

PART I

Item 1. Identity of Directors, Senior Management and Advisors

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

3A. [Reserved]

3B. Capitalization and Indebtedness

Not applicable.

3C. Reasons for the Offer and Use of Proceeds

Not applicable.

3D. Risk Factors

An investment in the ADSs or our common shares involves a high degree of risk. You should carefully consider the risks described below before making an investment decision. Our business, financial condition and results of operations could be materially and adversely affected by any of these risks. The trading price of the ADSs could decline due to any of these risks or other factors, and you may lose all or part of your investment.

For purposes of this section, when we state that a risk, uncertainty or problem may, could or will have an “adverse effect” on us or “adversely affect” us, we mean that the risk, uncertainty or problem could have an adverse effect on our business, financial condition, results of operations, cash flow, prospects and/or the trading price of the ADSs, except as otherwise indicated. The risks described below are those that we currently believe may materially and adversely affect us.

Risks Relating to Brazil

The Brazilian government has exercised, and continues to exercise, significant influence over the Brazilian economy and such involvement, along with general political and macroeconomic conditions, could adversely affect us.

The Brazilian government has frequently intervened in the Brazilian economy and occasionally made changes in policy and regulations. The Brazilian government’s actions to control inflation and affect policies and regulations have often involved, among other measures, increases in interest rates, changes in tax and social security policies, price controls, currency exchange and remittance controls, devaluations, capital controls and limits on imports. We may be adversely affected by changes in policy or regulations at the federal, state or municipal level involving or affecting the following factors, among others:

- interest rates;
- exchange controls;
- currency fluctuations;
- inflation;
- price volatility of raw materials and our final products;
- lack of infrastructure in Brazil;
- energy and water supply shortages and rationing programs;
- liquidity of the domestic capital and lending markets;
- regulatory policy for the mining, steel, cement, logistics and energy industries;
- environmental policies and regulations;

- tax policies and regulations, including frequent changes that may result in uncertainties regarding future taxation; and
- other political, social and macroeconomic developments in or affecting Brazil.

Uncertainty over whether the Brazilian government will implement changes in policy or regulation affecting these or other factors may contribute to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets and securities issued by Brazilian companies, including our common shares and the ADSs that represent them.

According to the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*), or the IBGE, Brazil's gross domestic product, or GDP, sharply contracted by 4.1% in 2020 due to global effects of developments relating to the COVID-19 pandemic and grew by 4.6% and 2.9% in 2021 and 2022, respectively. Developments in the Brazilian economy may affect Brazil's growth rates and, consequently, demand for our products, and we have been, and will continue to be, affected by changes in the Brazilian GDP.

Political instability may adversely affect us.

Brazilian markets experienced heightened volatility in the last decade due to uncertainties deriving from ongoing investigations relating to unlawful payments, as part of which numerous members of the Brazilian government, as well as senior officers of large state-owned and private companies have been convicted of political corruption of officials accepting bribes by means of kickbacks on contracts granted by the government to infrastructure, oil and gas and construction companies.

The ultimate outcome of these investigations remains uncertain, but these investigations have had an adverse impact on the image and reputation of the implicated companies, as well as on the general market perception of the Brazilian economy.

In October 2022, Brazil held elections for President, senators, federal deputies and state deputies. Former President Luiz Inácio Lula da Silva won the election. Uncertainty regarding political developments and the policies the Brazilian federal government may adopt or alter may have material adverse effects on the macroeconomic environment in Brazil, as well as on businesses operating in Brazil, including ours.

Exchange rate instability may adversely affect us and the market price of our common shares and the ADSs.

The Brazilian currency has, during the last decade, experienced frequent and substantial variations compared to the U.S. dollar and other foreign currencies. In 2020 and 2021, the *real* depreciated against the U.S. dollar and the U.S. dollar selling rate was R\$5.1967 per US\$1.00 as of December 31, 2020 and R\$5.5805 per US\$1.00 as of December 31, 2021, as reported by the Brazilian Central Bank. In 2022, the *real* appreciated against the U.S. dollar and the U.S. dollar selling rate was R\$5.2177 per US\$1.00 as of December 31, 2022.

Depreciation of the *real* against the U.S. dollar creates inflationary pressures in Brazil and causes increases in interest rates, which adversely affect the growth of the Brazilian economy as a whole, curtail access to foreign financial markets and may prompt government intervention, including recessionary governmental policies. Depreciation of the *real* against the U.S. dollar may also, in the context of an economic slowdown, lead to decreased consumer spending, deflationary pressures and reduced growth of the Brazilian economy.

On the other hand, appreciation of the *real* relative to the U.S. dollar and other foreign currencies could lead to a deterioration of the Brazilian foreign exchange current accounts, as well as dampen export-driven growth. Depending on the circumstances, either depreciation or appreciation of the *real* could materially affect our growth and that of the Brazilian economy, as well as impact the U.S. dollar value of distributions and dividends on, and the U.S. dollar equivalent of the market price of, our common shares and the ADSs.

In the event the *real* depreciates in relation to the U.S. dollar, the cost in *reais* of our foreign currency-denominated borrowings and imports of raw materials, particularly coal and coke, will increase. On the other hand, if the *real* appreciates in relation to the U.S. dollar, it will cause *real*-denominated production costs to increase as a percentage of total production costs and cause our exports to be less competitive. We have a total U.S. dollar-denominated or U.S. dollar-linked indebtedness of R\$25,026 million, which represents 60.4% of our total indebtedness, as of December 31, 2022.

Government efforts to combat inflation may hinder the growth of the Brazilian economy and could harm us.

Historically, Brazil has experienced high inflation rates. Inflation and certain actions taken by the Central Bank to curb it have had significant negative effects on the Brazilian economy. Inflation as measured by the national broad consumer price index (*Índice Nacional de Preços ao Consumidor Amplo*), or IPCA, was 4.5%, 10.1% and 5.8% in 2020, 2021 and 2022, respectively, and 23.1%, 23.1% and 17.8%, respectively, as measured by the general market price index (*Índice Geral de Preços do Mercado*), or IGP-M.

The base interest rate for the Brazilian banking system is the Central Bank's Special System for Settlement and Custody (*Sistema Especial de Liquidação e Custódia*) rate, or SELIC rate. The SELIC rate was repeatedly lowered from the October 2016 rate of 14.25% to 2.00% in August 2020 and has since steadily increased. As of December 31, 2020, 2021 and 2022, the SELIC rate was 2.0%, 9.25% and 13.75%, respectively. As of the date of this annual report, the SELIC rate remains 13.75%.

Inflation and the Brazilian government's measures to address it, principally the Central Bank's monetary policy, have had and may have significant effects on the Brazilian economy and us. Tight monetary policies with high interest rates have restricted and may restrict Brazil's growth and the availability of credit. Conversely, more lenient government and Central Bank policies and interest rate decreases have triggered and may trigger increases in inflation, and, consequently, growth volatility and the need for sudden and significant interest rate increases, which could negatively affect us and increase the payments on our indebtedness.

Developments and the perception of risk in other countries, especially other emerging market countries, may adversely affect the trading price of Brazilian securities, including our common shares and the ADSs.

The market value of securities of Brazilian issuers is affected by economic and market conditions in other countries, especially other emerging market countries. Although economic conditions in these countries may differ significantly from economic conditions in Brazil, investors' reactions to developments in these other countries may have an adverse effect on the market value of securities of Brazilian issuers. Crises in the United States, the European Union or emerging market countries may diminish investor interest in securities of Brazilian issuers, including ours. This could adversely affect the trading price of our common shares and/or the ADSs, and could also make it more difficult for us to gain access to the capital markets and finance our operations on acceptable terms, or at all.

Further, crises in world financial markets, such as in 2020 and the banking crisis in early 2023, as well as global economic challenges that persist as of the date of this annual report, could affect investors' views of securities issued by companies that operate in emerging markets. These developments could adversely affect the trading price of our common shares and the ADSs, and could also make it more difficult for us to access the capital markets and finance our operations on acceptable terms, or at all.

Developments since early 2022 relating to Russia's conflict with Ukraine and the developments in early 2023 relating to global financial institutions have generated uncertainty in global markets, and U.S. and European stock markets have seen increased price volatility. We cannot predict how these developments will evolve and whether or to what extent they may affect Brazilian capital markets and, consequently, us.

Risks Relating to Us and the Industries in Which We Operate

We are exposed to substantial changes in the demand for steel and iron ore, which significantly affect the prices of our products and may adversely affect us.

The steel and mining industries are highly cyclical, both in Brazil and abroad. The demand for steel and mining products and, thus, the financial condition and results of operations of companies in these industries, including us, are generally affected by macroeconomic fluctuations in the world economy and the economies of steel-producing countries, including trends in the automotive, construction, home appliances and packaging industries, as well as other industries that rely on steel distributors. A worldwide recession, an extended period of below-trend growth in developed countries or a slowdown in the emerging markets that are large consumers of our products (such as the domestic Brazilian market for our steel products and the Chinese market for iron ore) could sharply reduce demand for our products. In addition, flat steel competes with other materials that may be used as substitutes, such as aluminum (particularly in the automotive and packaging industry), cement, composites, glass, plastic and wood. Government regulatory initiatives mandating the use of such materials in lieu of steel, whether for environmental or other reasons, as well as the development of other new substitutes for steel products, could also significantly reduce market prices and demand for steel products and thereby reduce our cash flow and profitability. Any material decrease in demand or increase in supply for steel and iron ore in the domestic or export markets served by us could have a material adverse effect on us.

Prices charged for iron ore are subject to volatility. International iron ore prices may decrease significantly and materially and adversely affect us or require us to suspend certain of our projects and operations.

Our iron ore prices are based on a variety of pricing terms, which generally use market price indices as a basis for determining customer prices. Our prices for and revenues from iron ore are consequently volatile, which may adversely affect us. In the first quarter of 2023, average iron ore prices decreased 11.4% to US\$125.5/dmt, from US\$141.6/dmt in the same period of 2022. In 2022, average iron ore prices decreased 24.6% to US\$120.2/dmt, from US\$159.5/dmt in 2021, in each case according to the average Platts iron ore index (62% Fe CFR China). A decrease in market prices for iron ore may require us to change the way we operate or, depending on the magnitude of price decreases, even to suspend certain of our projects and operations and impair certain assets, which could adversely affect us.

Adverse economic conditions in China and an increase in global iron ore production capacity could materially and adversely affect us.

China has been the main driver of global demand for minerals and metals over the past years, effectively driving global prices for iron ore and steel. In 2022, China accounted for 73% of the global seaborne iron ore trade and 77% of our iron ore export sales were to the Asian market, mainly China. China is also the largest steel producer in the world, accounting for approximately 53% of the global steel production in 2022.

A contraction of China's economic growth could result in lower global demand for iron ore and steel and increase the global steel industry's over-capacity, which would materially and adversely affect companies in the industry, including us. Poor performance in the Chinese real estate sector and low investments in infrastructure, two of the largest markets for carbon steel in China, could also adversely affect us. As a result of fiscal and monetary stimuli to counter the effects of the COVID-19 pandemic, China's economic growth accelerated and its GDP increased 3.0% in 2022, as compared to 8.1% in 2021 and 2.3% in 2020. In December 2022, China began lifting its zero-COVID restrictions, which we expect to have a favorable impact on demand for, and consequently prices of, iron ore in 2023. However, we cannot assure that the Chinese government will not reimplement restrictions, which could materially and adversely affect market dynamics for our products and, consequently, us. In addition, developments relating to China's real estate market have affected and could further affect us.

In addition, the ramp-up of projects started in past years by major iron ore suppliers could affect seaborne iron ore prices and adversely affect us. Moreover, the recent upsurge in iron ore prices could also stimulate high-cost producers to resume operations, expanding our supply base, which may adversely affect us.

We are exposed to substantial changes in commodities prices, including oil prices, which significantly affect the prices of our inputs and the prices of our products, and may adversely affect us.

We are subject to volatility in international commodities prices. This volatility affects the prices of certain of our inputs, such as oil, and may therefore adversely affect our results of operations. In 2022, oil prices increased steeply, largely due to recent global developments relating to Russia's conflict with Ukraine. Because Russia is one of the world's largest oil exporters, we expect global developments relating to Russia's invasion of Ukraine, and resulting export restrictions, to result in a consistently decreased global supply and, consequently, higher fuel prices. International commodity price volatility may also affect the prices of our products, thereby having an impact on our pricing strategy, demand for our products and our results of operations.

We may not be able to adjust our mining production volume in a timely or cost-efficient manner in response to changes in demand.

Revenues from our mining business represented 42.1%, 37.7% and 28.2% of our total net revenues in 2020, 2021 and 2022, respectively. Operating at significant idle capacity during periods of weak demand may expose us to higher unit production costs since a significant portion of our cost structure is fixed in the short term due to the high capital intensity of mining operations. In addition, efforts to reduce costs during periods of weak demand could be limited by labor regulations or labor or government agreements.

Conversely, our ability to rapidly increase production capacity is limited, which could render us unable to fully satisfy demand for our iron ore. When demand exceeds our production capacity, we may meet excess customer demand by purchasing iron ore from unrelated parties and reselling it, which would increase our costs and narrow our operating margins. If we are unable to satisfy excess customer demand in this way, we may lose customers. In addition, operating close to full capacity may expose us to higher costs, including demurrage fees due to capacity restraints in our logistics systems.

A decrease in the availability or an increase in the price of raw materials for steel production, particularly coal and coke, may adversely affect us.

In 2022, raw material costs accounted for 70.0% of our total steel production costs. Our main raw materials include iron ore, coal, coke, limestone, dolomite, manganese, zinc, tin and aluminum. We depend on third parties for some of our raw material requirements, including importing all of the coal required to produce coke. In addition, we require significant amounts of energy, in the form of natural gas and electrical energy, to power our plants and equipment.

Any prolonged interruption in the supply of raw materials, natural gas or electrical energy, or substantial increases in their prices, could materially and adversely affect us. Interruptions and price increases could result from changes in laws or trade regulations, the availability and cost of transportation, suppliers' allocations to other purchasers, interruptions in production by suppliers and/or accidents or similar events on suppliers' premises or along the supply chain. Any inability to pass these cost increases onto our customers or to meet our customer demand because of scarcity of our key raw materials could also have a material and adverse effect on us.

Our steel products face significant competition, including price competition, from other domestic or foreign producers, which may adversely affect our profitability and market share.

The global steel industry is highly competitive with respect to price, product quality, customer service and technological advances permitting reduced production costs. Several factors influence Brazil's export of steel products, including protectionist policies of other countries, especially the United States, disputes regarding these policies before the World Trade Organization, the Brazilian government's exchange rate policy and the growth rate of the world economy. Further, continuous advances in materials sciences and technology have given rise to improvements in products such as plastics, aluminum, ceramics and glass, permitting them to serve as substitutes for steel. Due to high start-up costs, the economics of operating a steelworks facility on a continuous basis may encourage mill operators to maintain high levels of output, even in times of low demand, which results in oversupply and increases the pressure on industry profit margins. In addition, downward pressure on steel prices by our competitors may affect our profitability.

The steel industry has historically suffered from structural over-capacity which has worsened due to a substantial increase in production capacity in the developing world, particularly China and India, as well as other emerging markets. China is the largest global steel producer and, in addition, Chinese and certain steel exporting countries have favorable conditions (excess steel capacity, undervalued currency or higher market prices for steel in non-domestic markets), which can have a significant impact on steel prices in other markets. If we are not able to remain competitive in relation to competitors in China or other steel-producing countries, we may be adversely affected.

Steel companies in Brazil face strong competition from imported products, mainly as a result of the global excess in steel production, reduction in demand for steel products in mature markets, exchange rate appreciation and tax incentives in some of the main exporting countries. Despite Brazilian import duties to protect domestic producers, a substantial volume of steel products is imported. If the Brazilian government does not implement measures against subsidized steel imports and there is an increase in imports, we may be materially and adversely affected. Apart from direct steel imports, the Brazilian industry also faces competition from imported finished goods, which adversely affects the whole steel supply and production chain.

Protectionist and other measures adopted by foreign governments could adversely affect our export sales.

In response to increased production and steel exports from many countries, anti-dumping and countervailing duty and safeguard measures have been imposed by foreign governments representing the main markets for our exports. In 2021, the International Trade Commission, or ITC, initiated its five-year "sunset review" of the anti-dumping and countervailing duty orders for both hot-rolled and cold-rolled products. As a result of these reviews, the orders for both products were revoked in 2022. Additionally, in 2021, the European Commission initiated an anti-dumping investigation of electrolytic chromium coated steel (tin-free steel) products imported from Brazil and China. This investigation resulted in anti-dumping duties on the exports of tin-free steel from Brazil into the European Union. In 2022, the European Commission initiated its five-year "sunset review" of the anti-dumping duties on hot-rolled steel, which results are expected in the last quarter of 2023.

Since 2018, Brazil has been party to an agreement with the United States that established quotas for semi-finished steel products and quotas for finished steel products based on average exports. Any suspension or termination of this agreement may materially and adversely affect us. In 2021, the European Commission extended safeguard measures on imports of hot-rolled, cold-rolled, and tin mill products and maintained quotas for the next three years. In December 2022, the European Commission initiated a review process to determine whether such measures should be terminated one year earlier than planned.

For more information on protectionist measures, see “Item 4. Information on the Company--4B. Business Overview--Regulatory Matters--Protectionist Measures.” The imposition of these and other protectionist measures by foreign countries may materially and adversely affect our export sales.

Measures adopted by, or conflicts between, foreign governments could adversely affect us.

Recent global developments relating to Russia’s conflict with Ukraine have generated significant uncertainty in global commodities and financial markets, and the global steel market, among others, has shown indications of instability. Misalignment between supply and demand in the international steel market may adversely affect our pricing strategy, undermine our investment strategy and adversely affect us. Misalignment could result from, among other things, international embargoes between governments or suspended international steel production due to significant increases in the prices of raw materials or, in the case of certain companies, proximity to conflict zones.

Our activities depend on authorizations, concessions, licenses and permits, and changes in applicable laws, regulations or government measures could adversely affect us.

Our activities and the activities of our subsidiaries and joint ventures are subject to governmental authorizations, concessions, licenses and permits, which include environmental licenses, as well as water grants, for our infrastructure projects and concessions, including for the port terminals we operate and the railways in which we have an equity interest. We cannot guarantee that we will be able to maintain, renew or obtain any required authorization, concession, license or permit, or that no additional requirement will be imposed on us in connection with our requests.

Authorizations, concessions, licenses or permits required for the development of our activities may require that we meet certain performance thresholds or completion milestones. In case we are unable to meet these thresholds or milestones, we may lose or not be able to obtain or renew such authorizations, concessions, licenses or permits, or we may not be able to do so under the terms of new concession laws, claims for amicable contractual termination and subsequent re-bidding for concessions. We also cannot guarantee that we, our subsidiaries or our joint ventures that hold concessions will timely comply with our or their obligations under any relevant concession agreement or under conduct adjustment agreements (*Termos de Ajustamento de Conduta*), or TACs, entered into with governmental agencies. In addition, we are subject to supervision and penalties from governmental entities, including the Brazilian court of audit (*Tribunal de Contas da União*), or TCU, and regulatory agencies. A material breach of those obligations may result in the loss or early termination of concessions, authorizations, permits and/or licenses, the restriction of access to public financing for the concession or the amortization of public financing before a project begins to operate, or the acceleration of an event of default under our indebtedness. Additionally, we would be subject to penalties, including fines or the closure of facilities. In case of a takeover or concession agreement termination due to government default, if we are entitled to any indemnification from granting authorities for our investments, this indemnification may be insufficient to cover our costs, expenses or losses and may be paid long after the events affecting our concessions, licenses or permits occur, if at all.

In addition, changes in applicable laws or regulations could require modifications to our technologies and operations and unexpected capital expenditures. Capital expenditures that we have already made may not generate the returns we expected, if any.

After accidents involving the breaking of upstream mining dams operated by other mining companies in the cities of Mariana and Brumadinho in the state of Minas Gerais, the Brazilian National Mining Agency (*Agência Nacional de Mineração*), or the ANM, which is the regulatory agency under the Brazilian Ministry of Mines and Energy (*Ministério de Minas e Energia*), or the MME, of the Brazilian government, and Brazilian environmental regulatory authorities have applied more stringent environmental licensing requirements for mining project operations, specifically for dams.

The amount and timing of these and other environmental and related expenditures may vary substantially from those currently anticipated and we may encounter delays in obtaining environmental or other operating licenses, or not be able to obtain and/or renew them, which could subject us to civil, administrative or criminal liability and closure orders. Any of the above events, among others, may adversely affect us and our ability to obtain expected returns from our projects, and may render certain projects economically or otherwise unfeasible.

Further, new or more stringent environmental licensing requirements for our project operations, specifically for our dams, could be imposed on us. For additional information on mining regulations in Brazil, see “Item 4. Information on the Company—4B. Business Overview—Regulatory Matters—Mining Regulation.”

We have a high level of indebtedness that could make it more difficult or expensive to refinance our maturing debt and/or incur new debt.

As of December 31, 2022, our total debt outstanding was R\$41,441 million, comprising R\$5,270 million of short-term debt and R\$36,171 million of long-term debt. We had R\$11,991 million in cash and cash equivalents as of December 31, 2022. Our planned investments across our business segments will require a significant amount of cash over the course of 2023 and following years. See “Item 4. Information on the Company—4B. Business Overview—Investments and Divestitures—Acquisition Activity.”

Our level of indebtedness could affect our credit rating and our ability to obtain any necessary financing in the future and may increase our cost of borrowing. In addition, our level of indebtedness could make it more difficult to refinance our existing indebtedness and could make us more vulnerable in the event of a downturn in our business. In these and other circumstances, servicing our indebtedness may use a substantial portion of our cash flow from operations, which could adversely affect us and make it more difficult for us to make payments of dividends and other distributions to our shareholders, including the holders of ADSs, as well as to fund our operations, working capital and capital expenditures necessary for the maintenance and expansion of our business activities.

Our ability to refinance our indebtedness maturing in 2023 and 2024 is subject to market conditions and creditor approvals. In the event conditions are not favorable or approvals are not obtained, we will be required to make significant payments in the next 24 months under our financings, which would adversely affect our financial and cash position and may result in downgrades in our credit ratings.

We cannot assure you that our credit ratings will not be lowered, suspended or withdrawn by the rating agencies.

Our credit ratings are limited in scope, and do not address all material risks relating to an investment in our common shares or the ADSs, but rather reflect only the views of the rating agencies at the time the ratings are issued. These ratings may affect the cost and other terms upon which we are able to obtain funding and are subject to change due to factors specific to us, trends in the industries we operate in or trends in the credit and capital markets generally. As of the date of this annual report, our Fitch, Moody’s and S&P credit ratings are BB with a positive outlook, Ba2 with a stable outlook and BB with a positive outlook, respectively.

Credit rating agencies regularly evaluate us and their ratings are based on a number of factors, including our financial strength. We cannot assure you that credit rating agencies will not downgrade our credit ratings or that credit ratings will remain in effect for any given period of time or not be withdrawn entirely by the rating agencies, if in their judgment circumstances so warrant. Any lowering, suspension or withdrawal of our credit ratings may have an adverse effect on us and our ability to refinance our existing indebtedness.

Accidents or malfunctioning equipment on our premises, railways or ports may decrease or interrupt production, internal logistics or distribution of our products and adversely affect us.

The steel and iron ore production processes depend on certain critical equipment, such as blast furnaces, steel converters, continuous casting machines, rolling mills, drillers, reclaimers, conveyor belts, crushing and screening equipment and ship loaders, as well as on internal logistics and distribution channels, such as seaports and railways. This equipment and infrastructure may be affected in the case of malfunction or damage. Any significant interruptions in our production process, internal logistics or distribution channels (including our ports and railways) could materially and adversely affect us.

In addition, our operations involve the use, handling, storage, and discharge and disposal into the environment of hazardous substances. Our mining, steel and cement businesses are generally subject to significant risks and hazards, including fire, explosions, toxic gas leaks, spilling of polluting substances or other hazardous materials, rockfall incidents in mining operations and incidents involving mobile equipment or machinery and accidents involving our dams. Such events could occur by accident or by breach of operating and maintenance standards, and could result in a significant environmental impact, damage to or destruction of our mineral properties and/or production facilities, personal injury or death, delays or suspensions in production, monetary losses and exposure to civil responsibilities, administrative penalties, criminal sanctions and closure orders for non-compliance with these regulations. Our health, safety and environmental standards and risk management programs and procedures may be insufficient to prevent incidents or accidents that could adversely affect us.

Failures in or interruptions to our telecommunications, information technology systems or automated machinery could adversely affect us.

Our operations are heavily reliant on telecommunications, information technology systems and automated machinery. Disruptions to these systems, caused by obsolescence, technical failures or intentional acts, may adversely affect us. In addition, any failure in our systems related to confidential information, caused by external cyberattacks or internal actions, including negligence or misconduct of our employees, could adversely affect our reputation and our interactions with customers, competitors and other third parties, including governmental and regulatory bodies, suppliers and others, and may, among other things, expose us to fines and litigation.

Unauthorized access to or release or violation of our or our business partners' systems and data could materially and adversely affect us.

We are subject to a broad range of cyber threats, including attacks, with varying levels of sophistication. These cyber threats are related to the confidentiality, availability and integrity of our systems and data, including our customers' and business partners' confidential, classified or personal information. In addition, because we have access to certain information technology systems of certain of our business partners, our systems may be subject to attacks aimed at accessing, tampering with or exposing our business partners' systems and their data.

In addition, certain of our business partners, including our suppliers, have broad access to certain of our confidential and strategic information. Many of these business partners face similar security threats and any attacks on their systems could result in unauthorized access to our systems or data. Any unauthorized access to, or release or violation of our systems and data, whether directly or through cyberattacks or similar breaches affecting our business partners, could materially and adversely affect us, including subjecting us to regulatory scrutiny and fines.

Our insurance policies may not be sufficient to cover all our losses.

We maintain several types of insurance policies as part of our risk management for each of our businesses and seek to follow industry practice regarding best coverage, which encompasses domestic and international (import and export) cargo transportation (road, rail, sea or air), life insurance, personal accidents, health, automobile, directors and officers, general liability, CAR (construction and erection risks), trade credit insurance, surety, named perils, ports and terminal liabilities.

We also have an insurance policy covering the operational risks, material damages and loss of profits of the following operations and subsidiaries: Presidente Vargas Steelworks, CSN Mineração S.A., or CSN Mineração, and the container terminal Sepetiba Tecon S.A., or TECON.

The coverage obtained in our insurance policies may not be sufficient to cover all risks or the extent of the risks we are exposed to, which could expose us to significant costs. Additionally, we may not be able to successfully contract or renew our insurance policies or to do so on terms satisfactory to us. The occurrence of one or more of these events may adversely affect us.

Our projects are subject to risks that, if materialized, may result in increased costs and/or delays or that could prevent their timely or successful implementation.

We are investing to further increase our steel, mining and cement production capacity and/or efficiency, as well as our logistics capabilities. The success of these projects is subject to a number of risks that, if materialized, may adversely affect our growth prospects and profitability, including, among others:

- delays, availability issues or higher than expected costs in obtaining the necessary equipment, services and materials to build and operate a project;
- lack of infrastructure, including waste disposal areas and reliable power and water supply;
- environmental remediation costs;
- delays or higher than expected costs in obtaining or renewing required authorizations, concessions, licenses or permits and/or regulatory approvals, including related to environmental matters, to build or continue a project;
- changes in market conditions, laws or regulations that may result in material additional costs, which may render a project less profitable than expected or economically or otherwise unfeasible;
- service providers' inability to comply with certain legal duties under Brazilian law, including tax, labor and social security, for which we may become liable;
- breach by suppliers, contractors and service providers of their obligations with us; and
- disruptions in our logistics chain caused by third parties, contractual breaches, general operational or geotechnical issues.

Any one or a combination of the factors described above may materially and adversely affect our ability to successfully implement our strategy and, consequently, us.

We are subject to environmental, health and safety incidents and current, new or more stringent regulations may result in liability exposure and increased capital expenditures.

Our steel production, mining, cement, energy and logistics facilities are subject to a broad range of laws, regulations and permit requirements in the countries where we operate relating to the protection of the environment, health and safety.

Brazilian pollution standards are subject to change, including new effluent and air emission standards, water management and solid waste-handling regulations, wildlife maintenance regulations, restrictions on business expansions, native forest preservation requirements and the obligation to support the creation of an integral protection conservation unit, as privately owned conservation areas (*Reserva Particular do Patrimônio Natural*), or national parks, or areas of relevant ecological interest (*Área de Relevante Interesse Ecológico* - ARIE) as environmental compensation for industrial and mining expansion projects. The Brazilian government has adopted a decree under the national policy for climate change (*Política Nacional de Mudanças Climáticas*) that contemplates a reduction in carbon emissions for the mining, steel and cement industries and an action plan is under development by a technical committee comprising representatives from the government, industry associations and academia.

Our operations involve the use of natural resources, and are subject to significant risks and hazards, including fire, explosion, toxic gas leaks, spilling of polluting substances or other hazardous materials, rockfalls, incidents involving dams, failure of operational structures 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 significant environmental and social impacts, damage to or destruction of mineral properties or production facilities, personal injury, illness or death of employees, contractors or community members close to operations, environmental damage, delays in production, monetary losses and possible legal liability. Additionally, in remote localities, our employees may be exposed to tropical and contagious diseases that may affect their health and safety. Notwithstanding our standards, policies and controls, our operations remain subject to incidents or accidents that could adversely affect us and our stakeholders.

New or more stringent environmental, health and safety standards imposed on us could require increased capital expenditures, additional legal preservation areas within our properties or modifications to our operating practices or projects. For further information on environmental regulations and claims, see "Item 4. Information on the Company—4B. Business Overview—Regulatory Matters--Environmental Regulation."

The amount and timing of expenditures related to environmental, health and safety matters may vary substantially from those currently anticipated. These additional costs may have a negative impact on the profitability of the projects we intend to implement or may make such projects economically unfeasible. Waste disposal, including our slag piles, and emission practices may result in the need for us to clean up or retrofit our facilities or our disposal locations at substantial costs and/or could result in substantial civil, criminal and administrative liability, including, among other things, liability pursuant to public civil actions. Environmental legislation in foreign markets to which we export our products may also materially and adversely affect our export sales and us.

In addition, we may enter into TACs with Brazilian regulatory agencies that require us to minimize or eliminate the risk of environmental impacts in the areas where we operate. If we are unable to comply with a TAC or to remediate non-compliance in a timely manner, we may be exposed to penalties, such as fines, new environmental offsets, delays in obtaining environmental or other operating licenses, revocation of permits or closure of facilities.

Finally, new or more stringent regulatory frameworks may be imposed and may affect our mining operations, including requests for environmental recovery of areas and investments for the granting of mining concessions. Any failure to comply with these or other laws, resolutions and standards may expose us to civil, criminal and administrative liability.

Our governance and compliance procedures may fail to prevent regulatory penalties and reputational harm.

We operate in a global environment and our activities straddle multiple jurisdictions and complex regulatory frameworks subject to enforcement worldwide. Our governance and compliance procedures may not prevent breaches of legal, accounting and/or governance standards applicable to us, and we may be unable to identify wrongdoing or improper activities by members of our management, employees or third parties. We may be subject to breaches of our Code of Ethics, business conduct protocols and to instances of fraudulent behavior, dishonesty and unlawful conduct by members of our management, employees, contractors or other agents, which could subject us to fines, loss of our operating licenses and reputational harm, as well as other penalties, which may materially and adversely affect us.

We may fail to maintain an effective system of internal controls, which could prevent us from timely and accurately reporting our financial results.

Our internal controls over financial reporting may not prevent or detect misstatements in a timely manner due to inherent limitations, including human error, circumvention or overriding of controls, or fraud. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the adequacy of our internal controls, including implementing new or improved required controls, we could fail to meet our financial reporting obligations, which could trigger a default under certain of our agreements. In this regard, and in connection with management's evaluation of the effectiveness of our internal control over financial reporting, we concluded that, as of December 31, 2022, our internal control over financial reporting is effective.

Certain of our operations depend on joint ventures, strategic alliances and consortia, among other forms of cooperation, and our business could be adversely affected if our partners fail to observe their commitments.

We currently operate parts of our business through joint ventures, strategic alliances and consortia with other companies. Our forecasts and plans for these joint ventures, strategic alliances and consortia assume that our partners will observe their obligations to make capital contributions, purchase products and, in certain cases, provide managerial personnel or financing. In addition, many of the projects contemplated by our joint ventures or consortia rely on financing commitments, which contain certain preconditions for each disbursement. If any of our partners fails to observe their commitments or we fail to comply with all preconditions required under our financing commitments or other partnership arrangements, the affected joint venture, consortium or other project may not be able to operate in accordance with its business plans, or we may have to increase the level of our investment to implement these plans, which could adversely affect us.

Risks associated with drilling and production could render mining projects economically unfeasible.

Once mineral deposits are discovered, it can take a number of years from the initial phase of drilling until production is possible, during which time the economic feasibility of production may change. Substantial time and expenditures are required to:

- establish mineral reserves through drilling;
- determine appropriate mining and metallurgical processes for optimizing the recovery of metal contained in ore;
- obtain environmental and other licenses;

- construct mining and processing facilities and set up the infrastructure required for greenfield properties; and
- obtain the ore or extract the minerals from the ore.

If a mining project proves to not be economically feasible by the time we are able to profit from it, we may incur substantial losses and be obliged to record write-offs. In addition, potential changes or complications involving metallurgical and other technological processes arising during the life of a project may result in delays and cost overruns that may render the project not economically feasible.

Our mineral reserves and mine life may prove inaccurate, market price fluctuations and cost changes may render certain ore reserves uneconomical to mine and we may face rising extraction costs or investment requirements over time as our reserves deplete.

Our reported ore reserves are estimated quantities of ore and minerals that we have determined can be economically mined and processed under present and anticipated conditions to extract their mineral content. There are numerous uncertainties inherent in estimating quantities of reserves and in projecting potential future rates of mineral production, including many factors beyond our control. Reserve engineering involves estimating deposits of minerals that cannot be measured in an exact manner, and the accuracy of any reserve estimate is a function of the quality of available data and engineering and geological interpretation and judgment. As a result, no assurance can be given that the indicated amount of ore will be recovered or that it will be recovered at the rates we anticipate. Estimates of different engineers may vary, and results of our mining production subsequent to the date of an estimate may lead to revision of estimates. Reserve estimates and estimates of mine life may require revision based on actual production experience and other factors. For example, fluctuations in the market prices of minerals and metals, reduced recovery rates or increased operating and capital costs due to inflation, exchange rates or other factors may render proven and probable reserves uneconomic to exploit and may ultimately result in a restatement of reserves.

In addition, reserves are gradually depleted in the ordinary course of our exploration activities. As mining progresses, distances to the primary crusher and to waste deposits become longer and pits become steeper. Also, for some types of reserves, mineralization grade decreases and hardness increases at increased depths. As a result, over time we may experience rising unit extraction costs with respect to each mine, or we may need to make additional investments, including adaptation or construction of processing plants and expansion of our dry tailings processes. Our exploration programs may also fail to result in the expansion or replacement of reserves depleted by current production. If we do not enhance existing reserves or develop new operations, we may not be able to sustain our current level of production beyond the remaining lives of our existing mines. See “Item 4. Information on the Company—4B. Business Overview—Description of our Operating Segments—Our Mining Segment.”

Our subsidiary CSN Mineração intends to invest in the increase of the total iron ore processing capacity of its facilities and it may not necessarily complete these investments as planned and/or effectively achieve the production volume corresponding to the planned total iron ore processing capacity.

Our subsidiary CSN Mineração included in its business plan certain investments to increase its iron ore processing capacity in the medium and long term. The expansion of its production capacity involves significant investment and expenses and may not result in the effective expansion of its iron ore production, which depends on other additional factors, including the expansion of its mineral reserves. Moreover, these investments to increase its processing capacity are subject to numerous risks inherent to mining projects.

CSN Mineração has planned investments for the expansion of its iron ore processing capacity from 34 million tons per year in 2022 to up to 108 million tons per year by 2033. These numbers represent expected production capacity of CSN Mineração’s facilities following the implementation in full of its current business plan – not its production volume. We can provide no assurances that CSN Mineração’s production volume will effectively reach 108 million tons per year by 2033.

If CSN Mineração is unable to transform its iron ore processing capacity into effective iron ore production, it may not obtain the expected return on investments made, which may adversely affect us.

Natural and other disasters, or extreme weather conditions, could disrupt our operations.

Our mining and logistics operations are exposed to natural and other disasters, or extreme weather conditions, including as a result of climate change developments such as heavy rainfall or flooding, and these could reduce the available supply of our raw materials and increase our raw materials costs, as well as delay and otherwise disrupt our operations, including relating to logistics. In early 2022, due to heavy rainfall in the Southeast region of Brazil, we temporarily suspended mining operations at Casa de Pedra, processing operations at our Pires plant and port operations at TECAR. We partially and gradually re-initiated these operations after a couple of weeks once climate conditions improved and we were able to ensure operational safety. We conducted extraordinary maintenance and reinforced certain of our structures in order to fix damage caused and to prevent future damage from heavy rainfall. We cannot foresee extraordinary climate conditions, including as a result of climate change developments (the physical risks of climate change to which we are subject), or all regulatory changes in response to climate change (the transition risks of climate change to which we are subject), as well as their full potential impact on our operations.

Additionally, we are subject to technical or physical risks including fire, power loss, water supply loss, leakages, accidents and failures in telecommunications and information technology systems, whether resulting from natural or other disasters or otherwise, any of which could disrupt our operations.

We may not be able to consummate proposed acquisitions or integrate acquired businesses successfully.

From time to time, we may evaluate acquisition opportunities that would strategically fit our business objectives. If we are unable to consummate acquisitions or to integrate them successfully and develop these businesses to realize revenue growth and cost savings, we could be adversely affected. Acquisitions also pose the risk that we may be exposed to successor liability involving an acquired company. Due diligence conducted in connection with an acquisition, and any contractual guarantees or indemnities that we receive, may not be sufficient to protect us from, or compensate us for, actual liabilities. A material liability associated with an acquisition, including related to labor or environmental matters, could adversely affect us and reduce the expected and bargained-for benefits of the acquisition.

In addition, we may incur asset impairment charges related to acquisitions, which may reduce our profitability. Our acquisition activities may also present financial, managerial and operational risks, including diversion of management attention from existing core businesses, difficulties integrating or separating personnel, financial and other systems, failure to achieve the operational benefits that were anticipated at the time of the transaction, adverse effects on existing business relationships with suppliers and customers, inaccurate estimates of fair value made in the accounting for acquisitions and/or amortization of acquired intangible assets which would reduce future reported earnings, potential loss of customers or key employees of acquired businesses and indemnities and potential disputes with buyers or sellers. Finally, proposed acquisitions may also be subject to review from the antitrust authorities in the countries involved in the transaction, which may approve the transaction, do so subject to restrictions, including the divestment of assets, or reject it. Any of these developments or adverse regulatory decisions could adversely affect us.

We may not be able to maintain adequate liquidity and our cash flows from operations and available capital may not be sufficient to meet our obligations.

While our cash flows from operations and available capital have been sufficient to meet our current operating expenses, contractual obligations and debt service requirements to date, our liquidity, cash flows from operations and available capital may be adversely affected by the pricing environment for our products, the exchange rate environment and the effects of weak macroeconomic conditions in Brazil. We are considering certain measures to improve our liquidity and debt profile, including the potential sale of certain assets. In addition, we are negotiating the extension of certain of our credit facilities. If we are unable to successfully sell certain assets and/or extend our debt amortization profile, we may not be able to maintain adequate liquidity and our cash flows from operations and available capital may not be sufficient to meet our obligations.

We have experienced labor disputes in the past that have disrupted our operations, and such disputes may recur.

A substantial number of our employees and some of the employees of our subcontractors are represented by labor unions and are covered by collective bargaining or other labor agreements, which are subject to periodic renegotiation. Strikes and other labor disruptions at any of our facilities or labor disruptions involving third parties who may provide us with goods or services have in the past and may in the future materially and adversely affect the operations of our facilities and/or the timing of completion and the cost of our projects.

We are exposed to the risks of litigation.

We are and may be a party to legal proceedings and judicial, administrative or arbitration claims. For certain of these legal proceedings and claims, we have not established a provision on our balance sheet or have only established provisions for part of the amounts in question, based on our external or internal counsels' judgment as to the likelihood of an outcome unfavorable to us. Although we are contesting existing proceedings and claims, the outcome of each specific proceeding and claim is uncertain and may result in obligations that could materially and adversely affect us. In addition, certain judicial or administrative proceedings may adversely affect our shareholders and holders of the ADSs, specifically their receipt of dividends.

The effect of any discontinuation or replacement of LIBOR may adversely affect us.

The U.K. Financial Conduct Authority announced in July 2017 that it would no longer compel banks to submit rates for the calculation of the London interbank offered rate, or LIBOR, after 2021. To mitigate any possible impact, various regulators have proposed alternative reference rates. As of December 31, 2022, we had R\$7,046 million of LIBOR-indexed financings maturing beginning in 2023. We cannot predict the effect of any discontinuation or replacement of LIBOR at this time and, consequently, we cannot assure you that these changes will not have an adverse effect on us.

Risks Relating to Our Common Shares and the ADSs

Our controlling shareholder has the ability to direct our business and affairs and its interests could conflict with yours.

Our controlling shareholder has the power to, among other things, elect a majority of our directors and determine the outcome of any action requiring shareholder approval, including transactions with related parties, corporate reorganizations, acquisitions, dispositions, the destination and diversification of our investments and the timing and payment of any future dividends, subject to minimum dividend payment requirements imposed by Brazilian Corporate Law. Our controlling shareholder may have an interest in pursuing acquisitions, dispositions, financings or other transactions that could conflict with your interests as a holder of our common shares or the ADSs. In addition, the interests of the members of our controlling family have not always been aligned and any conflicts that may arise may adversely affect us.

If you surrender ADSs and withdraw common shares, you risk forfeiting Brazilian tax advantages and losing the ability to timely remit foreign currency abroad.

As an ADS holder, you benefit from the electronic certificate of foreign capital registration obtained by the custodian for our common shares underlying the ADSs in Brazil, which allows the custodian to convert dividends and other distributions with respect to our common shares into non-Brazilian currency and remit the proceeds abroad. Pursuant to Resolution No. 4,373, dated September 29, 2014, of the Brazilian National Monetary Council (*Conselho Monetário Nacional*), or the CMN, in order for an investor to surrender ADSs for the purpose of withdrawing the common shares represented thereby and be entitled to trade the underlying common shares directly on the B3 S.A. - *Brasil, Bolsa, Balcão*, or the B3, the investor is required to appoint a Brazilian financial institution duly authorized by the Central Bank and the CVM to act as its legal representative, who is responsible, among other things, for keeping and updating the investors' certificates of registration with the Central Bank. If you surrender ADSs and withdraw common shares, you may be subject to a less favorable tax treatment on gains with respect to these investments. Moreover, if your representative fails to obtain or update the relevant certificates of registration, you may incur additional expenses or be subject to operational delays which could affect your ability to receive dividends or distributions relating to our common shares or the return of your capital in a timely manner. The custodian's certificate of registration or any foreign capital registration directly obtained by you may be affected by future legislative or regulatory changes, and we cannot assure you that additional restrictions applicable to you, the disposition of the underlying common shares or the repatriation of the proceeds from the process will not be imposed in the future. For a more complete description of Brazilian tax regulations, including any potential risks regarding the possibility that the sale or disposition of ADSs by a Non-Brazilian Holder may be subject to capital gains tax in Brazil, see "Item 10. Additional Information-10E. Taxation-Brazilian Tax Considerations."

Holders of ADSs may not be able to exercise their voting rights.

Holders of ADSs may only exercise their voting rights with respect to the underlying common shares in accordance with the provisions of the deposit agreement. Under the deposit agreement, ADS holders must vote by giving voting instructions to the depositary. Upon receipt of the voting instructions of the ADS holder, the depositary will vote the underlying common shares in accordance with such instructions. If we ask for voting instructions, the depositary will notify ADS holders of the upcoming vote and will arrange to deliver the notice of the upcoming vote. We cannot assure that ADS holders will receive the notice in time to ensure that they can instruct the depositary to vote. In addition, the depositary and its agents are not liable for failing to carry out voting instructions or for the manner in which they do so.

As determined by Brazilian Corporate Law, the first notice of a shareholders' meeting must be given at least 21 days prior to holding the meeting. However, CVM rules require that companies whose shares are also represented by ADSs must convene a shareholders' meeting no later than 30 days in advance. When a shareholders' meeting is convened, holders of ADSs may not receive sufficient advance notice to surrender their ADSs in exchange for the underlying common shares in time to allow them to vote with respect to any specific matter. As a result, holders of ADSs may not be able to exercise their voting rights.

The relative volatility and illiquidity of the Brazilian securities markets may substantially limit your ability to sell the common shares underlying the ADSs at the price and time you desire.

Investing in securities that trade in emerging markets, such as Brazil, often involves greater risk than investing in securities of issuers in the United States and other developed countries, and such investments are generally considered to be more speculative in nature. The Brazilian securities market is substantially smaller, less liquid, more concentrated and can be more volatile than major securities markets in the United States and other developed countries. There is also significantly greater concentration in the Brazilian securities market than in major securities markets in the United States and other developed countries. The ten largest companies in terms of market capitalization represented 46.1% of the aggregate market capitalization of the B3 as of December 31, 2022. Although you are entitled to withdraw the common shares underlying the ADSs from the depositary at any time, your ability to sell the common shares underlying the ADSs at the price and time you wish may be substantially limited.

Holders of ADSs may be unable to exercise preemptive rights with respect to our common shares.

We may not be able to offer our common shares to U.S. holders of ADSs pursuant to preemptive rights granted to holders of our common shares in connection with any future issuance of our common shares unless a registration statement under the Securities Act is effective with respect to such common shares and preemptive rights, or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement relating to preemptive rights with respect to our common shares or to undertake steps that may be needed to find available exemptions from registration, and we cannot assure you that we will file any such registration statement or take any such steps. If such a registration statement is not filed and an exemption from registration is not available the depositary of the ADSs may attempt to sell the preemptive rights, and you will be entitled to receive the proceeds of such sale. However, these preemptive rights will expire if the depositary does not sell them, and U.S. holders of ADSs will not realize any value from the granting of such preemptive rights. Moreover, U.S. holders of ADSs representing our common shares, pursuant to the deposit agreement, are deemed to recognize that all preemptive and similar rights with respect to the ADSs have been validly waived. For a more complete description of preemptive rights, see "Item 10. Additional Information—10B. Memorandum and Articles of Association—Description of Capital Stock—Preemptive Rights."

A decrease in our market capitalization may increase volatility in the trading price of our common shares and the ADSs.

In recent years, our market capitalization has been volatile, resulting in increased volatility in the trading price of our common shares and the ADSs. Any decrease in our market capitalization may further increase this volatility. If the trading price of the ADSs drops below the levels required by the listing standards of the New York Stock Exchange, or the NYSE, we may be required to do a reverse stock split or a ratio change of the number of common shares per ADS in order to regain compliance with the NYSE's listing standards.

The trading price of the ADSs decreased in 2022 and, as of December 31, 2022, presented a variation of (35.0)%, as compared to their trading price as of December 31, 2021.