from $1,174,968 thousand for the year ended December 31, 2015 to $949,547 thousand for the year ended December 31, 2016, primarily due to an 18.5% decrease in average selling prices for all primary products as well as a foreign exchange impact, which decreased sales by $2,574 thousand.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased 20.4%, 22.6% and 12.3%, respectively, primarily due to lower European market index pricing. The sales volume of primary products was relatively consistent year-over-year.

Cost of sales

Cost of sales decreased $139,088 thousand, or 17.1%, from $811,114 thousand for the year ended December 31, 2015 to $672,026 thousand for the year ended December 31, 2016, primarily due to manufacturing cost improvement initiatives, including lower raw material and energy costs.

In addition, there was a favorable foreign exchange impact, which decreased Euro-denominated costs by $1,821 thousand.

Other operating income

Other operating income decreased $26,303 thousand, or 50.4%, from $52,211 thousand for the year ended December 31, 2015 to $25,908 thousand for the year ended December 31, 2016, primarily due to intercompany charges to the parent company during 2015 for its share of non-recurring transaction costs related to the Business Combination, which FerroAtlántica paid.

Staff costs

Staff costs decreased $16,212 thousand or 10.9%, from $148,652 thousand for the year ended December 31, 2015 to $132,440 thousand for the year ended December 31, 2016, primarily due to a decrease in the bonus and other social benefits in France and in Spain to reflect the Company's annual performance.

Other operating expense

Other operating expense decreased $24,598 thousand, or 17.2%, from $142,867 thousand for the year ended December 31, 2015 to $118,269 thousand for the year ended December 31, 2016, primarily due to a reduction of non-recurring transaction costs of approximately $27,000 thousand related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,525 thousand, or 10.0%, from $35,255 thousand for the year ended December 31, 2015 to $31,730 thousand for the year ended December 31, 2016, primarily due to a decrease in write-downs of trade receivables allowances of $2,115 thousand as we reduced exposure to customers that entered delinquency in 2015. In addition, there was a $1,410 thousand decrease in depreciation as a result of lower capital expenditures year-over-year.

Electrometallurgy — South Africa

	Year ended December 31,	
($ thousands)	2016	2015
Sales	142,160	219,890
Cost of sales	(99,124)	(134,978)
Other operating income	3,422	5,070
Staff costs	(23,589)	(24,663)
Other operating expense	(28,834)	(29,237)
Depreciation and amortization charges, operating allowances and write-downs	(4,732)	(7,744)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(10,697)**	**28,338**

Sales

Sales decreased $77,730 thousand, or 35.3%, from $219,890 thousand for the year ended December 31, 2015 to $142,160 thousand for the year ended December 31, 2016, primarily due to

a 17.1% decrease in silicon metal sales volumes due to the decline in exports to North America. In addition, there was an 18.8% decrease in silicon-based alloy sales volumes due to a weak domestic market. Average selling prices of all primary products decreased 30% in 2016 compared to 2015 due to a decrease in index pricing. This decrease was offset by a foreign exchange impact, which increased sales by $18,761 thousand.

Cost of sales

Cost of sales decreased $35,854 thousand, or 26.6%, from $134,978 thousand for the year ended December 31, 2015 to $99,124 thousand for the year ended December 31, 2016, primarily due to a 17.1% decrease in silicon metal sales volumes from 2015 to 2016 as well as a 33.4% decrease in silicon-based alloy sales volumes. This decrease was offset by a foreign exchange impact which increased cost of sales by $13,082 thousand.

Other operating income

Other operating income decreased $1,648 thousand, or 32.5%, from $5,070 thousand for the year ended December 31, 2015 to $3,422 thousand for the year ended December 31, 2016, primarily due to a decrease in by-product sales as a result of a weak domestic market as well as a reduction of other services provided to third parties.

Staff costs

Staff costs decreased $1,074 thousand or 4.4%, from $24,663 thousand for the year ended December 31, 2015 to $23,589 thousand for the year ended December 31, 2016, primarily due to a $4,187 thousand reduction of bonus and other social benefits to reflect the Company's annual performance. This decrease was offset by a foreign exchange impact, which increased staff costs by $3,113 thousand.

Other operating expense

Other operating expense decreased $403 thousand, or 1.4%, from $29,237 thousand for the year ended December 31, 2015 to $28,834 thousand for the year ended December 31, 2016, primarily due to lower variable, selling, and administrative costs during 2016 when the plant was idled or operating at a reduced production level. This decrease was offset by a foreign exchange impact, which increased other operating expense by $3,805 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,012 thousand, or 38.9%, from $7,744 thousand for the year ended December 31, 2015 to $4,732 thousand for the year ended December 31, 2016. This change is primarily attributable to a $1,572 thousand decrease in Receivable allowances and a decrease in depreciation of $2,064 thousand due to lower capital expenditures year-over-year. This decrease was offset by a foreign exchange impact, which increased depreciation and amortization charges by $624 thousand.

Other segments

($ thousands)	Year ended December 31, 2016	2015
Sales	90,337	129,123
Cost of sales	(79,912)	(88,041)
Other operating income	4,713	2,109
Staff costs	(58,577)	(30,574)
Other operating expense	(37,964)	(67,347)
Depreciation and amortization charges, operating allowances and write-downs	(12,818)	(22,492)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other losses	**(94,221)**	**(77,222)**

Sales

Sales decreased $38,786 thousand, or 30.0%, from $129,123 thousand for the year ended December 31, 2015 to $90,337 thousand for the year ended December 31, 2016, primarily due to a decrease in sales from partially and fully idled facilities, most significantly, FerroVen, which significantly reduced operations due to political and social instability in Venezuela, and MangShi, which was fully idled in November 2015. This decrease was offset by the inclusion of a full year of Globe sales in 2016 of $23,532 thousand as compared to the inclusion of only eight days of Globe sales in 2015.

Cost of sales

Cost of sales decreased $8,129 thousand, or 9.2%, from $88,041 thousand for the year ended December 31, 2015 to $79,912 thousand for the year ended December 31, 2016, primarily due to significantly reduced operations of Ferro Ven which was partially offset by the inclusion of a full year of Globe cost of sales in 2016 as compared to the inclusion of only eight days of Globe cost of sales in 2015. Additionally, inventory at MangShi was written down by approximately $2,500 thousand in 2016.

Other operating income

Other operating income increased $2,604 thousand, or 123.5%, from $2,109 thousand for the year ended December 31, 2015 to $4,713 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating income in 2016 of $1,647 thousand as compared to the inclusion of only eight days of Globe other operating income in 2015.

Staff costs

Staff costs increased $28,003 thousand or 91.6%, from $30,574 thousand for the year ended December 31, 2015 to $58,577 thousand for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $38,427 thousand as compared to the inclusion of only eight days of Globe sales in 2015. In addition, staff costs for the year ended December 31, 2016 include Alan Kestenbaum's severance payment of approximately $21,000 thousand, as well as other payments, and the accelerated vesting of equity awards made in connection with his resignation pursuant to the terms of the Employment Agreement. The increase in staff costs was partially offset by a decrease in staff costs at FerroVen, S.A. primarily

due to significantly reduced operations as well as the devaluation of the Venezuelan Bolivar, the local currency in which all employees are paid.

Other operating expense

Other operating expense decreased $29,383 thousand, or 43.6%, from $67,347 thousand for the year ended December 31, 2015 to $37,964 thousand for the year ended December 31, 2016, primarily due to significantly reduced operations at FerroVen, S.A. as well as the devaluation of the Venezuelan Bolivar, the local currency in which most local suppliers are paid in. Additionally, due diligence and development expenses decreased due to the decision not to continue with the FerroQuébec, Inc. project in late 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $9,674 thousand, or 43.0%, from $22,492 thousand for the year ended December 31, 2015 to $12,818 thousand for the year ended December 31, 2016, primarily due to the decrease in the depreciation of fixed assets at FerroVen, S.A as FerroVen, S.A. fully impaired its fixed assets at June 30, 2016, when the decision was made to idle the facility, as well as full impairment of fixed assets at MangShi at December 31, 2015. The decrease was offset by the inclusion of a full year of Globe depreciation and amortization charges, operating allowances and write-downs in 2016 as compared to the inclusion of only eight days of Globe depreciation and amortization charges, operating allowances and write-downs in 2015.

Effect of Inflation

Management believes that the impact of inflation was not material to Ferroglobe's results of operations in the years ended December 31, 2017, 2016 and 2015, although we experienced the impact of Venezuelan inflation in 2017, 2016 and 2015 on FerroVen, S.A.'s production costs in these years, which resulted in a loss of competitiveness.

Cyclical Nature of the Industry and Movement in Market Prices, Raw Materials and Input Costs

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets from late 2014 to late 2017. The weakened economic environment adversely affected our profitability for the year ended December 31, 2016, with a particularly pronounced effect on the profitability of our European business over such period.

B. Liquidity and Capital Resources

Sources of Liquidity

Ferroglobe's primary sources of long-term liquidity are its Senior Notes with a $350,000 thousand aggregate principal at an interest rate of 9.375%, due on March 1, 2022, a multicurrency Amended Revolving Credit Facility with an aggregate principal amount of $200,000 thousand maturing on August 20, 2018 (nil drawn down as of December 31, 2017). Ferroglobe's short-term liquidity is sustained by the Company's non-recourse accounts receivable arrangement which provides up to $250,000 thousand of upfront cash consideration (approximately

$166,525 thousand as of December 31, 2017) as well as the Company's cash flows from operations.

Ferroglobe's primary short-term liquidity needs are to fund its capital expenditure commitments and operational needs and service its existing debt. Ferroglobe's long-term liquidity needs primarily relate to debt repayment. Ferroglobe's core objective with respect to capital management is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe's growth.

For the year ended December 31, 2017, operating activities generated $150,375 thousand in cash, compared to $129,169 thousand in 2016 and $145,449 thousand in 2015. Investing activities used a total of $74,818 thousand of cash in 2017, compared to $84,281 thousand in 2016 and $17,966 thousand in 2015. Financing activities resulted in a total outflow of $113,397 thousand in cash in 2017, compared to an inflow of $49,917 thousand in 2016 and an outflow of $87,593 thousand in 2015. See ''Cash Flow Analysis'' below for additional information.

As of December 31, 2017, 2016 and 2015, Ferroglobe had cash and cash equivalents of $184,472 thousand, $196,982 thousand (inclusive of $51 thousand of cash and cash equivalents in assets held for sale), and $116,666 thousand, respectively. Cash and cash equivalents are held primarily held in U.S. Dollars and Euro.

As of December 31, 2017, Ferroglobe's total gross financial debt was $571,337 thousand, compared to $514,587 thousand as of December 31, 2016. As of December 31, 2017, gross financial debt was comprised of debt instruments of $350,270 thousand as of December 31, 2017 (nil in 2016), bank borrowings of $1,003 thousand ($421,291 in 2016), $82,633 thousand of finance leases ($86,620 thousand in 2016), and other financial liabilities of $137,431 thousand ($93,635 thousand in 2016).

Working Capital Position

Taking into account generally expected market conditions, Ferroglobe anticipates that cash flow generated from operations will be sufficient to fund its operations, including its working capital requirements, and to make the required principal and interest payments on its indebtedness during the next 12 months.

As of December 31, 2017, Ferroglobe's current assets totaled $691,291 thousand while current liabilities totaled $450,196 thousand, resulting in a positive working capital position of $241,095 thousand.

Capital Expenditures

Ferroglobe incurs capital expenditures in connection with expansion and productivity improvements, production plants maintenance and research and development projects. Capital expenditures are funded through cash generated from operations and financing activities. Ferroglobe's capital expenditures for the years ended December 31, 2017, 2016 and 2015 were $74,616 thousand, $71,119 thousand and $68,521 thousand, respectively. Principal capital expenditures during these periods were primarily for maintenance and improvement works at Ferroglobe's plants and mines. We expect our capital expenditures for 2018 to equal approximately $92,000 thousand, excluding any capital expenditures related to our solar grade silicon project. We believe we have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgy facilities. Additionally, we have committed to incur approximately €51,000 thousand of capital expenditures in connection with our solar grade silicon joint venture as part of an initial phase over the next two years, on top of capital expenditures of €21 million incurred in

prior years. While we would expect to commit to further amounts in connection with this joint venture in the future if the project continues to subsequent phases, which is subject to agreement and approval with our joint venture partners, we have not yet committed to any expenditures with respect to further phases. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by a loan obtained from the Spanish Ministry of Industry and Energy. See ''Item 4.B. — Information on the Company — Business Overview — Research and Development (R&D) — Solar grade silicon'' and ''Item 7.B. — Major Shareholders and Related Party Transactions — Related Party Transactions.'' See also ''— Tabular Disclosure of Contractual Obligations'' for disclosure regarding future committed capital expenditures.

Cash Flow Analysis — Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2017 and 2016:

	Year ended December 31,	
($ thousands)	2017	2016
Cash and cash equivalents at beginning of period	196,982	116,666
Cash flows from operating activities	150,375	121,169
Cash flows from investing activities	(74,818)	(84,281)
Cash flows from financing activities	(113,397)	49,917
Exchange differences on cash and cash equivalents in foreign currencies	25,330	(6,489)
Cash and cash equivalents at end of period	184,472	196,982
Cash and cash equivalents at end of period from statement of financial position	184,472	196,931
Cash and cash equivalents at end of period included within assets and disposal groups classified as held for sale	—	51

Ferroglobe did not pay dividends during the year ended December 31, 2017 and paid $54,988 thousand of dividends for the year ended December 31, 2016.

Cash flows from operating activities

Cash flows from operating activities increased $29,206 thousand, from $121,169 thousand for the year ended December 31, 2016, to $150,375 thousand for the year ended December 31, 2017. The increase was due to a decrease in trade receivables of $50,168 thousand, primarily related to our accounts receivable securitization program established in 2017, an increase in accounts payable of $17,613 thousand, offset by an increase in inventories of $16,274 thousand.

Other payments increased $44,888 thousand, primarily related to an increase of $78,727 thousand of payments to our SPV associated with the securitization program in 2017, offset by the $32,500 thousand settlement payment in 2016 in connection with the litigation related to the Business Combination.

Income taxes paid increased $15,831 thousand while interest increased $9,662 thousand due to the debt instrument established in February 2018.

Cash flows from investing activities

Cash flows from investing activities decreased $9,463 thousand from an outflow of $84,281 thousand for the year ended December 31, 2016 to an outflow of $74,818 thousand for the year ended December 31, 2017, primarily due to $9,807 thousand of payments associated with investments in other non-current financial assets primarily related to contributions to Blue Power, a party to the Company's Solar joint venture with Aurinka in 2016 (compared to investments in other non-current financial assets of $343 thousand in 2017). Capital expenditures for the year ended December 31, 2017 were $74,616 thousand compared to $71,119 thousand in 2016.

Cash flows from financing activities

Cash flows from financing activities decreased $163,314 thousand from an inflow of $49,917 thousand for the year ended December 31, 2016 to an outflow of $113,397 thousand for the year ended December 31, 2017. This was primarily driven by the issuance of Senior Notes with a $350,000 thousand principal, for which the proceeds were used primarily to repay existing indebtedness, including borrowings to finance investments and certain credit facilities and other loans. This was partly offset by a $54,988 thousand dividend payment to shareholders in 2016 (nil in 2017).

Cash Flow Analysis — Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2016 and 2015:

	Year ended December 31,	
($ thousands)	2016	2015
Cash and cash equivalents at beginning of period	116,666	48,651
Cash flows from operating activities	121,169	145,449
Cash flows from investing activities	(84,281)	17,966
Cash flows from financing activities	49,917	(87,593)
Exchange differences on cash and cash equivalents in foreign currencies	(6,489)	(7,807)
Cash and cash equivalents at end of period	196,982	116,666
Cash and cash equivalents at end of period from statement of financial position	196,931	116,666
Cash and cash equivalents at end of period included within assets and disposal groups classified as held for sale	51	—

The following table sets forth the dividends paid by Ferroglobe for the years ended December 31, 2016, and 2015:

	Year ended December 31,	
($ thousands)	2016	2015
Cash dividends	54,988	21,479

Cash flows from operating activities

Cash flows from operating activities decreased by $24,281 thousand, from $145,449 thousand for the year ended December 31, 2015, to $121,169 thousand for the year ended December 31, 2016. The decrease was due to a decrease in inventories of $108,207 thousand, a decrease in trade receivables of $56,297 thousand and an increase in accounts payable of $28,572 thousand as compared to the prior year period as a result of various working capital initiatives. This was offset by the $32,500 thousand settlement payment in connection with the litigation related to the Business Combination that was paid during the year ended December 31, 2016 and lower profits from operations as compared to the prior year period.

Cash flows from investing activities

Cash flows from investing activities decreased by $102,247 thousand from an inflow of $17,966 thousand for the year ended December 31, 2015 to an outflow of $84,281 thousand for the year ended December 31, 2016. The decrease is primarily attributable to a cash inflow of $77,709 thousand, which represents the cash and cash equivalents balance of Globe on the date of the Business Combination in 2015. In addition, capital expenditures increased as a result of including the full twelve months of Globe's capital expenditure of $27,577 thousand during 2016, which was offset by an overall reduction in capital expenditures on a pro-forma basis reflecting the market conditions during 2016.

Cash flows from financing activities

Cash flows from financing activities increased by $137,510 thousand from an outflow of $87,593 thousand for the year ended December 31, 2015 to an inflow of $49,917 thousand for the year ended December 31, 2016. The increase is mainly attributable to $118,945 thousand of net bank borrowings during the year ended December 31, 2016 compared to $55,390 thousand of net bank payments during the year ended December 31, 2015. The increase in net bank borrowings compared to the prior year period was to meet liquidity needs as a result of lower profits from operations. This was partly offset by a $33,509 thousand increase in cash dividends paid to shareholders during the year ended December 31, 2016.

Capital resources

Ferroglobe's core objective is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe's growth. In addition to cash flows from continuing operations, the Company's main sources of capital resources are its Senior Notes with an aggregate principal value of $350,000 thousand and a multicurrency Amended Revolving Credit Facility with an aggregate principal amount of $200,000 thousand.

Payments of dividends, distributions and advances by Ferroglobe's subsidiaries will be contingent upon their earnings and business considerations and may be limited by legal, regulatory and contractual restrictions. For instance, the repatriation of dividends from Ferroglobe's Venezuelan and Argentinean subsidiaries have been subject to certain restrictions and there is no assurance that further restrictions will not be imposed. Additionally, Ferroglobe's right to receive any assets of its subsidiaries as an equity holder of such subsidiaries, upon their liquidation or reorganization, will be effectively subordinated to the claims of such subsidiaries' creditors, including trade creditors.

The Company's debt instrument and multicurrency revolving credit facility contain certain financial covenants. Details and description of Ferroglobe's debt instrument and multicurrency revolving credit facility are described in Notes 16 and 18 of the Consolidated Financial Statements.

C. Research and Development, Patents and Licenses, etc.

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2017, 2016 and 2015, Ferroglobe spent $4.5 million, $6.2 million and $11.1 million, respectively, on research and development projects and activities.

For additional information see ''Item 4.B. — Information on the Company — Business Overview — Research and Development (R&D)''.

D. Trend Information

We discuss in Item 5.A. above and elsewhere in this annual report, trends, uncertainties, demands, commitments or events for the year ended December 31, 2017 that we believe are reasonably likely to have a material adverse effect on our revenues, income, profitability, liquidity or capital resources or to cause the disclosed financial information not to be necessarily indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

We do not have any outstanding off-balance sheet arrangements.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth Ferroglobe's contractual obligations and commercial commitments with definitive payment terms that will require significant cash outlays in the future, as of December 31, 2017.

		Payments Due by Period,			
($ thousands)	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Long-term debt obligations	497,657	32,813	65,625	399,219	—
Capital expenditures	5,533	5,533	—	—	—
Finance leases	82,633	12,920	27,910	41,803	—
Power purchase commitments[1]	22,415	22,415	—	—	—
Purchase obligations[2]	28,467	28,076	181	210	—
Operating lease obligations	12,707	2,361	3,765	2,792	3,789
Total	**649,412**	**104,118**	**97,481**	**444,024**	**3,789**

(1) Represents minimum charges that are enforceable and legally binding, and do not represent total anticipated purchases. Minimum charges requirements expire after providing one year notice of contract cancellation.

(2) The Company has outstanding purchase obligations with suppliers for raw materials in the normal course of business. The disclosed purchase obligation amount represents commitments to suppliers that are enforceable and legally binding and do not represent total anticipated purchases of raw materials in the future.

The table above also excludes certain other obligations reflected in our consolidated balance sheet, including estimated funding for pension obligations, for which the timing of payments may vary based on changes in the fair value of pension plan assets and actuarial assumptions. We

expect to contribute approximately $1,119 thousand to our pension plans for the year ended December 31, 2018.

G. Safe Harbor

This annual report contains forward-looking statements within the meaning of Section 27A of the U.S. Securities Act and Section 21E of the U.S. Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See ‘‘Cautionary Statements Regarding Forward-Looking Statements.’’

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Ferroglobe operates in an international and cyclical industry which exposes it to a variety of financial risks such as currency risk, liquidity risk, interest rate risk, credit risk and risks relating to the price of finished goods, raw materials and power.

The Company's management model aims to minimize the potential adverse impact of such risks upon the Company's financial performance. Risk is managed by the Company's executive management, supported by the Risk Management, Treasury and Finance functions. The risk management process includes identifying and evaluating financial risks in conjunction with the Company's operations and quantifying them by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity. Ferroglobe does not speculatively enter into or trade derivatives.

Market risk

Market risk is the risk that the Company's future cash flows or the fair value of its financial instruments will fluctuate because of changes in market prices. The primary market risks to which the Company is exposed comprise foreign currency risk, interest rate risk and risks related to prices of finished goods, raw materials (principally coal and manganese ore) and power.

Foreign exchange rate risk

Ferroglobe generates sales revenue and incurs operating costs in various currencies. The prices of finished goods are to a large extent determined in international markets, primarily in US dollars and Euros. Foreign currency risk is partly mitigated by the generation of sales revenue, the purchase of raw materials and other operating costs being denominated in the same currencies. Although it has done so on occasions in the past, and may decide to do so in the future, the Company does not generally enter into foreign currency derivatives in relation to its operating cash flows.

Foreign currency swaps in relation to trade receivables and trade payables

The proportion of foreign currency accounts receivable and accounts payable for which foreign currency swaps had been arranged were as follows at December 31:

	2017	2016
Percentage of accounts receivable in foreign currencies for which currency swaps have been arranged	—%	13.7%
Percentage of accounts payable in foreign currencies for which currency swaps have been arranged	—%	2.5%

At December 31, 2017, the Company has no foreign currency swaps in place in respect of foreign currency accounts receivable and accounts payable. The fair value of outstanding foreign currency swaps at December 31, 2016, was €(0.8) million.

The sensitivity of the Company's profit or loss to the impact of changes in the foreign exchange rates on its foreign currency swaps is as follows:

Sensitivity to the EUR/USD exchange rate	2017	2016
+10% (appreciation of the Euro)	—	2.5
−10% (depreciation of the Euro)	—	(2.5)

Notes and cross currency swap

In February 2017, the Company completed a restructuring of its finances which included the issue of $350,000 thousand 9.375% senior notes due 2022 and the repayment of certain existing indebtedness denominated in a number of currencies across its subsidiaries. The Company is exposed to foreign exchange risk as the interest and principal of the Notes is payable in US dollars, whereas its operations principally generate a combination of US dollar and Euro cash flows. Following approval by the Board, the Company entered into a cross-currency interest rate swap (the ''CCS'') to exchange 55% of the principal and interest payments due in US dollars for principal and interest payments in Euros. Under the CCS, on a semi-annual basis the Company will receive interest of 9.375% on a notional of $192,500 thousand and pay interest of 8.062% on a notional of €176,638 thousand and it will exchange these Euro and US dollar notional amounts at maturity of the Notes in 2022. The timing of payments of interest and principal under the CCS coincide exactly with those of the Notes. The fair value of the CCS at December 31, 2017 was a liability of $33,648 thousand.

The Parent Company, which has a Euro functional currency, has designated $150,000 thousand of the notional amount of the CCS as a cash flow hedge of the variability of the Euro functional currency equivalents of the future US dollar cash flows of $150,000 thousand of the principal amount of the Notes. The remaining $42,500 thousand of the notional amount of the CCS is not designated as a cash flow hedge and is accounted for at fair value through profit or loss. The Company has performed a sensitivity analysis that indicates that if the Euro was to strengthen (weaken) against the US Dollar by 10% it would record a loss (gain) of $5,831 thousand in respect of the portion of the CCS accounted for at fair value through profit or loss.

Interest rate risk

Ferroglobe is exposed to interest rate risk in respect of its financial liabilities that bear interest at floating rates. These primarily comprise credit facilities and obligations under finance leases related to hydroelectrical installations.

At December 31, the Company's interest-bearing financial liabilities were as follows:

	2017		
	Fixed rate US$'000	Floating rate US$'000	Total US$'000
Bank borrowings	—	1,003	1,003
Obligations under finance leases	—	82,633	82,633
Debt instruments	350,270	—	350,270
Other financial liabilities(*)	86,238	13,153	99,391
	436,508	**96,789**	**533,297**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

	2016		
	Fixed rate US$'000	Floating rate US$'000	Total US$'000
Bank borrowings	—	421,291	421,291
Obligations under finance leases(*)	—	5,237	5,237
Debt instruments	—	—	—
Other financial liabilities(**)	75,797	11,563	87,360
	75,797	**438,091**	**513,888**

(*) At December 31, 2016, obligations under finances leases of $81,383 thousand relating to the Spanish energy business were separately presented in the statement of financial position as part of a disposal group held for sale.

(**) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

The Company's finance leases related to its Spanish hydroelectrical installations bear interest at a floating rate tied to EURIBOR. Prior to the Business Combination, the Company entered into interest rate swaps to fix the interest payable in respect of these lease obligations. During the year ended December 31, 2017, the Company did not enter into any new interest rate derivatives. The market value of the Company's interest rate swap derivatives at December 31, 2017 was $4,392 thousand, compared to $6,275 thousand at December 31, 2016.

In respect of the above financial liabilities, at December 31, 2017, the Company had floating to fixed interest rate swaps in place covering 83% of its exposure to floating interest rates (2016: 3%). The increase in the proportion of floating rate financial liabilities covered by interest rate swaps reflects that in February 2017 the Company completed a comprehensive refinancing, replacing floating rate debt with fixed rate debt, and that at December 31, 2016, the Company's obligations under finance leases related to the Spanish energy business and related interest rate swaps were separately classified on the balance sheet as part of a disposal group held for sale.

At December 31, 2017, given that the majority of the Company's interest-bearing financial liabilities are at fixed interest rates and that the Company has interest rate swaps in place in respect of substantially all of its obligations under finance leases, management do not consider that there are reasonably possible changes in interest rates that would have a material impact on the Company's profitability.

At December 31, 2016, the Company performed a sensitivity analysis for floating rate financial liabilities that, taking into consideration the refinancing that occurred in February 2017, indicated that an increase of 1% in interest rates would have given rise to additional borrowing costs of $1.8 million in 2017.

Credit risk

Credit risk refers to the risk that a customer or counterparty will default on its contractual obligations resulting in financial loss. The Company's main credit risk exposure relates to the following financial assets:

- trade and other receivables; and
- loans and receivables (other financial assets) arising from the Company's accounts receivable securitization program.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. The Company has established policies, procedures and controls relating to customer credit risk management. Ongoing credit evaluation is performed on the financial condition

of accounts receivable and, where appropriate, the Company insures its trade receivables with reputable credit insurance companies.

Since August 2017, the Company has sold substantially all of the trade receivables generated by its subsidiaries in the U.S., Canada, Spain and France to an accounts receivable securitization program. This has enabled it to monetize these assets earlier than it did previously and significantly reduce working capital.

Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations as they fall due. The Company's main sources of financing are as follows:

- $350,000 thousand 9.375% senior notes due 2022. The proceeds from the Notes, issued by Ferroglobe and Globe in February 2017, were primarily used to repay certain existing indebtedness of the Parent Company and its subsidiaries. Interest is payable semi-annually on March 1 and September 1 of each year. If Ferroglobe experiences a change of control, the Company is required to offer to redeem the Notes at 101% of their principal amount.
- $200,000 thousand Amended Revolving Credit Facility. Loans under the Amended Revolving Credit Facility may be borrowed, repaid and reborrowed until the maturity of the facility in August 2018. Borrowings are available to be used to provide for the working capital and general corporate requirements of the Parent Company and its subsidiaries (including permitted acquisitions and permitted capital expenditures). At December 31, 2017 the full amount of the facility was available for drawdown. Subsequent to year-end, the facility was replaced by a new $250,000 thousand revolving credit facility maturing in February 2021.
- Hydroelectric finance lease. In May 2012, the Company entered into a sale and leaseback agreement with respect to certain hydroelectric assets in Spain. The lease payments are due in 120 installments from May 2012 to maturity in May 2022.

To ensure that there are sufficient funds available for the Company to repay its financial obligations as they fall due, each year the Company's Financial Planning and Analysis department prepares a financial budget that is approved by the Board of Directors and details all financing needs and how such financing will be provided. The budget projects the funds necessary for the most significant cash requirements, such as prepayments for capital expenditures, debt repayments and, where applicable, working capital requirements.