

RISK FACTORS

Risks relating to our business

The mining industry is highly exposed to the cyclical­ity of global economic activity and requires significant investments of capital.

The mining industry is primarily a supplier of industrial raw materials. Industrial production tends to be the most cyclical and volatile component of global economic activity, which affects demand for minerals and metals. At the same time, investment in mining requires a substantial amount of funds in order to replenish reserves, expand production capacity, build infrastructure and preserve the environment. Sensitivity to industrial production, together with the need for significant long-term capital investments, are important sources of risk for the financial performance and growth prospects of Vale and the mining industry generally.

Adverse economic developments in China could have a negative impact on our revenues, cash flow and profitability.

China has been the main driver of global demand for minerals and metals over the last few years. In 2012, Chinese demand represented 66% of global demand for seaborne iron ore, 48% of global demand for nickel and 41% of global demand for copper. The percentage of our gross operating revenues attributable to sales to customers in China was 36.2% in 2012. A contraction of China's economic growth could result in lower demand for our products, leading to lower revenues, cash flow and profitability. Poor performance in the Chinese real estate sector, the largest consumer of carbon steel in China, could also negatively impact our results.

Our business may be adversely affected by declines in demand for the products our customers produce, including steel (for our iron ore and coal business), stainless steel (for our nickel business) and agricultural commodities (for our fertilizer nutrients business).

Demand for our iron ore, coal and nickel products depends on global demand for steel. Iron ore and iron ore pellets, which together accounted for 69.7% of our 2012 gross operating revenues, are used to produce carbon steel. Nickel, which accounted for 8.5% of our 2012 gross operating revenues, is used mainly to produce stainless and alloy steels. Demand for steel depends heavily on global economic conditions, but it also depends on a variety of regional and sectoral factors. The prices of different steels and the performance of the global steel industry are highly cyclical and volatile, and these business cycles in the steel industry affect demand and prices for our products. In addition, vertical backward integration of the steel and stainless steel industries and the use of scrap could reduce the global seaborne trade of iron ore and primary nickel. The demand for fertilizers is affected by global prices of agricultural commodities. A sustained decline in the price of one or more agricultural commodities could negatively impact our fertilizer nutrients business.

The prices we charge, including prices for iron ore, nickel and copper, are subject to volatility.

Our iron ore prices are based on a variety of pricing options, which generally use spot price indices as a basis for determining the customer price. Our prices for nickel and copper are based on reported prices for these metals on commodity exchanges such as the London Metal Exchange ("LME") and the New York Mercantile Exchange ("NYMEX"). Our prices and revenues for these products are consequently volatile, which may adversely affect our cash flow. Global prices for metals are subject to significant fluctuations and are affected by many factors, including actual and expected global macroeconomic and political conditions, levels of supply and demand, the availability and cost of substitutes, inventory levels, investments by commodity funds and others and actions of participants in the commodity markets.

The nickel industry has experienced strong supply growth in recent years, which continued to put nickel prices under pressure in 2012. Nickel refining in China, especially imported nickel ores, increased an estimated 390,000 metric tons from 2006 to 2012. In 2012, estimated Chinese nickel pig iron and ferro-nickel production increased 23%, representing 28% of global nickel output. Other long lead-time nickel projects outside China also began to ramp up production in 2012, and the increase in nickel supply may continue in coming years because of the ramp-up of new nickel projects.

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

During periods of high demand, our ability to rapidly increase production capacity is limited, which could prevent us from meeting demand for our products. Moreover, we may be unable to complete expansions and greenfield projects in time to take advantage of rising demand for iron ore, nickel or other products. When demand exceeds our production capacity, we may meet excess customer demand by purchasing iron ore, iron ore pellets or nickel from joint ventures or 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.

Conversely, 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 previous labor or government agreements.

Regulatory, political, economic and social conditions in the countries in which we have operations or projects could adversely impact our business and the market price of our securities.

Our financial performance may be negatively affected by regulatory, political, economic and social conditions in countries in which we have significant operations or projects. In many of these jurisdictions, we are exposed to various risks such as renegotiation, nullification or forced modification of existing contracts, expropriation or nationalization of property, foreign exchange controls, changes in local laws, regulations and policies, political instability, bribery, extortion, corruption, civil strife, acts of war, guerilla activities and terrorism. We also face the risk of having to submit to the jurisdiction of a foreign court or arbitration panel or having to enforce a judgment against a sovereign nation within its own territory.

Actual or potential political or social changes and changes in economic policy may undermine investor confidence, which may hamper investment and thereby reduce economic growth, and otherwise may adversely affect the economic and other conditions under which we operate in ways that could have a materially negative effect on our business.

We are involved in several legal proceedings that could have a material adverse effect on our business in the event of an outcome that is unfavorable to us.

We are involved in several legal proceedings in which adverse parties have claimed substantial amounts. Although we are vigorously contesting them, the outcomes of these proceedings are uncertain and may result in obligations that could materially adversely affect our business and the value of our shares, ADSs and HDSs. In addition, under Brazilian law, a taxpayer intending to challenge a tax assessment in the judicial system must ordinarily provide the court with a bond or security in the amount of the assessment in order to suspend collection efforts. In some of our tax litigation cases, we may be required to post bond or some form of security with the court, and, depending on the nature, amount and scope of such a bond or pledge, this may have a significant financial impact on our business. For additional information, see *Additional Information—Legal proceedings*.

Disagreements with local communities in which we operate could adversely impact our business and reputation.

Disputes with communities in which we operate may arise from time to time. Although we contribute to local communities with taxes, employment and business opportunities and social programs, expectations are complex and involve multiple stakeholders with different and constantly evolving interests. In some instances, our operations and mineral reserves are located on or near lands owned or used by indigenous or aboriginal people or other groups of stakeholders. Some of these indigenous peoples may have rights to review or participate in natural resource management, and we consult and negotiate with them to mitigate the impact of our operations or to obtain access to their lands. Some of our mining and other operations are located in territories where title may be subject to disputes or uncertainties, or in areas claimed for agriculture or land reform purposes, which may lead to disagreements with landowners, local communities and the government. We consult and negotiate with these groups to come to common agreement on land access and how to mitigate the impact of our operations.

Disagreements or disputes with local groups, including indigenous or aboriginal groups, could cause delays or interruptions to our operations, adversely affect our reputation or otherwise hamper our ability to develop our reserves and conduct our operations. Protesters have taken actions to disrupt our operations and projects, and they may continue to do so in the future. Although we engage in active dialogue with all stakeholders and vigorously defend ourselves against illegal acts, future attempts by protesters to harm our operations could adversely affect our business.

We could be adversely affected by changes in government policies or resource nationalism, including the imposition of new taxes or royalties on mining activities.

Mining is subject to government regulation in the form of taxes and royalties, which can have a significant financial impact on our operations. In the countries where we are present, governments may impose new taxes, raise existing taxes and royalty rates, reduce tax exemptions and benefits, or change the basis on which taxes are calculated in a manner that is unfavorable to us. Governments that have committed to provide a stable taxation or regulatory environment may alter those commitments or shorten their duration.

We may also be required to meet domestic beneficiation requirements in certain countries in which we operate, such as local processing rules or increased export taxes on unprocessed ores. Such requirements can significantly increase the risk profile and costs of operations in those jurisdictions. We and the mining industry are subject to rising resource nationalism in certain countries in which we operate that can result in constraints on our operations, increased taxation or even expropriations and nationalizations.

Concessions, authorizations, licenses and permits are subject to expiration, limitation on renewal and various other risks and uncertainties.

Our operations depend on authorizations and concessions from governmental regulatory agencies in the countries in which we operate. We are subject to laws and regulations in many jurisdictions that can change at any time, and changes in laws and regulations may require modifications to our technologies and operations and result in unanticipated capital expenditures.

Some of our mining concessions are subject to fixed expiration dates and might only be renewed a limited number of times for a limited period of time. Apart from mining concessions, we may need to obtain various authorizations, licenses and permits from governmental or other regulatory bodies in connection with the planning, maintenance and operation of our mines and related logistics infrastructure, which may be subject to fixed expiration dates or periodic review or renewal. While we anticipate that renewals will be given as and when sought, there is no assurance that such renewals will be granted as a matter of course and there is no assurance that new conditions will not be imposed in connection with renewal. Fees for mining concessions might increase substantially due to the passage of time from the original issuance of each individual exploration license. If so, the costs of holding or renewing our mining concessions might impede our business objectives. Accordingly, we need to continually assess the mineral potential of each mining concession, particularly at the time of renewal, to determine if the costs of maintaining the concession is justified by the results of operations to date, and we might elect to let some of our concessions lapse. There can be no assurance that concessions will be obtained on terms favorable to us, or at all, for our future intended mining or exploration targets.

In a number of jurisdictions where we have exploration projects, we may be required to retrocede to the state a certain portion of the area covered by the exploration license as a condition to obtaining a mining concession. This requirement can lead to a substantial loss of part of the mineral deposit originally identified in our feasibility studies. For more information on mining concessions and other similar rights, see *Regulatory matters*.

Our projects are subject to risks that may result in increased costs or delay in their implementation.

We are investing to maintain and further increase our production capacity and logistics capabilities and to expand the scope of the minerals we produce. We regularly review the economic viability of our projects. As a result of this review, we may decide to postpone, suspend or interrupt the implementation of certain projects. Our projects are also subject to a number of risks that may adversely affect our growth prospects and profitability, including the following:

- We may encounter delays or higher than expected costs in obtaining the necessary equipment or services and in implementing new technologies to build and operate a project.
- Our efforts to develop projects on schedule may be hampered by a lack of infrastructure, including reliable telecommunications services and power supply.
- Suppliers and contractors may fail to meet their contractual obligations to us.
- We may face unexpected weather conditions or other force majeure events.
- We may fail to obtain the required permits and licenses to build a project, or we may experience delays or higher than expected costs in obtaining them.
- Changes in market conditions or regulations may make a project less profitable than expected at the time we initiated work on it.
- There may be accidents or incidents during project implementation.
- We may face shortages of skilled personnel.

Operational problems could materially and adversely affect our business and financial performance.

Ineffective project management and operational breakdowns might require us to suspend or curtail operations, which could generally reduce our productivity. Operational breakdowns could entail failure of critical plant and machinery. There can be no assurance that ineffective project management or other operational problems will not occur. Any damages to our projects or delays in our operations caused by ineffective project management or operational breakdowns could materially and adversely affect our business and results of operations. Our business is subject to a number of operational risks that may adversely affect our results of operations, such as:

- Unexpected weather conditions or other force majeure events.
- Adverse mining conditions delaying or hampering our ability to produce the expected quantity of minerals and to meet specifications required by customers, which can trigger price adjustments.
- Accidents or incidents involving our mines, plants, railroads, ports and ships.
- Delays or interruptions in the transportation of our products, including with railroads, ports and ships.
- Tropical diseases, HIV/AIDS and other contagious diseases in regions where some of our development projects are located, which pose health and safety risks to our employees.
- Labor disputes that may disrupt our operations from time to time.
- Changes in market conditions or regulations may affect the economic prospects of an operation and make it inconsistent with our business strategy.

Rules governing ocean transport of iron ore fines could affect our operations.

A portion of our production is in the form of non-concentrate iron ore. This type of ore has been occasionally compared to fines, which are small particles of ore. Current studies are analyzing whether these ores, when transported with a high moisture content, may begin to act like a fluid, although we have no record of such an event occurring, based on more than 50 years of safe shipping as a company. This might cause cargo to become less stable, presenting potential dangers to navigation. The operational risks depend on many factors, including the characteristics of the ore, the circumstances under which they are loaded and transported and the type of vessel used. To manage these risks, the shipping industry and maritime insurers generally follow rules adopted under the International Maritime Solid Bulk Cargoes (IMSBC) Code, but those rules do not currently specifically address the transportation of non-concentrate iron ore such as we produce in the Carajás mineral province in our Northern System. Potential changes to the rules are currently under consideration under the auspices of the International Maritime Organization (IMO). We believe that the safety of our shipping practices is evidenced by our long track record of safe operations, but regulatory changes could require us to modify our practices for handling or shipping our production, and these measures could increase our costs, require new investment, and even limit the volume of our exports.

Our business could be adversely affected by the failure of our counterparties to perform their obligations.

Customers, suppliers, contractors and other counterparties may fail to perform existing contracts and obligations, which may unfavorably impact our operations and financial results. The ability of suppliers and customers to perform their obligations may be adversely affected in times of financial stress and economic downturn. Suppliers are also subject to capacity constraints in times of high demand which may affect their ability to fulfill their commitments.

We currently operate important parts of our pelletizing, bauxite, nickel, coal, copper and steel businesses through joint ventures with other companies. Important parts of our electricity investments and projects are operated through consortia. Our forecasts and plans for these joint ventures and consortia assume that our partners will observe their obligations to make capital contributions, purchase products and, in some cases, provide skilled and competent managerial personnel. If any of our partners fails to observe its commitments, the affected joint venture or consortium 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.

Our business is subject to environmental, health and safety incidents or accidents.

Our operations involve the use, handling, discharge and disposal of hazardous materials into the environment and the use of natural resources, and the mining industry is generally subject to significant risks and hazards, including the potential for fire or explosion, gas leaks, escape of polluting substances or other hazardous materials, rockfall incidents in underground mining operations and incidents involving mobile equipment or machinery. This could occur by accident or by a breach of operating standards, and could result in a significant incident, including damage to or destruction of mineral properties or production facilities, personal injury or death, environmental damage, delays in production, monetary losses and possible legal liability. Vale has health, safety and environmental standards and management systems in place to mitigate the risk of such incidents or accidents. Notwithstanding our standards, policies and controls, our operations remain subject to incidents or accidents that could adversely affect our business or reputation.

Our business may be adversely affected by environmental regulation, including regulations pertaining to climate change.

Nearly all aspects of our activities, products, services and projects around the world are subject to environmental, health and safety regulations, which may expose us to increased liability or increased costs. These regulations require us to obtain environmental licenses, permits and authorizations for our operations, and to conduct environmental impact assessments in order to get approval for our projects and permission for initiating construction. Significant changes to existing operations are also subject to these requirements. Difficulties in obtaining permits may lead to construction delays or cost increases, and in some cases may lead us to postpone or even abandon a project. Environmental regulation also imposes standards and controls on activities relating to mineral research, mining, pelletizing activities, railway and marine services, ports, decommissioning, refining, distribution and marketing of our products. Such regulation may give rise to significant costs and liabilities. In addition, community activist groups and other stakeholders may increase demands for socially responsible and environmentally sustainable practices, which could entail significant costs and reduce our profitability. Private litigation relating to these or other matters may adversely affect our financial condition or cause harm to our reputation.

Environmental regulation in many countries in which we operate has become stricter in recent years, and it is possible that more regulation or more aggressive enforcement of existing regulations will adversely affect us by imposing restrictions on our activities and products, creating new requirements for the issuance or renewal of environmental licenses, raising our costs or requiring us to engage in expensive reclamation efforts. For example, changes in Brazilian legislation for the protection of underground cavities have required us to conduct extensive technical studies and to engage in complex discussions with Brazilian environmental regulators, which are continuing. As a result, we cannot yet assess the final impact of these regulations on our operations, but it is possible that in certain of our iron ore mining operations or projects we may be required to limit mining or to incur additional costs to preserve underground cavities or to compensate for the impact on them, and the consequences could be material to production volumes, costs or reserves in our iron ore business.

Concern over climate change and efforts to comply with international undertakings could lead governments to impose limits on carbon emissions, carbon taxes or emissions trading schemes applicable to our operations, which could adversely affect our operating costs or our capital expenditure requirements. For example, in 2012, the Brazilian government conducted public hearings to present and discuss certain proposed controls on carbon emissions for mining activities under the carbon emissions law (*Política Nacional de Mudanças Climáticas*), and the Australian government introduced a carbon pricing mechanism in July 2012 that requires certain companies, including us, to purchase carbon emissions permits. In addition, the IMO is studying mechanisms such as carbon pricing to reduce greenhouse gases emissions from international shipping, which may increase our international transportation costs.

Natural disasters may inflict severe damage to our operations and projects in the countries where we operate and may cause a negative impact in our sales to countries adversely affected by such disasters.

Natural disasters, such as wind storms, floods, earthquakes and tsunamis may adversely affect our operations and projects in the countries where we operate, and may cause a contraction in sales to countries adversely affected due to, among other factors, power outages and the destruction of industrial facilities and infrastructure. The physical impact of climate change on our business remains highly uncertain, but we may experience changes in rainfall patterns, water shortages, rising sea levels, increased storm intensity and flooding as a result of climate change, which may adversely affect our operations. On certain occasions in recent years, we have determined that force majeure events have occurred due to severe weather.

We may not have adequate insurance coverage for some business risks.

Our businesses are generally subject to a number of risks and hazards, which could result in damage to, or destruction of, mineral properties, facilities and equipment. The insurance we maintain against risks that are typical in our business may not provide adequate coverage. Insurance against some risks (including liabilities for environmental pollution or certain hazards or interruption of certain business activities) may not be available at a reasonable cost, or at all. Even when it is available, we may self-insure where we determine that is more cost-effective to do so. As a result, accidents or other negative developments involving our mining, production or transportation facilities could have a material adverse effect on our operations.

Our reserve estimates may materially differ from mineral quantities that we are actually able to recover; our estimates of mine life may prove inaccurate; and market price fluctuations and changes in operating and capital costs may render certain ore reserves uneconomical to mine.

Our reported ore reserves are estimated quantities of ore and minerals that we have determined can be economically mined and processed under present and assumed future conditions. There are numerous uncertainties inherent in estimating quantities of reserves and in projecting potential future rates of mineral production, including factors beyond our control. Reserve reporting 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. Reserve estimates and estimates of mine life may require revisions 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, changes in regulatory requirements or other factors may render proven and probable reserves uneconomic to exploit and may ultimately result in a restatement of reserves. Such a restatement could affect depreciation and amortization rates and have an adverse effect on our financial performance.

We may not be able to replenish our reserves, which could adversely affect our mining prospects.

We engage in mineral exploration, which is highly speculative in nature, involves many risks and frequently is non-productive. Our exploration programs, which involve significant expenditures, may fail to result in the expansion or replacement of reserves depleted by current production. If we do not develop new reserves, we will not be able to sustain our current level of production beyond the remaining lives of our existing mines.

Drilling and production risks could adversely affect the mining process.

Once mineral deposits are discovered, it can take a number of years from the initial phases of drilling until production is possible, during which 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, processing facilities and infrastructure required for greenfield properties; and
- obtain the ore or extract the minerals from the ore.

If a project proves not to be economically feasible by the time we are able to exploit it, we may incur substantial losses and be obliged to take write-downs. 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.

We face rising extraction costs or investment requirements over time as reserves deplete.

Reserves are gradually depleted in the ordinary course of a given open pit or underground mining operation. As mining progresses, distances to the primary crusher and to waste deposits become longer, pits become steeper, mines move from being open pit to underground, and underground operations become deeper. In addition, for some types of reserves, mineralization grade decreases and hardness increases at increased depths. As a result, over time, we usually 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 or construction of tailing dams. Several of our mines have been operating for long periods, and we will likely experience rising extraction costs per unit in the future at these operations in particular.

Labor disputes may disrupt our operations from time to time.

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 negotiation. Strikes and other labor disruptions at any of our operations could adversely affect the operation of facilities and the timing of completion and cost of our capital projects. For more information about labor relations, see *Management and employees—Employees*. Moreover, we could be adversely affected by labor disruptions involving unrelated parties that may provide us with goods or services.

We may face shortages of equipment, services and skilled personnel.

The mining industry has faced worldwide shortages of mining and construction equipment, spare parts, contractors and other skilled personnel during periods of high demand for minerals and metals and intense development of mining projects. We may experience longer lead times for mining equipment and problems with the quality of contracted engineering, construction and maintenance services. We compete with other mining and extractive sector companies for highly skilled management and staff with relevant industry and technical experience, and we may not be able to attract and retain such people. Shortages during peak periods could negatively impact our operations, resulting in higher production or capital expenditure costs, production interruptions, higher inventory costs, project delays and potentially lower production and revenues.

Higher energy costs or energy shortages would adversely affect our business.

Energy costs are a significant component of our cost of production, representing 11.1% of our total cost of goods sold in 2012. To fulfill our energy needs, we depend on the following sources: oil by-products, which represented 48% of total energy needs in 2012, electricity (21%), coal (9%), natural gas (15%) and other energy sources (7%), using figures converted into tons of oil equivalent ("TOE").

Fuel costs represented 7.8% of our cost of goods sold in 2012. Increases in oil and gas prices adversely affect margins in our logistics services, mining, iron ore pellets, fertilizers and nickel businesses.

Electricity costs represented 3.3% of our total cost of goods sold in 2012. If we are unable to secure reliable access to electricity at acceptable prices, we may be forced to curtail production or may experience higher production costs, either of which would adversely affect our results of operations. We face the risk of energy shortages in the countries where we have operations and projects due to excess demand or weather conditions, such as floods or droughts.

Electricity shortages have occurred throughout the world, and there can be no assurance that growth in power generation capacity in the countries in which we operate will be sufficient to meet future consumption increases. Future shortages, and government efforts to respond to or prevent shortages, may adversely impact the cost or supply of electricity for our operations.

Price volatility—relative to the U.S. dollar—of the currencies in which we conduct operations could adversely affect our financial condition and results of operations.

A substantial portion of our revenues and our debt is denominated in U.S. dollars, and changes in exchange rates may result in (i) losses or gains on our net U.S. dollar-denominated indebtedness and accounts receivable and (ii) fair value losses or gains on currency derivatives we use to stabilize our cash flow in U.S. dollars. In 2012 and 2011, we had currency losses of US\$1.915 billion and US\$1.382 billion, respectively, while in 2010 we had currency gains of US\$102 million. In addition, the price volatility of the Brazilian *real*, the Canadian dollar, the Australian dollar, the Indonesian rupiah and other currencies against the U.S. dollar affect our results since most of our costs of goods sold are denominated in currencies other than the U.S. dollar, principally the *real* (57% in 2012) and the Canadian dollar (14% in 2012), while our revenues are mostly U.S. dollar-denominated. We expect currency fluctuations to continue to affect our financial income, expense and cash flow generation.

Significant volatility in currency prices may also result in disruption of foreign exchange markets, which could limit our ability to transfer or to convert certain currencies into U.S. dollars and other currencies for the purpose of making timely payments of interest and principal on our indebtedness. The central banks and governments of the countries in which we operate may institute restrictive exchange rate policies in the future and impose taxes on foreign exchange transactions.

The integration between the Company and acquired companies might prove more difficult than anticipated.

We may not be able to successfully integrate our acquired businesses. We have grown our business in part through acquisitions, and some of our future growth could depend on acquisitions. Integration of acquisition targets might take longer than expected, and the costs associated with integration of acquisition targets might be higher than anticipated. Completed acquisitions could fail to achieve the increased revenues, cost savings or operational benefits that were anticipated at the time of their conception. Acquisitions could lead to the incurrence of substantial costs as a result of, for example, impairment of goodwill, unforeseen liabilities arising from acquired businesses, inability to retain key staff, inconsistencies in standards, controls, procedures and policies between the Company and the acquisition target which could negatively affect our financial condition and results of operations. In addition, management attention could be diverted from ordinary responsibilities to integration issues.

Risks relating to our corporate structure

Our controlling shareholder has significant influence over Vale, and the Brazilian government has certain veto rights.

As of February 28, 2013, Valepar S.A. ("Valepar") owned 52.7% of our outstanding common stock and 32.4% of our total outstanding capital. As a result of its share ownership, Valepar can elect the majority of our board of directors and control the outcome of some actions that require shareholder approval. For a description of our ownership structure and of the Valepar shareholders' agreement, see *Share ownership and trading—Major shareholders*.

The Brazilian government owns 12 golden shares of Vale, granting it limited veto power over certain company actions, such as changes to our name, the location of our headquarters and our corporate purpose as it relates to mining activities. For a detailed description of the Brazilian government's veto powers, see *Additional information—Memorandum and articles of association—Common shares and preferred shares*.

Our governance and compliance processes 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 with increased enforcement activities worldwide. Our governance and compliance processes, which include the review of internal control over financial reporting, may not prevent future breaches of legal, accounting or governance standards. We may be subject to breaches of our Code of Ethical Conduct and business conduct protocols and to instances of fraudulent behavior, corrupt practices and dishonesty by our employees, contractors or other agents. Our failure to comply with applicable laws and other standards could subject us to fines, loss of operating licenses and reputational harm.

It could be difficult for investors to enforce any judgment obtained outside Brazil against us or any of our associates.

Our investors may be located in jurisdictions outside Brazil and could seek to bring actions against us or our directors or officers in the courts of their home jurisdictions. The Company is a Brazilian company, and the majority of our officers and directors are residents of Brazil. The vast majority of our assets and the assets of our officers and directors are likely to be located in jurisdictions other than the home jurisdictions of our investors. It might not be possible for investors to effect service of process within their home jurisdictions on us or on our officers or directors who reside outside their home jurisdictions. In addition, a foreign judgment will be enforceable in the courts of Brazil without a re-examination of the merits only if previously confirmed by the Brazilian Superior Court of Justice (*Superior Tribunal de Justiça*), and confirmation will only be granted if the judgment: (a) fulfills all formalities required for its enforceability under the laws of the country where it was issued; (b) was issued by a competent court after due service of process on the defendant, as required under applicable law; (c) is not subject to appeal; (d) was authenticated by a Brazilian consulate in the country in which it was issued and is accompanied by a sworn translation into the Portuguese language; and (e) is not contrary to Brazilian national sovereignty, public policy or good morals. Therefore, investors might not be able to recover against us or our directors and officers on judgments of the courts of their home jurisdictions predicated upon the laws of such jurisdictions.

Risks relating to our depositary shares

If ADR holders or HDR holders exchange ADSs or HDSS, respectively, for the underlying shares, they risk losing the ability to remit foreign currency abroad.

The custodian for the shares underlying our ADSs and HDSS maintains a registration with the Central Bank of Brazil entitling it to remit U.S. dollars outside Brazil for payments of dividends and other distributions relating to the shares underlying our ADSs and HDSS or upon the disposition of the underlying shares. If an ADR holder or HDR holder exchanges its ADSs or HDSS for the underlying shares, it will be entitled to rely on the custodian's registration for only five business days from the date of exchange. Thereafter, an ADR holder or HDR holder may not be able to obtain and remit foreign currency abroad upon the disposition of, or distributions relating to, the underlying shares unless it obtains its own registration under Resolution No. 2,689 of the National Monetary Council ("CMN"), which permits qualifying institutional foreign investors to buy and sell securities on the BM&FBOVESPA. For more information regarding these exchange controls, see *Additional Information -Exchange controls and other limitations affecting security holders*. If an ADR holder or HDR holder attempts to obtain its own registration, it may incur expenses or suffer delays in the application process, which could delay the receipt of dividends or other distributions relating to the underlying shares or the return of capital in a timely manner.

The custodian's registration or any registration obtained could be affected by future legislative changes, and additional restrictions applicable to ADR holders or HDR holders, the disposition of the underlying shares or the repatriation of the proceeds from disposition could be imposed in the future.

ADR holders and HDR holders may be unable to exercise preemptive rights relating to the shares underlying their ADSs and HDSS.

The ability of ADR holders and HDR holders to exercise preemptive rights is not assured, particularly if the applicable law in the holder's jurisdiction (for example, the Securities Act in the United States or the Companies Ordinance in Hong Kong) requires that either a registration statement be effective or an exemption from registration be available with respect to those rights, as is in the case in the United States, or that any document offering preemptive rights be registered as a prospectus, as is the case in Hong Kong. We are not obligated to extend the offer of preemptive rights to holders of ADRs or HDRs, to file a registration statement in the United States, or to make any other similar filing in any other jurisdiction, relating to preemptive rights or to undertake steps that may be needed to make exemptions from registration available, and we cannot assure holders that we will file any registration statement or take such steps.

ADR holders and HDR holders may encounter difficulties in the exercise of voting rights.

ADR holders and HDR holders do not have the rights of shareholders. They have only the contractual rights set forth for their benefit under the deposit agreements. ADR holders and HDR holders are not permitted to attend shareholders' meetings, and they may only vote by providing instructions to the depository. In practice, the ability of a holder of ADRs or HDRs to instruct the depository as to voting will depend on the timing and procedures for providing instructions to the depository either directly or through the holder's custodian and clearing system. With respect to ADSs for which instructions are not received, the depository may, subject to certain limitations, grant a proxy to a person designated by us.

The legal protections for holders of our securities differ from one jurisdiction to another and may be inconsistent, unfamiliar or less effective than investors anticipate.

We are a global company with securities traded in several different markets and investors located in many different countries. The legal regime for the protection of investors varies around the world, sometimes in important respects, and investors in our securities should recognize that the protections and remedies available to them may be different from those to which they are accustomed in their home markets. We are subject to securities legislation in several countries, which have different rules, supervision and enforcement practices. The only corporate law applicable to us is the law of Brazil, with its specific substantive rules and judicial procedures. We are subject to corporate governance rules in several jurisdictions where our securities are listed, but as a foreign private issuer, we are not required to follow many of the corporate governance rules that apply to U.S. domestic issuers with securities listed on the New York Stock Exchange, and we are not subject to the U.S. proxy rules. Similarly, we have been granted waivers and exemptions from certain requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("HKEX Listing Rules"), the Codes on Takeovers and Mergers and Share Repurchases and the Securities and Futures Ordinance of Hong Kong that are generally applicable to issuers listed in Hong Kong.

PRESENTATION OF FINANCIAL INFORMATION

We have prepared our financial statements in this annual report in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"). We also publish financial statements in accordance with International Financial Reporting Standards ("IFRS"), which differ in certain respects from U.S. GAAP, and use IFRS in reports to Brazilian shareholders, in CVM filings, and in determining the legal minimum dividend under Brazilian law.

Beginning in 2013, we will cease to prepare and publish financial statements in accordance with U.S. GAAP. During 2013, we will publish interim financial statements under IFRS only, and beginning with our annual report on Form 20-F for the year 2013, we will present our audited annual financial statements in accordance with IFRS.

Our financial statements and the other financial information in this annual report have been translated from Brazilian *reais* into U.S. dollars on the basis explained in Note 3 to our financial statements, unless we indicate otherwise.

SELECTED FINANCIAL DATA

The tables below present selected consolidated financial information as of and for the periods indicated. You should read this information together with our consolidated financial statements in this annual report.

Statement of income data

	For the year ended December 31,				
	2008	2009	2010	2011	2012
			(US\$ million)		
Net operating revenues	37,884	25,437	47,029	60,946	47,694
Cost of products and services	(18,099)	(15,747)	(20,550)	(25,529)	(26,591)
Selling, general and administrative expenses	(1,748)	(1,139)	(1,701)	(2,334)	(2,240)
Research and development	(1,085)	(981)	(878)	(1,674)	(1,478)
Impairment of goodwill	(950)	-	-	-	-
Impairment on assets	-	-	-	-	(4,023)
Gain (loss) on sale of assets	-	-	-	1,513	(491)
Other expenses	(1,254)	(1,522)	(2,205)	(2,810)	(3,648)
Operating income	14,748	6,057	21,695	30,112	9,223
Non-operating income (expenses):					
Financial income (expenses), net	(1,075)	351	(1,725)	(1,672)	(2,813)
Exchange and monetary gains (losses), net	364	675	344	(1,641)	(1,788)
Gain on sale of investments	80	40	-	-	-
Subtotal	(1,531)	1,066	(1,381)	(3,313)	(3,881)
Income before discontinued operations, income taxes and equity results	13,217	7,123	20,314	26,799	5,422
Income taxes charge	(535)	(2,100)	(3,705)	(5,282)	833
Equity in results of affiliates, joint ventures and other investments	794	433	987	1,135	640
Impairment on investments	-	-	-	-	(1,641)
Net income from continuing operations	13,476	5,456	17,596	22,652	5,254
Discontinued operations, net of tax	-	-	(143)	-	-
Net income	13,476	5,456	17,453	22,652	5,254
Net income (loss) attributable to non-controlling interests	258	107	189	(233)	(257)
Net income attributable to Company's shareholders	13,218	5,349	17,264	22,885	5,511
Total cash paid to shareholders(1)	2,850	2,724	3,000	9,000	6,000

(1) Consists of total cash paid to shareholders during the period, whether classified as dividends or interest on shareholders' equity.

Earnings per share

	For the year ended December 31,				
	2008	2009	2010	2011	2012
	(US\$, except as noted)				
Earnings per share:					
Per common share	2.58	0.97	3.23	4.33	1.07
Per preferred share	2.58	0.97	3.23	4.33	1.07
Weighted average number of shares outstanding (in thousands)(1)(2):					
Common shares	3,028,817	3,181,766	3,210,023	3,197,063	3,172,179
Preferred shares	1,946,454	2,030,700	2,035,783	1,984,030	1,933,491
Treasury common shares underlying convertible notes	56,582	74,998	18,416	18,416	-
Treasury preferred shares underlying convertible notes	30,295	77,580	47,285	47,285	-
Total	5,062,148	5,364,984	5,311,507	5,246,794	5,105,670
Distributions to shareholders per share(3):					
Expressed in US\$	0.56	0.53	0.57	1.74	1.17
Expressed in R\$	1.09	1.01	0.98	2.89	2.26

- (1) Each common ADS represents one common share and each preferred ADS represents one preferred share.
- (2) Changes in the number of shares outstanding reflect a global equity offering in July 2008 and share repurchase programs conducted from October 2008 to May 2009, from September 2010 to October 2010 and from May 2011 to November 2011. For more information see *Share ownership and trading-Purchases of equity securities by the issuer and affiliated purchasers*.
- (3) Our distributions to shareholders may be classified as either dividends or interest on shareholders' equity. In many years, part of each distribution has been classified as interest on shareholders' equity and part has been classified as dividends. For information about distributions paid to shareholders, see *Share ownership and trading-Distributions*.

Balance sheet data

	At December 31,				
	2008	2009	2010	2011	2012
	(US\$ million)				
Current assets	23,238	21,294	31,791	21,736	22,897
Property, plant and equipment, net and intangible assets	49,329	68,618	84,370	98,030	91,766
Investments in affiliated companies and joint ventures and other investments	5,488	4,585	4,497	8,093	6,492
Other assets	5,017	7,590	8,481	8,869	10,323
Total assets	79,992	102,279	129,139	128,728	131,478
Current liabilities	7,237	9,181	17,912	11,043	12,585
Long-term liabilities(1)	10,173	12,703	17,195	16,033	15,731
Long-term debt(2)	17,535	19,998	21,591	21,538	26,799
Total liabilities	34,945	41,782	56,698	48,614	55,115
Redeemable non-controlling interests	599	731	712	505	487
Shareholders' equity:					
Capital stock	23,848	23,839	23,726	36,983	38,888
Additional paid-in capital	393	411	2,188	(61)	(529)
Mandatorily convertible notes-common ADSs	1,288	1,578	290	290	-
Mandatorily convertible notes-preferred ADSs	581	1,225	644	644	-
Reserves and retained earnings	16,446	29,882	42,051	39,939	36,582
Total company shareholders' equity	42,556	56,935	68,899	77,715	74,241
Non-controlling interests	1,892	2,831	2,830	1,894	1,635
Total shareholders' equity	44,448	59,766	71,729	79,609	75,876
Total liabilities and shareholders' equity	79,992	102,279	129,139	128,728	131,478

- (1) Excludes long-term debt.
- (2) Excludes current portion of long-term debt.

I. INFORMATION ON THE COMPANY

BUSINESS OVERVIEW

Summary

We are one of the largest metals and mining companies in the world and the largest in the Americas, based on market capitalization. We are the world's largest producer of iron ore and iron ore pellets and the world's second-largest producer of nickel. We also produce manganese ore, ferroalloys, coal, copper, platinum group metals ("PGMs"), gold, silver, cobalt and potash, phosphates and other fertilizer nutrients. To support our growth strategy, we are engaged in mineral exploration efforts in 15 countries around the globe. We operate large logistics systems in Brazil and other regions of the world, including railroads, maritime terminals and ports, which are integrated with our mining operations. In addition, we have a portfolio of maritime freight assets to transport iron ore. Directly and through affiliates and joint ventures, we also have investments in energy and steel businesses.

The following table presents the breakdown of total gross operating revenues attributable to each of our main lines of business.

	Year ended December 31,					
	2010		2011		2012	
	US\$ million	% of total	US\$ million	% of total	US\$ million	% of total
Bulk materials:						
Iron ore	US\$28,120	58.3%	US\$36,910	59.2%	US\$27,202	55.8%
Iron ore pellets	6,402	13.3	8,204	13.1	6,776	13.9
Manganese and ferroalloys	922	1.9	732	1.2	592	1.2
Coal	770	1.6	1,050	1.7	1,092	2.3
Subtotal-bulk materials	US\$36,214	75.1%	US\$46,904	75.2%	US\$35,662	73.2%
Base metals:						
Nickel and other products(1)	US\$ 4,712	9.8%	US\$ 8,118	13.0%	US\$ 5,975	12.2%
Copper(2)	934	1.9	1,126	1.8	1,158	2.4
Aluminum(3)	2,554	5.3	383	0.6	-	-
Subtotal-base metals	US\$ 8,200	17.0%	US\$ 9,627	15.4%	US\$ 7,133	14.6%
Fertilizer nutrients	1,845	3.8	3,547	5.7	3,777	7.7
Logistics services	1,465	3.0	1,726	2.8	1,644	3.4
Other products and services(4)	493	1.1	541	0.9	537	1.1
Total gross operating revenues	US\$48,217	100.0%	US\$62,345	100.0%	US\$48,753	100.0%

- (1) Includes nickel co-products and by-products (copper, precious metals, cobalt and others).
- (2) Does not include copper produced as a nickel co-product.
- (3) Reflects aluminum operations we sold in February 2011.
- (4) Includes pig iron and energy.

• **Bulk materials:**

- o **Iron ore and iron ore pellets.** We operate four systems in Brazil for producing and distributing iron ore, which we refer to as the Northern, Southeastern, Southern and Midwestern Systems. The Northern and the Southeastern Systems are fully integrated, consisting of mines, railroads and a maritime terminal and a port. The Southern System consists of three mining sites and two maritime terminals. We operate 10 pellet plants in Brazil and two in Oman. Three of our pellet plants in Brazil have been suspended since the fourth quarter of 2012 in response to market conditions. We also have a 50% stake in a joint venture that owns three integrated pellet plants in Brazil, and we have 25% stakes in two pellet companies in China.