Vale S.A.
Form 20-F
March 27, 2014

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As filed with the Securities and Exchange Commission on March 27, 2014

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 20-F

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

For the fiscal year ended: December 31, 2013
Commission file number: 001-15030

VALE S.A.

(Exact name of Registrant as specified in its charter)

Federative Republic of Brazil
(Jurisdiction of incorporation or organization)

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Avenida Graça Aranha, No. 26
20030-900 Rio de Janeiro, RJ, Brazil
(Address of principal executive offices)

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Preferred class A shares of Vale, no par value per share	New York Stock Exchange*
American Depositary Shares (evidenced by American Depositary Receipts), each representing one preferred class A share of Vale	New York Stock Exchange
Common shares of Vale, no par value per share	New York Stock Exchange*
American Depositary Shares (evidenced by American Depositary Receipts), each representing one common share of Vale	New York Stock Exchange
6.25% Guaranteed Notes due 2016, issued by Vale Overseas	New York Stock Exchange
6.250% Guaranteed Notes due 2017, issued by Vale Overseas	New York Stock Exchange
5.625% Guaranteed Notes due 2019, issued by Vale Overseas	New York Stock Exchange
4.625% Guaranteed Notes due 2020, issued by Vale Overseas	New York Stock Exchange
4.375% Guaranteed Notes due 2022, issued by Vale Overseas	New York Stock Exchange
8.25% Guaranteed Notes due 2034, issued by Vale Overseas	New York Stock Exchange
6.875% Guaranteed Notes due 2036, issued by Vale Overseas	New York Stock Exchange
6.875% Guaranteed Notes due 2039, issued by Vale Overseas	New York Stock Exchange
5.625% Notes due 2042, issued by Vale S.A.	New York Stock Exchange

*

Shares are not listed for trading, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the New York Stock Exchange.

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

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

The number of outstanding shares of each class of stock of Vale as of December 31, 2013 was:

3,256,724,482 common shares, no par value per share
2,108,579,618 preferred class A shares, no par value per share
12 golden shares, no par value per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ý No o

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes ý No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ý No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer" and "large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ý Accelerated filer o Non-accelerated filer o

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP o International Financial Reporting Standards as issued by the International Accounting Standards Board ý Other o

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 o Item 18 o

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No ý

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FORWARD-LOOKING STATEMENTS

This annual report contains statements that may constitute forward-looking statements within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Many of those forward-looking statements can be identified by the use of forward-looking words such as "anticipate," "believe," "could," "expect," "should," "plan," "intend," "estimate" and "potential," among others. Those statements appear in a number of places and include statements regarding our intent, belief or current expectations with respect to:

our direction and future operation;

the implementation of our principal operating strategies, including our potential participation in acquisition, divestiture or joint venture transactions or other investment opportunities;

the implementation of our financing strategy and capital expenditure plans;

the exploration of mineral reserves and development of mining facilities;

the depletion and exhaustion of mines and mineral reserves;

trends in commodity prices and demand for commodities;

the future impact of competition and regulation;

the payment of dividends or interest on shareholders' equity;

industry trends, including the direction of prices and expected levels of supply and demand;

other factors or trends affecting our financial condition or results of operations; and

the factors discussed under *Risk factors*.

We caution you that forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from those in forward-looking statements as a result of various factors. These risks and uncertainties include factors relating to (a) the countries in which we operate, especially Brazil and Canada, (b) the global economy, (c) capital markets, (d) the mining and metals businesses, which are cyclical in nature, and their dependence upon global industrial production, which is also cyclical, and (e) the high degree of global competition in the markets in which we operate. For additional information on factors that could cause our actual results to differ from expectations reflected in forward-looking statements, see *Risk factors*. Forward-looking statements speak only as of the date they are made, and we do not undertake any obligation to update them in light of new information or future developments. All forward-looking statements attributed to us or a person acting on our behalf are expressly qualified in their entirety by this cautionary statement, and you should not place undue reliance on any forward-looking statement.

Vale S.A. is a stock corporation, or sociedade por ações*, that was organized on January 11, 1943 under the laws of the Federative Republic of Brazil for an unlimited period of time. Its head office is located at Avenida Graça Aranha, No. 26, 20030-900 Rio de Janeiro, RJ,*

Brazil, and its telephone number is 55-21-3814-4477.

In this report, references to "Vale" are to Vale S.A. References to "we," "us" or the "Company" are to Vale and, except where the context otherwise requires, its consolidated subsidiaries. References to our "preferred shares" are to our preferred class A shares. References to our "ADSs" or "American Depositary Shares" include both our common American Depositary Shares (our "common ADSs"), each of which represents one common share of Vale, and our preferred class A American Depositary Shares (our "preferred ADSs"), each of which represents one class A preferred share of Vale. American Depositary Shares are represented by American Depositary Receipts ("ADRs") issued by the depositary. References to our "HDSs" or "Hong Kong Depositary Shares" include both our common Hong Kong Depositary Shares (our "common HDSs"), each of which represents one common share of Vale, and our class A preferred Hong Kong Depositary Shares (our "preferred HDSs"), each of which represents one preferred Class A share of Vale. Hong Kong Depositary Shares are represented by Hong Kong Depositary Receipts ("HDRs") issued by the depositary.

Unless otherwise specified, we use metric units.

References to "real," "reais" or "R$" are to the official currency of Brazil, the real (singular) or reais (plural). References to "U.S. dollars" or "US$" are to United States dollars. References to "CAD" are to Canadian dollars, and references to "A$" are to Australian dollars.

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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 and maintain 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 2013, Chinese demand represented 64.3% of global demand for seaborne iron ore, 50% of global demand for nickel and 43% of global demand for copper. The percentage of our net operating revenues attributable to sales to customers in China was 40.5% in 2013. Therefore, any 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, would 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 73.0% of our 2013 net operating revenues, are used to produce carbon steel. Nickel, which accounted for 8.3% of our 2013 net 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 sectorial 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 copper is affected by the demand for copper wire, and a sustained decline in the construction industry could have a negative impact on our copper business. The demand for fertilizers is affected by prices of agricultural commodities in the international and Brazilian markets, and 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.

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The nickel industry has experienced strong supply growth in recent years, which continued to put nickel prices under pressure in 2013. Nickel refining in China, primarily using imported nickel ores and related raw material, increased an estimated 560,000 metric tons from 2006 to 2013. In 2013, estimated Chinese nickel pig iron and ferro-nickel production continued to increase, representing 25% of global nickel output. Other long lead-time nickel projects are also ramping up and will continue to increase the global supply of nickel in the coming years.

In January 2014, the Indonesian government approved a law that restricts the sale and export of unprocessed nickel. Indonesia is currently a major producer of nickel, and as a result of the new law, we expect that the nickel supply on international markets will decline, causing nickel prices to increase. In the event that this measure does not take effect or has an impact different from our expectations, we may need to revise our projections of future prices of nickel.

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 potential 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 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 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. For additional information, see *Additional information Legal proceedings*.

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

Disputes with communities where we operate may arise from time to time. Although we contribute to local communities with taxes, royalties, 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 on 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 trends such as 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, request or force renegotiation of tax stabilization agreements 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 are also required to meet domestic beneficiation requirements in certain countries in which we operate, such as local processing rules, export taxes or restrictions, or charges on unprocessed ores. The imposition of or increase in such taxes or charges can significantly increase the risk profile and costs of operations in those jurisdictions. We and the mining industry are subject to rising trends of 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.

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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 on a timely basis, 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 renewing the license or 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.

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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 and related infrastructure, 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.
- Disruptions to or unavailability of critical information technology systems or services resulting from accidents or malicious acts.

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.

In addition, some of our assets may be controlled and managed by joint venture partners that may not fully comply with our standards, controls and procedures, including our health, safety, environment and community standards. Failure by any of our partners to adopt standards, controls and procedures equivalent to ours could lead to higher costs, reduced production or environmental, health and safety incidents or accidents, which could adversely affect our results and reputation.

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

Our operations involve the use, handling, storage, discharge and disposal of hazardous substances 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, toxic 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. We have health, safety and environmental standards and risk management systems and processes 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. 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, and their efforts may lead to the creation or revision of government regulations and policies, 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 caves have required us to conduct extensive technical studies and to engage in complex discussions with Brazilian environmental regulators, which are continuing. 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 or modify our mining plans or to incur additional costs to preserve caves or to compensate for the impact on them, with potential consequences for production volumes, costs or reserves in our iron ore business. For more information about Brazilian environmental regulations related to caves, see *Regulatory matters Environmental regulations*.

National policies and international regulations regarding climate change may affect a number of our businesses in different countries, because we operate worldwide. For example, there is legislation in many countries where we operate that limits greenhouse gas emissions in the mining industry. Regulatory initiatives at the national and international levels that affect our shipping practices could increase our costs or require us to make new capital expenditures.

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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, droughts, 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. On December 27, 2013, we declared force majeure under a number of our iron ore sales contracts as a result of the adverse weather conditions in southeastern Brazil, which resulted in the suspension of the mining and transport, creating serious challenges to the operations of our Southeastern System. The force majeure was lifted on January 6, 2014.

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, 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 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 uncertain 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.

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The feasibility of new mineral projects may change over time.

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.

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

Energy costs are a significant component of our cost of production, representing 10.2% of our total cost of goods sold in 2013. To fulfill our energy needs, we depend on the following sources: oil by-products, which represented 46% of total energy needs in 2013, electricity (25%), coal (7%), natural gas (16%) and other energy sources (6%), using figures converted into tons of oil equivalent ("TOE").

Fuel costs represented 7.5% of our cost of goods sold in 2013. Increases in oil and gas prices adversely affect margins in our logistics services, mining, iron ore pellets, fertilizers and nickel businesses.

Electricity costs represented 2.7% of our total cost of goods sold in 2013. 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, lack of infrastructure 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 2013, 2012 and 2011, we had foreign exchange losses of US$2.8 billion, US$1.9 billion and US$1.4 billion, respectively. 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* (54% in 2013) and the Canadian dollar (14% in 2013), 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.

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Failures in our information technology systems or difficulties in integrating new enterprise resource planning software may interfere with the normal functioning of our business.

We rely on information technology ("IT") systems for the operation of many of our business processes. Failures in our IT systems, whether caused by accident or malicious acts, may result in the disclosure or theft of sensible information, misappropriation of funds and disruptions to our business operations.

In addition, we are in the process of integrating new enterprise resource planning software into our IT systems. If we are unable to replace, upgrade or modify our IT systems to adapt to this new software in a timely and cost-effective manner, our ability to capture and process financial transactions may be negatively affected. Implementing the software may prove more costly or take longer than expected, result in the loss of data or lead to system malfunctions that interfere with the normal functioning of our business. If we are unable to successfully manage the process of implementing the new software, our results of operations may be adversely affected.

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, 2014, 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 Ethics and 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.

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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.

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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 depositary. In practice, the ability of a holder of ADRs or HDRs to instruct the depositary as to voting will depend on the timing and procedures for providing instructions to the depositary either directly or through the holder's custodian and clearing system. With respect to ADSs for which instructions are not received, the depositary 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 ways, 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

Our financial statements as of and for each of the years ended in December 31, 2013, 2012 and 2011 contained in this annual report have been presented in U.S. Dollars and prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB").

We have discontinued the preparation of financial statements in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"). We have adopted IFRS, as issued by the IASB, as the basis for the preparation and presentation of our financial statements and reporting to the SEC beginning with our financial statements as of and for the year ending December 31, 2013 presented in this annual report. This annual report and future reports filed with the SEC will only present financial information prepared in accordance with IFRS.

We first adopted IFRS, as issued by the IASB, for our financial statements for the year ended December 31, 2010, which we published and filed with the CVM. Our transition date from Brazilian GAAP to IFRS was January 1, 2009, and we used certain mandatory or elective exceptions under IFRS 1 in those financial statements. For a reconciliation of our financial statements in accordance with IFRS from U.S. GAAP, see Note 33 to our consolidated financial statements.

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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.

Consolidated statement of income data

	For the year ended December 31,				
	2009	2010	2011	2012	2013
	(US$ million)				
Net operating revenues	24,771	46,424	60,075	46,553	46,767
Cost of products and services	(15,035)	(19,829)	(24,528)	(25,390)	(24,245)
Selling, general and administrative expenses	(1,064)	(1,663)	(2,271)	(2,172)	(1,302)
Research and development	(976)	(876)	(1,671)	(1,465)	(801)
Other operating expenses, net	(1,553)	(2,214)	(2,775)	(3,588)	(2,843)
Impairment of non-current assets				(4,023)	(2,298)
Gain (loss) on measurement or sales of non-current assets			1,494	(506)	(215)
Operating income	6,143	21,842	30,324	9,409	15,063
Non-operating income (expenses):					
Financial income (expenses), net	874	(1,533)	(3,549)	(4,022)	(8,332)
Equity results from associates and joint controlled entities	440	983	1,138	645	469
Results on sale of investments from associates and joint controlled entities	17				41
Impairment on investments				(1,941)	
Income before income taxes	7,474	21,292	27,913	4,091	7,241
Income taxes	(2,080)	(3,712)	(5,265)	1,174	(6,833)
Income from continuing operations	5,394	17,580	22,648	5,265	408
Income (loss) attributable to non-controlling interests	107	190	(233)	(257)	(178)
Net income attributable to Company's shareholders, from continuing operations	5,287	17,390	22,881	5,522	586
Loss from discontinued operations, net of tax	(6)	(133)	(86)	(68)	(2)
Net income attributable to Company's shareholders	5,281	17,257	22,795	5,454	584
Income (loss) attributable to non-controlling interests	107	190	(233)	(257)	(178)
Net income	5,388	17,447	22,562	5,197	406
Total cash paid to shareholders(1)	2,724	3,000	9,000	6,000	4,500

(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,				
	2009	**2010**	**2011**	**2012**	**2013**
	(US$, except as noted)				
Earnings per share:					
Per common share	0.98	3.25	4.34	1.06	0.11
Per preferred share	0.98	3.25	4.34	1.06	0.11
Weighted average number of shares outstanding (in thousands)(1)(2):					
Common shares	3,181,706	3,210,023	3,197,063	3,172,179	3,185,653
Preferred shares	2,030,700	2,035,783	1,984,030	1,933,491	1,967,722
Treasury common shares underlying convertible notes	74,998	18,416	18,416		
Treasury preferred shares underlying convertible notes	77,580	47,285	47,285		
Total	5,364,984	5,311,507	5,246,794	5,105,670	5,153,375
Distributions to shareholders per share(3):					
Expressed in US$	0.53	0.57	1.74	1.17	0.87
Expressed in R$	1.01	0.98	2.89	2.26	1.81

(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 share repurchase programs conducted 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.*

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Balance sheet data

	At December 31,				
	2009	2010	2011	2012	2013
	(US$ million)				
Current assets	20,459	31,559	21,538	22,069	20,611
Property, plant and equipment, net and intangible assets	69,042	86,115	91,863	94,093	88,536
Investments in affiliated companies and joint ventures and other investments	4,446	4,394	8,013	6,384	3,584
Other assets	5,527	4,559	5,502	8,031	11,866
Total assets	99,474	126,627	126,916	130,577	124,597
Current liabilities	9,208	17,987	11,093	12,402	9,164
Liabilities directly associated with non-current assets held for sale and discontinued operations				169	448
Long-term liabilities(1)	12,764	17,214	16,470	16,380	22,379
Long-term debt(2)	19,902	21,591	21,538	26,799	27,670
Total liabilities	41,874	56,792	49,101	55,750	59,661
Results from operations with non-controlling shareholders	(98)	1,413	7	(400)	(400)
Shareholders' equity:					
Capital stock	43,869	45,266	60,578	60,578	60,578
Additional paid-in capital	(98)	1,413	7	(552)	(552)
Mandatorily convertible notes common ADSs	1,350	236	191		
Mandatorily convertible notes preferred ADSs	1,048	528	422		
Retained earnings and revenue reserves	8,826	19,866	14,902	13,213	3,299
Total Company shareholders' equity	54,995	67,309	76,100	73,239	63,325
Noncontrolling interests	2,605	2,526	1,715	1,588	1,611
Total shareholders' equity	57,600	69,835	77,815	74,827	64,936
Total liabilities and shareholders' equity	99,474	126,627	126,916	130,577	124,597

(1) Excludes long-term debt.

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

In 2013, we started to account for our employment benefits according to the revised IAS 19 Employee benefits ("IAS 19R"). In accordance with its transition provisions, we applied this standard retrospectively as of and for the years ended December 31, 2012 and 2011. For further details on the effects of retroactive application of IAS 19R, see Note 6 to our consolidated financial statements. We have not restated our

selected consolidated financial information set forth above as of and for the years ended December 31, 2010 and 2009, because we do not consider the impact of IAS 19R material for those periods.

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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 11 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, floating transfer stations and a distribution center to support the distribution of iron ore worldwide. Directly and through affiliates and joint ventures, we also have investments in energy and steel businesses.

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

	Year ended December 31,					
	2011		2012		2013	
	US$ million	% of total	US$ million	% of total	US$ million	% of total
Bulk materials:						
Iron ore	36,416	60.6%	26,931	57.9%	28,137	60.2%
Iron ore pellets	7,938	13.2	6,560	14.1	6,000	12.8
Manganese and ferroalloys	676	1.1	543	1.2	523	1.1
Coal	1,058	1.8	1,092	2.3	1,010	2.2
Other ferrous products and services	585	1.0	246	0.5	132	0.3
Subtotal bulk materials	46,673	77.7	35,372	76.0	35,802	76.6
Base metals:						
Nickel and other products(1)	8,118	13.5	5,975	12.8	5,839	12.5
Copper(2)	1,103	1.8	1,156	2.5	1,447	3.1
Subtotal base metals	9,221	15.3	7,131	15.3	7,286	15.6
Fertilizer nutrients	3,322	5.5	3,570	7.7	2,814	6.0
Other(3)	859	1.4	480	1.0	865	1.8
Total net operating revenues	60,075	100.0%	46,553	100.0%	46,767	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) Includes pig iron and energy.

Bulk materials:

- *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. The operations of 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.

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- *Manganese and ferroalloys*. We conduct our manganese mining operations through subsidiaries in Brazil, and we produce several types of manganese ferroalloys through a wholly-owned subsidiary in Brazil.

- *Coal*. We produce metallurgical and thermal coal through Vale Moçambique, S.A. ("Vale Moçambique"), which operates assets in Mozambique, and Rio Doce Australia Pty Ltd ("Vale Australia"), which operates coal assets in Australia through wholly-owned subsidiaries and unincorporated joint ventures. In Mozambique, we are ramping up operations in Moatize, which includes both metallurgical and thermal coal. We also have minority interests in Chinese coal and coke producers.

Base metals:

- *Nickel*. Our principal nickel mines and processing operations are conducted by our wholly-owned subsidiary Vale Canada Limited ("Vale Canada"), which has mining operations in Canada and Indonesia. We also own and operate, or have interests in, nickel refining facilities in the United Kingdom, Japan, Taiwan, South Korea and China. We are currently ramping up our operations in New Caledonia. At the end of 2013, we resumed the ramp-up of our nickel operations in Onça Puma, Brazil.

- *Copper*. In Brazil, we produce copper concentrates at Sossego and Salobo, in Carajás, in the Brazilian state of Pará. Salobo operations are ramping up. In Canada, we produce copper concentrates, copper anodes and copper cathodes in conjunction with our nickel mining operations at Sudbury and Voisey's Bay. In Zambia, our joint venture produces copper concentrates at Lubambe, located in the Zambian Copperbelt.

- *Cobalt, PGMs and other precious metals*. We produce cobalt as a by-product of our nickel mining and processing operations in Canada and refine the majority of it at our Port Colborne facilities, in the Province of Ontario, Canada. We also produce cobalt as a by-product of our nickel operations in New Caledonia, which we are currently ramping up. We produce PGM as by-products of our nickel mining and processing operations in Canada. The PGMs are concentrated at our Port Colborne facilities and refined at our precious metals refinery in Acton, England. We produce gold and silver as by-products of our nickel mining and processing operations in Canada, and gold as a by-product of our copper mining in Brazil. Some of the precious metals from our Canadian operations are upgraded at our Port Colborne facilities, and all such precious metals are refined by unrelated parties in Canada and other countries.

Fertilizer nutrients:

- We produce potash in Brazil, with operations in Rosario do Catete, in the state of Sergipe. Our main phosphate operations are conducted by our subsidiary Vale Fertilizantes S.A. ("Vale Fertilizantes"), which holds most of our fertilizer assets in Brazil and is the largest Brazilian producer of phosphate rock, phosphate and nitrogen fertilizers. We also have operations in Bayóvar, a phosphate rock mine in Peru.

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Logistics infrastructure:

- We are a leading operator of logistics services in Brazil and other regions of the world, with railroads, maritime terminals, distribution centers and ports. Two of our four iron ore systems include an integrated railroad network linked to port and terminal facilities. We also have an interest in MRS Logística S.A. ("MRS"), which transports our iron ore products from the Southern System mines to our maritime terminals. We are constructing a world-class logistics infrastructure to support our operations in Central and Eastern Africa. We own and charter dry bulk vessels to transport the products that we sell on a cost and freight ("CFR") basis to customers.

Business strategy

Our mission is to transform natural resources into prosperity and sustainable development. Our vision is to be the number one global natural resources company in creating long-term value through excellence and passion for people and the planet. We are committed to investing only in world-class assets, with long life, low cost, expandability and high quality output, capable of creating value through the cycles. A lean management organization, with teamwork and accountability, excellence in project execution and firm commitment to transparency and shareholder value creation are principles of paramount importance that guide us towards the achievement of our goals. Health and safety, investment in human capital, a positive work environment and sustainability are also critical to our long-term competitiveness.

We aim to maintain our leadership position in the global iron ore market and to grow through world-class assets while exercising disciplined capital management and maintaining a low cost structure. Iron ore and nickel will continue to be our main businesses while we work to maximize the value of our copper, coking coal and fertilizer nutrients businesses. To enhance our competitiveness, we will continue to invest in our railroads and our global distribution network. We seek opportunities to make strategic partnerships and complement our portfolio through acquisitions, while focusing on disciplined capital management. We have also disposed of assets that we have determined to be non-strategic or in order to optimize the structure of our business portfolio. The divestiture of assets improves capital allocation and unlocks funds to finance the execution of top priority projects. The preservation of our credit ratings is one of our basic commitments. Below are the highlights of our major business strategies.

Maintaining our leadership position in the global iron ore market

We continue to consolidate our leadership in the global iron ore market. In 2013, we had an estimated market share of 21.9% of the total volume traded in the seaborne market, slightly below the previous year. We are committed to maintaining our leadership position in the global iron ore market, by focusing our product line to capture industry trends, increasing our production capacity in line with demand growth, controlling costs, strengthening our logistics infrastructure of railroads, ports, shipping and distribution centers, and strengthening relationships with customers. Our diversified portfolio of high quality products, strong technical marketing strategy, efficient logistics and long-standing relationships with major customers will help us achieve this goal.

Enhancing our logistics capacity to support our bulk materials business

We believe that the quality of our railway assets and extensive experience as a railroad and port operator position us as a leader in the logistics business in Brazil. We have been expanding the capacity of our railroads primarily to meet the needs of our iron ore business.

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To support our commercial strategy for our iron ore business, we are building a global distribution network. We operate a distribution center in Oman and two floating transfer stations ("FTS") in the Philippines, and we continue to invest in a fleet of Valemax vessels primarily dedicated to transporting iron ore from Brazil to Asia on a shuttle basis. We are also investing in the development of a distribution center in Malaysia in order to enhance the competitiveness of our iron ore business in the region.

In order to position ourselves for the future expansion of our coal production in Mozambique and leverage our presence in Africa, we are currently expanding railroad capacity by rehabilitating the existing network and building new railroad tracks to develop the logistics corridor from our mine to a new port to be built at Nacala-à-Velha.

Maximization of value in the nickel and copper businesses

We are one of the world's largest nickel producers, with large-scale, long-life and low-cost operations, a substantial resource base, diversified mining operations producing nickel from nickel sulfides and laterites and advanced technology. We have refineries in North America, South America, Europe and Asia, which produce an array of products for use in most nickel applications. We are a leading producer of high-quality nickel products for non-stainless steel applications, such as plating, alloy steels, high nickel alloys and batteries, which represented 63% of our nickel sales in 2013. Our long-term goal is to strengthen our leadership in the nickel business. We continue to optimize our operational flowsheet and to review our asset utilization aiming to increase cost efficiency and improve returns.

The growth of our copper business will allow us to leverage the processing plants in our Sossego and Salobo operations by using existing facilities and minimizing capital expenditures. We operate the Sossego copper mine and are ramping up our copper operations at Salobo, both located in the Carajás region. These copper mines benefit from our infrastructure facilities serving the Northern System. The gold we produce at Sossego and Salobo increases the total aggregated value of those operations. We are also ramping up our copper operations at Lubambe, in Zambia, through a joint venture. We also recover copper in conjunction with our nickel operations, principally at Sudbury and Voisey's Bay, in Canada.

Developing the coal business

We have coal operations in Moatize (Mozambique) and Australia, and we hold minority interests in two joint ventures in China. We intend to continue pursuing organic growth in the metallurgical coal business mainly through the expansion of the Moatize operations in Mozambique.

Maintaining growth options in fertilizer nutrients business

We have potash and phosphate rock operations as well as potential investments in greenfield and brownfield projects that we believe will allow us to benefit from certain demographic trends: the growing world population, an increase in per capita income in emerging economies, higher global consumption of proteins and fertilizer-driven agricultural expansion in Brazil. We operate phosphate assets and a potash mine in Brazil (Taquari-Vassouras) and a phosphate rock operation in Peru (Bayóvar). Our portfolio also includes potash and phosphate projects and mineral exploration initiatives.

Development of our resource base

We are taking advantage of our global presence to develop mineral exploration initiatives. We conduct brownfield exploration to maximize results from existing mining areas and to support both projects and operations. We conduct our greenfield exploration activities in 11 countries, with Brazil, Peru, Chile, Australia and Indonesia representing 82% of our expenditures budgeted for 2014. In particular, we seek to identify opportunities and develop deposits with the potential for large scale production at low cost. Our exploration activities include iron ore, nickel, copper, coal, potash and phosphates.

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Optimizing our energy matrix

As a large consumer of electricity, we have invested in power generation projects to support our operations and to reduce our exposure to the volatility of energy prices and regulatory uncertainties. Accordingly, we have developed hydroelectric power generation plants in Brazil, Canada and Indonesia, and we currently generate 59% of our worldwide electricity needs from our own plants. We are seeking to develop a cleaner energy matrix by investing to develop clean energy sources such as biofuels and focusing on reducing our carbon footprint.

Integrating sustainability into our business

We are committed to integrating sustainability considerations into our business strategy, as we cannot grow without taking into account the physical limits of our planet or the well-being of communities in which we operate. Since 2013, we have incorporated environmental and social projects directly into our strategic planning, moving away from a stand-alone investment model. We practice sustainable mining by dedicating resources to education and research on applying technologies to use natural resources efficiently. In addition, we actively support an open dialogue with our main stakeholders (governments, communities, customers, suppliers, employees and others), because we recognize that only by acting together can we achieve sustainable growth and contribute to social welfare.

Significant changes in our business

We summarize below major events related to our organic growth, divestitures, acquisitions and other significant developments in our business since the beginning of 2013.

Organic growth

We have an extensive program of investments in the organic growth of our businesses. Our main investment projects are summarized under *Capital expenditures*. The most significant projects that have come on stream since the beginning of 2013 are summarized below:

Carajás plant 2 (formerly known as Carajás Additional 40 Mtpy). In the second half of 2013, we completed the construction of an iron ore dry processing plant in Carajás, in the Brazilian state of Pará, which is expected to reduce our operating costs and increase our productivity. The estimated nominal capacity of this project is 40 Mtpy.

Carajás CLN 150Mtpy. In the second half of 2013, we completed the Carajás CLN 150 Mtpy project, which resulted in the increase of the Northern System's railway and port capacity. The project included the construction of a fourth pier at the Ponta da Madeira maritime terminal, located in the Brazilian state of Maranhão, increasing the terminal's capacity to 150 Mtpy. This project raised EFC's estimated nominal logistics capacity to 128 Mtpy.

Conceição Itabiritos. In the second half of 2013, we also completed the construction of a concentration plant in the Southeastern System, in the Brazilian state of Minas Gerais. The estimated additional nominal capacity of the project is 12 Mtpy of pellet feed.

Long Harbour. In the second half of 2013, we completed the construction of our hydrometallurgical facility in Long Harbour, in the province of Newfoundland and Labrador, Canada. The refinery has an estimated nominal capacity of 50,000 tpy of finished nickel with associated copper and cobalt co-product streams, without additional capacity. We have initiated commissioning activities and expect to commence production in the second quarter of 2014.

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Totten. In the second half of 2013, we also concluded construction of our nickel-copper mine in Sudbury, Ontario, Canada. The project has an estimated nominal capacity of 8,000 tpy nickel and 10,000 tpy of copper.

Dispositions and asset sales

We are always seeking to optimize the structure of our portfolio of businesses in order to achieve the most efficient allocation of capital. To that end, we dispose of assets that we have determined to be non-strategic. We summarize below our most significant dispositions and asset sales since the beginning of 2013.

Sale of gold streams from Salobo and Sudbury mines In February 2013, we sold to Silver Wheaton Corp. and Silver Wheaton (Caymans) Ltd. (together, "Silver Wheaton") 25% of the gold produced as a by-product at our Salobo copper mine, in Brazil, for the life of that mine, and 70% of the gold produced as a by-product at our Sudbury nickel-copper mines, in Canada, for 20 years. We received an initial cash payment of US$1.9 billion and 10 million warrants exercisable into Silver Wheaton shares, with a strike price of US$65.0 and a 10-year term, and ongoing payments of the lesser of US$400 (which in the case of Salobo is subject to a 1% annual inflation adjustment) and the prevailing market price, for each ounce of gold that we deliver under the agreement.

Sale of interests in Hydro In November 2013, we sold our entire 22% interest in Norsk Hydro ASA ("Hydro"), a major aluminum producer listed on the Oslo Stock Exchange and the London Stock Exchange, in an offering that generated gross cash proceeds of US$1.811 billion. We originally acquired the interest in 2011, as part of the consideration for transferring a substantial part of our aluminum business in Brazil to Hydro.

Sale of stake in oil and gas concessions In November 2013, we entered into an agreement to sell our 20% stake in onshore concessions BT-PN-2 and BT-PN-3 in the Parnaíba Basin, Brazil to a subsidiary of GDF Suez. The transaction amounts to US$8 million in cash plus potential proceeds of up to US$22 million, subject to the purchaser's final investment decision to develop and produce under these concessions. The conclusion of this sale will relieve us from committed capital expenditures of approximately US$16 million until June of 2014. The closing of this transaction is subject to customary conditions precedent and regulatory approvals.

Sale of Tres Valles In December 2013, we concluded the sale of Sociedad Contractual Minera Tres Valles ("Tres Valles"), a copper mine business in the Coquimbo region in Chile, to Inversiones Porto San Giorgio S.A, controlled by Vecchiola S.A, for US$25 million. The transaction includes the sale of all of our 90%-equity interest in Tres Valles and other mineral rights we held in the Coquimbo region.

Sale of Log-in In December 2013, we sold our entire 31.3% stake in Log-in Logística Intermodal S.A. ("Log-in") through an auction on the BM&FBOVESPA. We received a total of US$94 million from this sale.

Sale of Fosbrasil In December 2013, we agreed to sell our entire 44.25% stake in Fosbrasil, a company that produces purified phosphoric acid in Cajati, in the Brazilian state of São Paulo, to Israel Chemicals Ltd ("ICL") for US$45 million. The conclusion of this transaction is subject to customary conditions precedent and regulatory approvals.

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Sale of stakes in VLI In 2013, we agreed to sell an aggregate of 62.4% of our wholly-owned subsidiary VLI S.A. ("VLI"). In September 2013, we agreed to transfer 20% of the total share capital to Mitsui & Co., Ltd. ("Mitsui"), for R$1.5 billion, and 15.9% to the investment fund of a Brazilian employee benefits fund called Fundo de Garantia por Tempo de Serviço FGTS ("FI-FGTS"), for R$1.2 billion. All of the cash proceeds from the sale to FI-FGTS and R$800.0 million of the proceeds from Mitsui will consist of a cash contribution to VLI in consideration of the issue of new shares to Mitsui and FI-FGTS. The cash contribution to VLI will be used to finance part of VLI's investment plan. We will receive the remaining R$709.0 million directly from Mitsui in consideration of the transfer of VLI shares held by Vale. In December 2013, we entered into an agreement with an investment fund managed by Brookfield Asset Management ("Brookfield") for the sale of an additional 26.5% stake in VLI, for R$2.0 billion, which we will receive directly from Brookfield in consideration of the transfer of VLI shares held by Vale. Each of these transactions is subject to conditions precedent, including, in the case of the transaction with Brookfield, approval by the antitrust authorities. On March 20, 2014, the antitrust authorities approved the transactions with Mitsui and FI-FGTS. Upon completion of these transactions, we will hold 37.6% of VLI's total share capital, and will enter into a shareholders' agreement with Mitsui, FI-FGTS and Brookfield.

Acquisitions

Completion of the Belvedere acquisition In February 2013, we concluded the acquisition from a subsidiary of Aquila Resources Limited ("Aquila") of the remaining 24.5% stake that we did not own in the Belvedere underground coal project ("Belvedere") in Queensland, Australia. The price of A$150 million (US$156million) was the fair market value determined by an independent expert engaged by Vale and Aquila. Belvedere is still in an early stage of development and, consequently, its implementation is subject to approval by our Board of Directors. According to our preliminary estimates, Belvedere has the potential to reach a production capacity up to 7.0 million metric tons per year of mainly coking coal.

Increased stake in Capim Branco I and II hydroelectric power plants In March 2013, we acquired an additional 12.47% stake in Capim Branco I and II hydroelectric power plants from Suzano Papel e Celulose S.A. for US$112 million. Through this acquisition, our stake in Capim Branco I and II increased to 60.89%, which stake gives us the right to receive around 1,524 gigawatt hours of energy per year until the end of the concession in 2036.

Restructuring our investments in power generation

In December 2013, we entered into several agreements with CEMIG Geração e Transmissão S.A. ("CEMIG GT") to: (i) sell 49% of our 9% stake in Norte Energia S.A. ("Norte Energia"), the company established to develop and operate the Belo Monte hydroelectric plant, in the Brazilian state of Pará, to CEMIG GT, for approximately R$206 million; and (ii) create two distinct joint ventures, which will hold the power generation assets and projects described below:

The first joint venture is Aliança Norte Energia Participações S.A. ("Aliança Norte Energia"), which will be 51% owned by us and 49% by CEMIG GT. We will convey our current direct 9.0% interest in Norte Energia to Aliança Norte Energia. As a result, our interest in the Belo Monte project will be reduced to 4.59%, and we are seeking to reduce our guarantee of the financing for the Belo Monte project to the corresponding percentage.

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The second joint venture is Aliança Geração de Energia S.A. ("Aliança Geração"). We will own 55% of Aliança Geração, which will hold our and CEMIG GT's interests in the following hydroelectric power plants: Porto Estrela, Igarapava, Funil, Capim Branco I e II, Aimorés and Candonga. These plants have an aggregate attributable installed capacity of 1,158 MW and assured energy of 652 average MW. We will enter into long-term contracts with Aliança Geração in order to maintain the same amount of energy supplied to our operations.

These transactions are subject to regulatory approvals and other conditions precedent. The final amounts of these transactions are subject to certain adjustments in accordance with the terms and conditions established in the investment agreements.

Suspension of the Rio Colorado project in Argentina

In March 2013, we suspended the implementation of the Rio Colorado project in Argentina, because the circumstances of the project under current conditions would not enable results in line with our commitment to discipline in capital allocation and value creation. We have been and will keep honoring our commitments related to the concessions and reviewing alternatives to enhance the prospects for the project, and we will subsequently evaluate whether to resume it. In 2013, we recognized an impairment on our potash assets related to the Rio Colorado project. For more information see Note 16 to our consolidated financial statements.

Obtaining environmental licenses for S11D and CLN S11D projects

In May 2013, we received the environmental license to construct a 101 km rail spur that will connect the Carajás S11D project to the Carajás railroad ("EFC"), which is part of the CLN S11D project. In July 2013, we obtained the installation license for our Carajás S11D iron ore project, which authorizes construction of the plant and development of the mine. The S11D project consists of development of a mine, processing plant, railway and a port, with an estimated nominal capacity of 90 Mtpy of iron ore. The CLN S11D project is expected to increase EFC's estimated nominal logistics capacity to approximately 230 Mtpy.

Participation in the REFIS

In November 2013, we elected to participate in the federal tax settlement program ("REFIS") for payment of Brazilian corporate income tax and social contribution on the net income of our non-Brazilian subsidiaries and affiliates from 2003 to 2012.

Under the program, we paid US$2.6 billion in 2013, including an upfront payment and an initial installment, and the remaining US$7.0 billion to be paid in 178 further monthly installments, accruing interest based on the Central Bank of Brazil's overnight interest rate ("SELIC"). Our participation in the REFIS resulted in a substantial reduction in the amounts in dispute and is consistent with our goal of eliminating uncertainties and focusing on our core businesses, while preserving potential benefits from legal challenges to the tax regime for foreign subsidiaries. Our participation in the REFIS had a substantial effect on our 2013 financial performance. For more information about the REFIS, see *Legal proceedings Litigation on Brazilian taxation of foreign subsidiaries*.

Resumption of Onça Puma operations

At the end of 2013, we resumed our nickel operations at Onça Puma, which had been suspended since June 2012 as a result of damages to the facility's two furnaces. We rebuilt one of the furnaces, and the nominal capacity of Onça Puma with only one furnace operating will be approximately 25,000 tpy.

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LINES OF BUSINESS

Our principal lines of business consist of mining and related logistics. We also have energy assets to supply part of our consumption. This section presents information about operations, production, sales and competition and is organized as follows.

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1. Bulk materials

Our bulk materials business includes iron ore mining, iron ore pellet production, coal production, manganese ore mining and ferroalloy production. Each of these activities is described below.

1.1 Iron ore and Iron ore pellets

1.1.1 Iron ore operations

We conduct our iron ore business in Brazil primarily at the parent-company level, through our wholly-owned subsidiary Mineração Corumbaense Reunida S.A. ("MCR") and through our subsidiary MBR. Our mines, all of which are open pit, and their related operations are mainly concentrated in three systems: the Southeastern, Southern and Northern Systems, each with its own transportation capabilities. We also conduct mining operations in the Midwestern System and through Samarco Mineração S.A. ("Samarco"), a joint venture with BHP Billiton plc in which we have a 50% equity stake. We conduct each of our iron ore operations in Brazil under concessions from the federal government granted for an indefinite period. For more information about these concessions, see *Regulatory matters Mining rights and regulation of mining activities*.

Company/Mining System	Location	Description/History	Mineralization	Operations	Power Source	Access/Transportation
Vale						
Northern System	Carajás, state of Pará	Open-pit mines and ore-processing plants. Divided into Serra Norte, Serra Sul and Serra Leste (northern, southern and eastern ranges). Since 1985, we have been conducting mining activities in the northern range, which is divided into three main mining areas (N4W, N4E and N5). A new beneficiation plant started up in the last quarter 2013.	High grade hematite (66.7% on average).	Open-pit mining operations. Beneficiation process consists simply of sizing operations, including screening, hydrocycloning, crushing and filtration. Output from the beneficiation process consists of sinter feed, pellet feed and lump ore.	Supplied through the national electricity grid. Acquired from regional utility companies.	EFC railroad transports the iron ore to the Ponta da Madeira maritime terminal in the state of Maranhão.
Southeastern System	Iron Quadrangle, state of Minas Gerais	Three sites: Itabira (two mines, with three major beneficiation plants), Minas Centrais (three mines, with three major beneficiation plants and one secondary plant) and Mariana (three mines, with four major beneficiation plants).	Ore reserves with high ratios of itabirite ore relative to hematite ore. Itabirite ore has iron grade of 35-60% and requires concentration to achieve shipping grade.	Open-pit mining operations. We generally process the run-of-mine by means of standard crushing, classification and concentration steps, producing sinter feed, lump ore and pellet feed in the beneficiation plants located at the mining sites.	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.	EFVM railroad connects these mines to the Tubarão port.

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Company/Mining System	Location	Description/History	Mineralization	Operations	Power Source	Access/Transportation
Southern System	Iron Quadrangle, state of Minas Gerais	Three major sites: Minas Itabirito (four mines, three major beneficiation plants and three secondary beneficiation plants); Vargem Grande (three mines and two major beneficiation plants); and Paraopeba (four mines and four beneficiation plants).	Ore reserves with high ratios of itabirite ore relative to hematite ore. Itabirite ore has iron grade of 35-60% and requires concentration to achieve shipping grade.	Open-pit mining operations. We generally process the run-of-mine by means of standard crushing, classification and concentration steps, producing sinter feed, lump ore and pellet feed in the beneficiation plants located at the mining sites.	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.	MRS, an affiliate railway company, transports our iron ore products from the mines to our Guaíba Island and Itaguaí maritime terminals in the state of Rio de Janeiro.
Midwestern System(1)	State of Mato Grosso do Sul	Comprised of the Urucum and Corumbá mines. Open-pit mining operations.	Urucum and Corumbá ore reserves comprised by hematite ore, which generates lump ore predominantly.	Open-pit mining operations. The beneficiation process for the run of mine consists of standard crushing and classification steps, producing lump and fines.	Supplied through the national electricity grid. Acquired from regional utility companies.	Products delivered to customers through barges traveling along the Paraguay and Paraná rivers.
Samarco	Iron Quadrangle, state of Minas Gerais	Integrated system comprised of two mines, two beneficiation plants, two pipelines, three pellet plants and a port.	Itabirite type.	Open-pit mining operations. The two beneficiation plants, located at the site, process the run-of-mine by means of standard crushing, milling and concentration steps, producing pellet feed and sinter feed.	Supplied through the national electricity grid. Acquired from regional utility companies.	Samarco mines supply the Samarco pellet plants using two pipelines extending approximately 400 kilometers. These pipelines transport the iron ore from the beneficiation plants to the pelletizing plants, and from the pelletizing plants to the port in the state of Espírito Santo.

(1) Part of our operations in the Midwestern System is conducted through MCR.

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1.1.2 Iron ore production

The following table sets forth information about our iron ore production.

Mine/Plant	Type	Production for the year ended December 31, 2011	2012	2013	2013 Process Recovery
		(million metric tons)			(%)
Southeastern System					
Itabira					
Cauê	Open pit	18.6	17.8	15.9	62.3
Conceição	Open pit	21.4	19.9	18.1	68.8
Minas Centrais					
Água Limpa(1)	Open pit	5.0	4.6	4.4	47.5
Gongo Soco(3)	Open pit	5.3	4.4	4.7	100.0
Brucutu	Open pit	30.9	31.7	28.7	73.7
Mariana					
Alegria	Open pit	14.7	14.7	15.8	82.7
Fábrica Nova	Open pit	13.2	13.0	12.5	67.3
Fazendão	Open pit	11.1	9.5	9.3	100.0
Total Southeastern System		120.2	115.6	109.5	
Southern System					
Minas Itabirito					
Segredo/João Pereira	Open pit	11.8	12.2	12.0	75.6
Sapecado/Galinheiro	Open pit	18.6	19.6	19.0	69.2
Vargem Grande					
Tamanduá	Open pit	8.8	9.7	6.7	81.3
Capitão do Mato	Open pit	7.3	7.3	9.9	81.3
Abóboras	Open pit	5.3	5.6	5.4	100.0
Paraopeba					
Jangada	Open pit	5.1	6.1	6.9	94.2
Córrego do Feijão(3)	Open pit	6.8	6.8	5.8	94.2
Capão Xavier	Open pit	8.4	9.6	9.2	87.1
Mar Azul(3)	Open pit	4.1	3.3	4.2	100.0
Total Southern System		76.3	80.3	79.0	
Midwestern System					
Corumbá	Open pit	4.1	4.6	4.5	79.8
Urucum	Open pit	1.5	1.8	2.0	69.3
Total Midwestern System		5.6	6.4	6.5	
Northern System					
Serra Norte					
N4W	Open pit	38.9	39.3	31.3	93.5
N4E	Open pit	20.1	18.7	19.9	93.5
N5	Open pit	50.8	48.8	53.6	93.5
Total Northern System		109.8	106.8	104.9	

Vale	311.8	309.0	299.8	
Samarco(2)	10.8	10.9	10.9	56.8
Total	322.6	320.0	310.7	

(1) Água Limpa mine and plants are owned by Baovale, in which we own 100% of the voting shares and 50% of the total shares. Production figures for Água Limpa have not been adjusted to reflect our ownership interest.

(2) Production figures for Samarco, in which we have a 50% interest, have been adjusted to reflect our ownership interest.

(3) Production figures for these mines or plants include minor operations at other sites with low levels of production and total reserves.

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1.1.3 Iron ore pellets operations

Directly and through joint ventures, we produce iron ore pellets in Brazil, Oman and China, as set forth in the following table. Our total estimated nominal capacity is 57.2 Mtpy, including the full capacity of our pelletizing plants in Oman, but not including our joint ventures Samarco, Zhuhai YPM Pellet Co., Ltd. ("Zhuhai YPM") and Anyang Yu Vale Yongtong Pellet Co., Ltd. ("Anyang"). Of our total 2013 pellet production, including the production of our joint ventures, 61.4% was blast furnace pellets and 38.6% was direct reduction pellets, which are used in steel mills that employ the direct reduction process rather than blast furnace technology. We supply all of the iron ore requirements of our wholly-owned pellet plants and part of the iron ore requirements for Samarco and Zhuhai YPM. In 2013, we sold 10.2 million metric tons to Samarco and 1.2 million metric tons to Zhuhai YPM.

Company/Plant	Description / History	Nominal Capacity (Mtpy)	Power Source	Other Information	Vale's Share (%)	Partners
Brazil:						
Vale						
Tubarão (state of Espírito Santo)	Two wholly owned pellet plants (Tubarão I and II) and five leased plants. Receives iron ore from our Southeastern System mines and distribution is made though our logistics infrastructure.	29.2	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.	Operations at the Tubarão I and II pellet plants have been suspended since November 13, 2012 in response to changes in steel industry demand for raw materials (contraction in pellet consumption in favor of greater use of sinter feed).	100.0	
Fábrica (state of Minas Gerais)	Part of the Southern System. Receives iron ore from the Fábrica mine. Production is transported by MRS and EFVM.	4.5	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.		100.0	
Vargem Grande (state of Minas Gerais)	Part of the Southern System. Receives iron ore from the Pico and Vargem Grande mines and the production is transported by MRS.	7.0	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.		100.0	
São Luís (state of Maranhão)	Part of the Northern System. Receives iron ore from Carajás and production is shipped to customers through our Ponta da Madeira maritime terminal.	7.5	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.	On October 8, 2012, we suspended operations at the São Luís pellet plant for reasons similar to those supporting our suspension of operations at the Tubarão I and II plants.	100.0	

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Company/Plant	Description / History	Nominal Capacity (Mtpy)	Power Source	Other Information	Vale's Share (%)	Partners
Samarco	Three pellet plants with nominal capacity of 22.3 Mtpy. The pellet plants are located in the Ponta Ubu unit, in Anchieta, state of Espírito Santo.	22.3	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Samarco.	In 2014, we will start up the fourth pellet plant with a capacity of 8.3 Mtpy, which will increase Samarco's total nominal pellet capacity to 30.5 Mtpy.	50.0	BHP Billiton plc
Oman:						
Vale Oman Pelletizing Company LLC ("VOPC")	Vale's industrial complex. Two pellet plants (totaling 9.0 Mtpy of capacity) for direct reduction pellets. The pelletizing plants are integrated with our distribution center that has a nominal capacity to handle 40.0 Mtpy.	9.0	Supplied through the national electricity grid.	In the last quarter of the year, the site reached the monthly nominal capacity. The total volume produced in 2013 was 8.28 Mtpy.	70.0	Oman Oil Company S.A.O.C.
China:						
Zhuhai YPM	Part of the Yueyufeng Steelmaking Complex. It has port facilities, which we use to receive feed from our mines in Brazil. The main customer is Zhuhai Yueyufeng Iron & Steel Co., Ltd. ("YYF"), which is also located in the Yueyufeng Steelmaking Complex.	1.2	Supplied through the national electricity grid.		25.0	Zhuhai Yueyufeng Iron and Steel Co. Ltd., Halswell Enterprises Limited
Anyang	Pelletizing operation in China with the capacity to produce 1.2 Mtpy that started production in March 2011.	1.2	Supplied through the national electricity grid.		25.0	Anyang Iron & Steel Co., Ltd.

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1.1.4 Iron ore pellets production

The following table sets forth information about our main iron ore pellet production.

Company	Production for the year ended December 31, 2011	2012	2013
		(million metric tons)	
Vale(1)	39.0	43.3	39.0
Hispanobras(2)	2.1	1.1	
Samarco(3)	10.7	10.7	10.6
Zhuhai YPM(3)	0.3	0.2	0.2
Anyang(3)	0.2	0.2	0.2
Total	52.3	55.6	50.0

(1) Figure includes actual production, including full production from our pellet plants in Oman and from the four pellet plants we leased in Brazil in 2008. We signed a 10-year operating lease contract for Itabrasco's pellet plant in October 2008. We signed a five-year operating lease contract for Kobrasco's pellet plant in June 2008, renewed for additional five years in 2013. We signed a 30-year operating lease contract for Nibrasco's two pellet plants in May 2008.

(2) On July 1, 2012, we signed a three-year operating lease for Hispanobras' pellet plant and started to consolidate its output with our production.

(3) Production figures for Samarco, Zhuhai YPM and Anyang have been adjusted to reflect our ownership interest.

1.1.5 Customers, sales and marketing

We supply all of our iron ore and iron ore pellets (including our share of joint-venture pellet production) to the steel industry. Prevailing and expected levels of demand for steel products affect demand for our iron ore and iron ore pellets. Demand for steel products is influenced by many factors, such as global manufacturing production, civil construction and infrastructure spending. For further information about demand and prices, see *Operating and financial review and prospects Major factors affecting prices.*

In 2013, China accounted for 47.7% of our iron ore and iron ore pellet shipments, and Asia as a whole accounted for 64.9%. Europe accounted for 18.0%, followed by Brazil with 11.8%. Our 10 largest customers collectively purchased 143.6 million metric tons of iron ore and iron ore pellets from us, representing 47.0% of our 2013 iron ore and iron ore pellet sales volumes and 42.4% of our total iron ore and iron ore pellet revenues. In 2013, no individual customer accounted for more than 10.0% of our iron ore and iron ore pellet shipments.

In 2013, the Asian market (mainly Japan, South Korea and Taiwan) and the European market were the primary markets for our blast furnace pellets, while the Middle East, North America and North Africa were the primary markets for our direct reduction pellets.

We strongly emphasize customer service in order to improve our competitiveness. We work with our customers to understand their main objectives and to provide them with iron ore solutions to meet specific customer needs. Using our expertise in mining, agglomeration and iron-making processes, we search for technical solutions that will balance the best use of our world-class mining assets and the satisfaction of our customers. We believe that our ability to provide customers with a total iron ore solution and the quality of our products are both very important advantages helping us to improve our competitiveness in relation to competitors who may be more conveniently located geographically. In addition to offering technical assistance to our customers, we operate sales support offices in Tokyo (Japan), Seoul (South Korea), Singapore, Dubai (UAE) and Shanghai (China), which support the sales made by Vale International, located in St. Prex, Switzerland, which is a wholly-owned subsidiary of Vale International Holdings GmbH (formerly Vale Austria Holdings GmbH). These offices also allow us to stay in close contact with our customers, monitor their requirements and our contract performance, and ensure that our customers receive timely deliveries.

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We sell iron ore and iron ore pellets under different arrangements, including long-term contracts with customers and on a spot basis through tenders and trading platforms. We adopt different pricing mechanisms for our sales, generally linked to the Chinese spot market, including basically the following systems: (i) daily spot prices, (ii) spot price after delivery, consisting of a provisional pricing and an adjustment invoice following delivery; (iii) current quarter and monthly averages; and (iv) three-month average with a lag of one month.

1.1.6 Competition

The global iron ore and iron ore pellet markets are highly competitive. The main factors affecting competition are price, quality and range of products offered, reliability, operating costs and shipping costs.

Our biggest competitors in the Asian market are located in Australia and include subsidiaries and affiliates of BHP Billiton plc ("BHP Billiton"), Rio Tinto Ltd ("Rio Tinto") and Fortescue Metals Group Ltd ("FMG"). Although the transportation costs of delivering iron ore from Australia to Asian customers are generally lower than ours as a result of Australia's geographical proximity, we are competitive in the Asian market for two main reasons. First, steel companies generally seek to obtain the types (or blends) of iron ore and iron ore pellets that can produce the intended final product in the most economic and efficient manner. Our iron ore has low impurity levels and other properties that generally lead to lower processing costs. For example, in addition to its high grade, the alumina grade of our iron ore is very low compared to Australian ores, reducing consumption of coke and increasing productivity in blast furnaces, which is particularly important during periods of high demand. When market demand is strong, our quality differential generally becomes more valuable to customers. Second, steel companies often develop sales relationships based on a reliable supply of a specific mix of iron ore and iron ore pellets.

In terms of reliability, our ownership and operation of logistics facilities in the Northern and Southeastern Systems help us ensure that our products are delivered on time and at a relatively low cost. In addition, we continue to develop a low-cost freight portfolio aimed at enhancing our ability to offer our products in the Asian market at competitive prices and to increase our market share. To support this strategy, we have built a distribution center in Oman and two FTS in the Philippines, and we are investing in a distribution center in Malaysia. We are party to medium- and long-term freight contracts, and we own vessels, including new ships called Valemax. They reduce energy consumption and greenhouse emissions by carrying an increased amount of cargo in a single trip, offering lower freight rates. These investments improve speed and flexibility for customization, and they shorten the time to market required for our products.

Our principal competitors in Europe are Kumba Iron Ore Limited, Luossavaara Kiirunavaara AB ("LKAB"), Société Nationale Industrielle et Minière ("SNIM") and Iron Ore Company of Canada ("IOC"), a subsidiary of Rio Tinto. We are competitive in the European market for the same reasons as in Asia, but also due to the proximity of our port facilities to European customers.

The Brazilian iron ore market is also competitive. There are several small iron ore producers and new companies with developing projects, such as Anglo Ferrous Brazil, MMX, Ferrous Resources and Bahia Mineração. Some steel companies, including Gerdau S.A. ("Gerdau"), Companhia Siderúrgica Nacional ("CSN"), V&M do Brasil S.A. ("Mannesmann"), Usiminas and Arcelor Mittal, also have iron ore mining operations. Although pricing is relevant, quality and reliability are important competitive factors as well. We believe that our integrated transportation systems, high-quality ore and technical services make us a strong competitor in the Brazilian market.

With respect to pellets, our major competitors are LKAB, Cliffs Natural Resources Inc., Arcelor Mittal Mines Canada (formerly Quebec Cartier Mining Co.), IOC and Gulf Industrial Investment Co.

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1.2 Coal

1.2.1 Operations

We produce metallurgical and thermal coal through our subsidiaries Vale Moçambique, which operates Moatize, and Vale Australia, which operates coal assets in Australia through wholly-owned companies and unincorporated joint ventures. We also have a minority interest in two Chinese companies, Henan Longyu Energy Resources Co., Ltd. ("Longyu") and Shandong Yankuang International Coking Company Limited. ("Yankuang"), as set forth in the following table.

Company/Mining Site	Location	Description/History	Mineralization/Operations	Mining Title	Power Source	Access/Transportation
Vale Moçambique						
Moatize	Tete, Mozambique	Open-cut mine, which was developed directly by Vale. Operations started in August 2011 and are expected to reach a nominal production capacity of 11 Mtpy, mostly comprised of metallurgical coal. Vale has a 95.0% stake, and the remaining is owned by Empresa Moçambicana de Exploração Mineira, S.A.	Produces metallurgical and thermal coal. Moatize's main branded product is the Chipanga premium hard coking coal, but there is operational flexibility for multiple products. The optimal product portfolio will come as a result of market trials. Coal from the mines is processed at a coal handling and processing plant ("CHPP") with a capacity of 4,000 metric tons per hour.	Mining concession expiring in 2032, renewable thereafter.	Supplied by local utility company. Back up supply on site.	The coal is transported from the mine by the Linha do Sena railway to the port of Beira.
Vale Australia						
Integra Coal	Hunter Valley, New South Wales	Open-cut mine and underground coal mine, acquired from AMCI in 2007, located 10 kilometers northwest of Singleton in the Hunter Valley of New South Wales, Australia. Vale has a 61.2% stake and the remaining is owned by Nippon Steel ("NSC"), JFE Group ("JFE"), Posco, Toyota Tsusho Austrália, Chubu Electric Power Co. Ltd.	Produces metallurgical and thermal coal. The operations are comprised of an underground coal mine that produces coal by longwall methods and an open-cut mine. Coal from the mines is processed at a CHPP with a capacity of 1,200 metric tons per hour.	Mining tenements expiring in 2023, 2026, 2030 and 2032.	Supplied through the national electricity grid. Acquired from local utility companies.	Production is loaded onto trains and transported 83km to the port of Newcastle, New South Wales, Australia.
Carborough Downs	Bowen Basin, Queensland	Acquired from AMCI in 2007. Carborough Downs mining leases overlie the Rangal Coal Measures of the Bowen Basin with the seams of Leichardt and Vermont. Both seams have coking properties and can be beneficiated to produce coking coal and pulverized coal injection ("PCI") products. Vale has a 85.0% stake and the remaining is owned by JFE, Posco, Tata Steel.	Metallurgical coal. The Leichardt seam is currently our main target for development and constitutes 100% of the current reserve and resource base. Carborough Downs coal is processed at the Carborough Downs CHPP, which is capable of processing 1,000 metric tons per hour, and which operates seven days per week.	Mining tenements expiring in 2035 and 2039.	Supplied through the national electricity grid. Acquired from local utility companies.	The product is loaded onto trains at a rail loadout facility and transported 163 kilometers to the Dalrymple Bay Coal Terminal, Queensland, Australia.

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Company/Mining Site	Location	Description/History	Mineralization/Operations	Mining Title	Power Source	Access/Transportation
Isaac Plains	Bowen Basin, Queensland	The Isaac Plains open-cut mine, acquired from AMCI in 2007, is located close to Carborough Downs in central Queensland. The mine is managed by Isaac Plains Coal Management on behalf of the joint venture parties. Vale has a 50.0% stake, and the remaining shares are owned by a subsidiary of Sumitomo.	Metallurgical and thermal coal. The coal is classified as a medium volatile bituminous coal with low sulfur content. Coal is processed at the Isaac Plains CHPP, which has a capacity of 500 metric tons per hour.	Mining tenements expiring in 2025.	Supplied through the national electricity grid. Acquired from local utility companies.	Railed 172 kilometers to the Dalrymple Bay Coal Terminal.
China						
Longyu	Henan Province, China	Longyu has two operational coal mines, which are located 10km and 5km from Yongcheng city, Henan Province. Vale has a 25.0% stake and the remaining is owned by Yongmei Group Co., Ltd. (former Yongcheng Coal & Electricity (Group) Co. Ltd.), Shanghai Baosteel International Economic & Trading Co., Ltd. and other minority shareholders. Vale acquired a stake in Longyu by purchasing newly issued shares.	Metallurgical and thermal coal and other related products.	Mining concessions expiring in 2034	Supplied through the national electricity grid. Acquired from local utility companies.	Products are trucked or railed directly to customers in China or railed or trucked to Lianyungang port.
Yankuang	Shandong Province, China	Metallurgical coke plant located 10km from Yanzhou city, Shandong Province. Vale has a 25.0% stake and the remaining is owned by Yankuang Group Co. Ltd. and Itochu Corporation. Yankuang was formed by the three shareholders.	Metallurgical coke, methanol, tar oil and benzene. Yankuang has production capacity of 1.7 Mtpy of coke and 200,000 tpy of methanol.		Supplied through the national electricity grid. Acquired from local utility companies.	Most coke products are railed while other products are trucked directly to customers in China or railed to Rizhao port.

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1.2.2 Production

The following table sets forth information on our markeatable coal production.

Operation	Mine type	Production for the year ended December 31, 2011	2012	2013
		(thousand metric tons)		
Metallurgical coal:				
Vale Australia				
Integra Coal(1)	Underground and open-cut	467	962	1,410
Isaac Plains(2)	Open-cut	635	709	656
Carborough Downs(3)	Underground	1,390	911	2,447
Broadlea(4)	Open-cut	0	0	0
Vale Moçambique				
Moatize(5)	Open-cut	275	2,501	2,373
Total metallurgical coal		2,766	5,083	6,885
Thermal coal:				
Vale Colombia				
El Hatillo(6)	Open-cut	3,565		
Vale Australia				
Integra Coal(1)	Open-cut	325	351	87
Isaac Plains(2)	Open-cut	274	381	347
Broadlea(4)	Open-cut	0	0	0
Vale Moçambique				
Moatize(5)	Open-cut	342	1,267	1,444
Total thermal coal		4,506	1,999	1,878

(1) These figures correspond to our 61.2% equity interest in Integra Coal, an unincorporated joint venture.

(2) These figures correspond to our 50.0% equity interest in Isaac Plains, an unincorporated joint venture.

(3) These figures correspond to our 85.0% equity interest in Carborough Downs, an unincorporated joint venture.

(4) Broadlea Coal has been on care and maintenance status since December 2009.

(5) Moatize started production in August 2011.

(6) We sold the El Hatillo mine in the second quarter of 2012.

1.2.3 Customers and sales

Coal sales from our Australian operations are primarily focused on East Asia. Coal sales from our Moatize operations, in Mozambique, target global steel markets, including Asia, India, Africa, Europe and the Americas. Our Chinese coal joint ventures direct their sales into the Chinese domestic market.

1.2.4 Competition

The global coal industry comprises markets for black (metallurgical and thermal) and brown (lignite) coal, and is highly competitive.

Growth in the demand for steel, especially in Asia, underpins strong demand for both metallurgical and thermal coal. We expect robust supply and lower prices for metallurgical coal in the next few years, which will reduce investments in new greenfield projects and may result in supply imbalances in the long term. Port and rail constraints in certain supply regions could lead to limited availability of incremental metallurgical coal production without significant capital expenditures.

Competition in the coal industry is based primarily on the economics of production costs, coal quality and transportation costs. Our key competitive strengths include the strategic geographic location of our current and future supply bases and our production cash costs relative to other producers.

Major participants in the seaborne coal market are subsidiaries, affiliates and joint ventures of BHP Billiton, Glencore Xstrata, Anglo American, Rio Tinto, Teck Cominco, Peabody, Walter Energy and the Shenhua Group, among others.

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1.3 Manganese ore and ferroalloys

1.3.1 Manganese ore operations and production

We conduct our manganese mining operations in Brazil through our wholly-owned subsidiaries Vale Manganês S.A. ("Vale Manganês"), Vale Mina do Azul S.A. and MCR. Our mines produce three types of manganese ore products:

- metallurgical ore, used primarily for the production of ferroalloys;
- natural manganese dioxide, suitable for the manufacture of electrolytic batteries; and
- chemical ore, used in several industries for the production of fertilizer, pesticides and animal feed, and used as a pigment in the ceramics industry.

Mining Site	Company	Location	Description/History	Mineralization	Operations	Power Source	Access/Transportation
Azul	Vale Mina do Azul S.A.	State of Pará	Open-pit mining operations and on-site beneficiation plant.	High-grade ores (at least 40% manganese grade).	Crushing and classification steps, producing lumps and fines.	Supplied through the national electricity grid. Acquired from regional utility companies.	Manganese ore is transported by truck and EFC railroad to the Ponta da Madeira maritime terminal.
Morro da Mina	Vale Manganês	State of Minas Gerais	Open-pit mining operations and one major beneficiation plant.	Low-grade ores (24% manganese grade).	Crushing and screening/dense medium classification steps, producing lumps and fines to the Barbacena and Ouro Preto ferroalloy plants.	Supplied through the national electricity grid. Acquired from regional utility companies.	Manganese ore is transported by trucks to the Ouro Preto and Barbacena ferroalloy plants.
Urucum	MCR	State of Mato Grosso do Sul	Underground mining operations and on-site beneficiation plant.	High-grade ores (at least 40% manganese grade).	Crushing and classification steps, producing lumps and fines.	Supplied through the national electricity grid. Acquired from regional utility companies.	Manganese ore is transported to the port of Rosario (Argentina) by barges traveling along the Paraguay and Paraná rivers.

The following table sets forth information about our manganese production.

Mine	Type	Production for the year ended December 31, 2011	2012	2013	2013 Process Recovery
		(million metric tons)			(%)
Azul	Open pit	2.1	1.9	1.9	57.8
Morro da Mina	Open pit	0.1	0.2	0.1	65.6
Urucum	Underground	0.3	0.3	0.4	81.9
Total		2.5	2.4	2.4	

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1.3.2 Ferroalloys operations and production

We conduct our ferroalloys business through our wholly-owned subsidiary Vale Manganês.

The production of ferroalloys consumes significant amounts of electricity, representing 5.7% of our total consumption in 2013. The electricity supply to our ferroalloy plants is provided through power purchase agreements. For information on the risks associated with potential energy shortages, see *Risk factors*.

We produce several types of manganese ferroalloys, such as high carbon and medium carbon ferro-manganese and ferro-silicon manganese.

Plant	Location	Description/History	Nominal Capacity	Power Source
Minas Gerais Plants	Cities of Barbacena and Ouro Preto	Barbacena has six furnaces, two refining stations and a briquetting plant. Ouro Preto has three furnaces.	74,000 tons per year at Barbacena plant and 65,000 tons per year at Ouro Preto plant.	Supplied through the national electricity grid. Energy acquired from independent producers through power purchase agreements.
Bahia Plant	City of Simões Filho	Four furnaces, two converters and a sintering plant.	150,000 tons per year.	Supplied through the national electricity grid. Energy acquired from independent producers through power purchase agreements.

The following table sets forth information about our ferroalloys production.

	Production for the year ended December 31,		
Plant	**2011**	**2012**	**2013**
	(thousand metric tons)		
Barbacena	67	65	45
Ouro Preto	61	62	48
Simões Filho	76	79	82
Total	204	206	175

1.3.3 Manganese ore and ferroalloys: sales and competition

The markets for manganese ore and ferroalloys are highly competitive. Competition in the manganese ore market takes place in two segments. High-grade manganese ore competes on a global seaborne basis, while low-grade ore competes on a regional basis. For some ferroalloys, high-grade ore is mandatory, while for others high- and low-grade ores are complementary. The main suppliers of high-grade ores are located in South Africa, Gabon, Australia and Brazil. The main producers of low-grade ores are located in the Ukraine, China, Ghana, Kazakhstan, India and Mexico.

The ferroalloy market is characterized by a large number of participants who compete primarily on the basis of price. The principal competitive factors in this market are the costs of manganese ore, electricity, logistics and reductants. We compete with both stand-alone producers and integrated producers that also mine their own ore. Our competitors are located principally in countries that produce manganese ore or steel. For further information about demand and prices, see *Operating and financial review and prospects Major factors affecting prices.*

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2. Base metals

2.1 Nickel

2.1.1 Operations

We conduct our nickel operations primarily through our wholly-owned subsidiary Vale Canada, which operates two nickel production systems, one in the North Atlantic and the other in the Asia Pacific. A third nickel production system, Onça Puma, in the South Atlantic, resumed its ramp-up activities in late 2013. Our nickel operations are set forth in the following table.

Mining System/Company	Location	Description/History	Operations	Mining Title	Power Source	Access/Transportation
North Atlantic						
Vale Canada	Canada Sudbury, Ontario	Integrated mining, milling, smelting and refining operations to process ore into finished nickel with a nominal capacity of 66,000 metric tons of refined nickel per year and additional nickel oxide feed for the refinery in Wales. Mining operations in Sudbury began in 1885. Vale acquired the Sudbury operations in 2006.	Primarily underground mining operations with nickel sulfide ore bodies, which also contain some copper, cobalt, PGMs, gold and silver. Construction of the Totten mine was completed in 2013. We also smelt and refine an intermediate product, nickel concentrate, from our Voisey's Bay operations. In addition to producing finished nickel in Sudbury, we ship a nickel oxide intermediate product to our nickel refinery in Wales for processing to final products. We also have capabilities to ship nickel oxide to our Asian refineries.	Patented mineral rights with no expiration date; mineral leases expiring between 2014 and 2025; and mining license of occupation with indefinite expiration date.	Supplied by Ontario's provincial electricity grid and produced directly by Vale.	Located by the Trans-Canada highway and the two major railways that pass through the Sudbury area. Finished products are delivered to the North American market by truck. For overseas customers, the products are loaded into containers and travel intermodally (truck/rail/containership) through both east and west coast Canadian ports.
Vale Canada	Canada Thompson, Manitoba	Integrated mining, milling, smelting and refining operations to process ore into finished nickel with a nominal capacity of 45,000 metric tons of refined nickel per year. Thompson mineralization was discovered in 1956 and was acquired by Vale in 2006.	Primarily underground mining operations with nickel sulfide ore bodies, which also contain some copper and cobalt. Local concentrate combines with nickel concentrate from our Voisey's Bay operations for smelting and refining to high quality nickel plate product. Smelting and refining are being considered for phase out in Thompson, due to pending federal sulfur dioxide	Order in Council leases expiring between 2020 and 2030; mineral leases expiring in 2034.	Supplied by the Provincial utility company.	Finished products are delivered to market by truck in North America. For overseas customers, the products are loaded into containers and travel intermodally (truck/rail/containership) to final destination through both west coast and east coast Canadian ports.

	emission standards that are expected to come into effect in 2015.

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Mining System/Company	Location	Description/History	Operations	Mining Title	Power Source	Access/Transportation
Vale Newfoundland & Labrador Limited	Canada Voisey's Bay, Newfoundland and Labrador	Open-pit mining and milling of ore into intermediate products-nickel and copper concentrates. Voisey's Bay's operations started in 2005 and were purchased by Vale in 2006.	Comprised of the Ovoid open pit mine, and deposits with the potential for underground operations at a later stage. We mine nickel sulfide ore bodies, which also contain some copper and cobalt. Nickel concentrates are currently shipped to our Sudbury and Thompson operations for final processing (smelting and refining) while copper concentrate is sold in the market. Once the Long Harbour refinery is operational, our nickel concentrate from Labrador will be redirected to the facility and processed on a prioritized basis.	Mining lease expiring in 2027.	100% supplied through Vale owned diesel generators.	The nickel and copper concentrates are transported to the port by haulage trucks and then shipped by drybulk vessels to either overseas markets or to our Canadian operations for further refining.
Vale Europe Limited	U.K. Clydach, Wales	Stand-alone nickel refinery (producer of finished nickel), with nominal capacity of 40,000 metric tons per year. Clydach's refinery commenced operations in 1902 and was acquired by Vale in 2006.	Processes a nickel intermediate product, nickel oxide, supplied from either our Sudbury or Matsuzaka operations to produce finished nickel in the form of powders and pellets.		Supplied through the national electricity grid.	Transported to final customer in the UK and continental Europe by truck. Product for overseas customers are trucked to the ports of Southhampton and Liverpool and shipped by ocean container.

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Mining System/Company	Location	Description/History	Operations	Mining Title	Power Source	Access/Transportation
Asia Pacific						
PT Vale Indonesia Tbk ("PTVI", previously PT International Nickel Indonesia Tbk)	Indonesia Sulawesi Sorowako,	Open cast mining area and related processing facility (producer of nickel matte, an intermediate product) with a nominal capacity of approximately 80,000 metric tons of nickel in matte per year. PTVI's shares are traded on the Indonesia Stock Exchange. We indirectly hold 59.3% of PTVI's share capital, Sumitomo Metal Mining Co., Ltd ("Sumitomo") holds 20.1%, Sumitomo Corporation holds 0.1% and the public holds 20.5%. PTVI was established in 1968, commenced its commercial operations in 1978 and was acquired by Vale in 2006.	PTVI mines nickel laterite ore and produces nickel matte, which is shipped primarily to nickel refineries in Japan. Pursuant to life-of-mine off-take agreements, PTVI sells 80% of its production to our wholly-owned subsidiary Vale Canada and 20% of its production to Sumitomo.	Contract of work expiring in 2025, which is currently being renegotiated with the Indonesian government.	Produced primarily by PVTI's low cost hydroelectric power plants on the Larona River (there are currently three facilities). PTVI has thermal generating facilities in order to supplement its hydroelectric power supply with a source of energy that is not subject to hydrological factors.	Trucked approximately 55 km to the river port at Malili and then loaded onto barges in order to load break-bulk vessels for onward shipment to Japan.
Vale Nouvelle-Calédonie S.A.S ("VNC")	New Caledonia Province Southern	Mining and processing operations (producer of nickel oxide and cobalt carbonate). VNC's shares are held by Vale (80.5%), Sumic (14.5%) and Société de Participation Minière du Sud Caledonien SAS ("SPMSC") (5%). (1)	We are currently ramping up our nickel operation in New Caledonia. VNC utilizes a High Pressure Acid Leach ("HPAL") process to treat limonitic laterite and saprolitic laterite ores. We expect to continue to ramp-up VNC over the next three years to reach nominal production capacity of 57,000 metric tons per year of nickel contained in nickel oxide, which will be further processed in our facilities in Asia, and hydroxide cake form, and 4,500 metric tons of cobalt in carbonate form.	Mining concessions expiring between 2015 and 2051.	Supplied through the national electricity grid and by independent producers.	Products are packed into containers and are trucked approximately 4km to Prony port.

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Mining System/Company	Location	Description/History	Operations	Mining Title	Power Source	Access/Transportation
Vale Japan Limited	Japan Matsuzaka	Stand-alone nickel refinery (producer of intermediate and finished nickel), with nominal capacity of 60,000 metric tons per year. Vale owns 87.2% of the shares, and Sumitomo owns the remaining shares. The refinery was built in 1965 and was acquired by Vale in 2006.	Produces intermediate products for further processing in our refineries in China, Korea and Taiwan, and finished nickel products using nickel matte sourced from PTVI.		Supplied through the national electricity grid. Acquired from regional utility companies.	Products trucked over public roads to customers in Japan. For overseas customers, the product is stuffed into containers at the plant and shipped from the ports of Yokkaichi and Nagoya.
Vale Taiwan Ltd	Taiwan Kaoshiung	Stand-alone nickel refinery (producer of finished nickel), with nominal capacity of 18,000 metric tons per year. The refinery commenced production in 1983 and was acquired by Vale in 2006.	Produces finished nickel primarily for the stainless steel industry, using intermediate products from our Matsuzaka and New Caledonian operations.		Supplied through the national electricity grid. Acquired from regional utility companies.	Trucked over public roads to customers in Taiwan. For overseas customers, the product is stuffed into containers at the plant and shipped from the port of Kaoshiung.
Vale Nickel (Dalian) Co., Ltd	China Dalian, Liaoning	Stand-alone nickel refinery (producer of finished nickel), with nominal capacity of 32,000 metric tons per year. Vale owns 98.3% of the shares and Ningbo Sunhu Chemical Products Co., Ltd. owns the remaining 1.7%. The refinery commenced production in 2008.	Produces finished nickel for the stainless steel industry, using intermediate products primarily from our Matsuzaka and New Caledonian operations.		Supplied through the national electricity grid. Acquired from regional utility companies.	Product moved over public roads by truck and by railway to customers in China. It is also shipped in ocean containers to overseas and some domestic customers.
Korea Nickel Corporation	South Korea Onsan	Stand-alone nickel refinery (producer of finished nickel), with nominal capacity of 30,000 metric tons per year. Vale owns 25.0% of the shares, and the remaining shares are held by Korea Zinc Co., Ltd, Posteel Co., Ltd, Young Poong Co., Ltd. and others. The refinery commenced production in 1989.	Produces finished nickel for the local stainless steel industry in Korea, primarily using intermediate products containing about 75% nickel (in the form of nickel oxide) primarily from our Matsuzaka operations.		Supplied through the national electricity grid. Acquired from regional utility companies.	KNC's production is moved by truck over public roads to customers in Korea and is exported in containers to overseas customers from the ports of Busan and Ulsan.

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Mining System/Company	Location	Description/History	Operations	Mining Title	Power Source	Access/Transportation
South Atlantic						
Vale/Onça Puma	Brazil Ourilândia do Norte, Pará	Mining, smelting and refining operation producing a high quality ferronickel for application within the stainless steel industry.	The Onça Puma mine is built on lateritic nickel deposits of saprolitic laterite ore. The operation produces ferronickel via the rotary kiln-electric furnace process. We resumed operations with a single line in 2013, with first metal being produced in the fourth quarter of 2013. The nominal capacity of the single line operation is estimated at 25,000 metric tons per year. We will evaluate opportunities to restart the second line operations in light of market outlook and single line furnace performance considerations.	Mining concession for indefinite period.	Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Vale.	The ferro-nickel is transported by public paved road and EFC railroad to the Itaqui maritime terminal in the state of Maranhão. It is exported in ocean containers.

(1) Sumic, a joint venture between Sumitomo and Mitsui, has a put option to sell us all of its shares in VNC under certain conditions see Note 31 to our consolidated financial statements. Once the start-up of commercial production is reached at VNC, Sumic will have an option to purchase 6.5% of VNC, which represents the dilution in Sumic's shareholding that occurred as a result of an October 2012 agreement. SPMSC has an obligation to increase its stake in VNC to 10% within two years after the start-up of commercial production.

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2.1.2 Production

The following table sets forth our annual mine production by operating mine (or on an aggregate basis for PTVI because it has mining areas rather than mines) and the average percentage grades of nickel and copper. The mine production at PTVI represents the product from PTVI's dryer kilns delivered to PTVI's smelting operations and does not include nickel losses due to smelting. For our Sudbury, Thompson and Voisey's Bay operations, the production and average grades represent the mine product delivered to those operations' respective processing plants and do not include adjustments due to beneficiation, smelting or refining. The following table sets forth information about ore production at our nickel mining sites.

	2011			2012			2013		
	(thousands of metric tons, except percentages)								
		Grade			Grade			Grade	
	Production	% Copper	% Nickel	Production	% Copper	% Nickel	Production	% Copper	% Nickel
Ontario operating mines									
Copper Cliff North	892	1.15	1.03	792	1.09	0.92	913	1.32	1.28
Creighton	991	1.72	2.22	797	1.80	1.84	915	2.01	2.19
Stobie	1,568	0.61	0.74	2,006	0.56	0.66	1,887	0.59	0.65
Garson	640	1.78	2.08	643	1.56	1.61	815	1.42	1.75
Coleman	1,363	3.02	1.77	1,062	2.58	1.51	1,515	3.15	1.52
Ellen	131	0.45	0.90	371	0.44	0.93	109	0.49	1.00
Totten	28	1.01	0.97	6	2.37	1.15	64	1.84	1.92
Gertrude	-	-	-	36	0.27	0.72	196	0.32	0.89
Total Ontario operations	5,612	1.61%	1.45%	5,714	1.29%	1.14%	6,414	1.61%	1.33%
Manitoba operating mines									
Thompson	1,182	-	1.76	1,160	-	1.86	1,175	-	2.07
Birchtree	721	-	1.36	643	-	1.34	613	-	1.39
Total Manitoba operations	1,903	-	1.61%	1,804	-	1.67%	1,788	-	1.84%
Voisey's Bay operating mines									
Ovoid	2,366	2.39%	3.38%	2,351	1.94%	3.11%	2,318	1.68%	2.89%
Sulawesi operating mining areas									
Sorowako	3,848	-	1.95%	3,678	-	2.02%	4,369	-	2.00%

New Caledonia operating mines									
VNC	1,043	-	1.29%	1,179	-	1.27%	1,860	-	1.36%
Brazil operating mines									
Onça Puma	1,466	-	1.86%	1,975	-	1.87%	263	-	2.28%

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The following table sets forth information about our nickel production, including: nickel refined through our facilities and intermediates designated for sale. The numbers below are reported on an ore-source basis.

Mine	Type	Production for the year ended December 31, 2011	2012	2013
		(thousand metric tons)		
Sudbury(1)	Underground	59.7	65.5	69.4
Thompson(1)	Underground	25.0	24.2	24.5
Voisey's Bay(2)	Open pit	68.9	61.9	63.0
Sorowako(3)	Open cast	67.8	69.0	78.8
Onça Puma(4)	Open pit	7.0	6.0	1.9
New Caledonia(5)	Open pit	5.1	4.5	16.3
External(6)	-	8.0	5.9	6.4
Total(7)		241.5	237.0	260.2

(1) Primary nickel production only (i.e., does not include secondary nickel from unrelated parties).

(2) Includes finished nickel produced at our Sudbury and Thompson operations.

(3) We have a 59.3% interest in PTVI, which owns the Sorowako mines, and these figures include the minority interests.

(4) Primary production only. Nickel contained in ferro-nickel.

(5) We have a 80.5% interest in VNC, and these figures include minority interests. Nickel contained in NHC and NiO.

(6) Finished nickel processed at our facilities using feeds purchased from unrelated parties.

(7) These figures do not include tolling of feeds for unrelated parties.

2.1.3 Customers and sales

Our nickel customers are broadly distributed on a global basis. In 2013, 44% of our total nickel sales were delivered to customers in Asia, 28% to North America, 27% to Europe and 1% to other markets. We have short-term fixed-volume contracts with customers for the majority of our expected annual nickel sales. These contracts generally provide stable demand for a significant portion of our annual production.

Nickel is an exchange-traded metal, listed on the LME, and most nickel products are priced according to a discount or premium to the LME price, depending primarily on the nickel product's physical and technical characteristics. Our finished nickel products represent what is known in the industry as "primary" nickel, meaning nickel produced principally from nickel ores (as opposed to "secondary" nickel, which is recovered from recycled nickel-containing material). Finished primary nickel products are distinguishable in terms of the following characteristics, which determine the product price level and the suitability for various end-use applications:

- nickel content and purity level: (i) intermediates has various levels of nickel content, (ii) nickel pig iron has 1.5-6% nickel, (iii) ferro-nickel has 10-40% nickel, (iv) refined nickel with less than 99.8% nickel, including products such as Tonimet and Utility nickel, (v) standard LME grade nickel has a minimum of 99.8% nickel, and (v) high purity nickel has a minimum of 99.9% nickel and does not contain specific elemental impurities;

- shape (such as pellets, discs, squares, and strips); and

size.

In 2013, the principal end-use applications for nickel were:

austenitic stainless steel (66% of global nickel consumption);

non-ferrous alloys, alloy steels and foundry applications (17% of global nickel consumption);

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nickel plating (7% of global nickel consumption); and

specialty applications, such as batteries, chemicals and powder metallurgy (10% of global nickel consumption).

In 2013, 63% of our refined nickel sales were made into non-stainless steel applications, compared to the industry average for primary nickel producers of 34%, which brings more stability to our sales volumes. As a result of our focus on such higher-value segments, our average realized nickel prices for refined nickel have typically exceeded LME cash nickel prices.

We offer sales and technical support to our customers on a global basis. We have a well-established global marketing network for finished nickel, based at our head office in Toronto, Canada. We also have sales and technical support offices in St. Prex (Switzerland), Saddle Brook, New Jersey (United States), Tokyo (Japan), Shanghai (China), Singapore and Kaohsiung (Taiwan). For information about demand and prices, see *Operating and financial review and prospects Major factors affecting prices*.

2.1.4 Competition

The global nickel market is highly competitive. Our key competitive strengths include our long-life mines, our low cash costs of production relative to other nickel producers, sophisticated exploration and processing technologies, and a diversified portfolio of products. Our global marketing reach, diverse product mix, and technical support direct our products to the applications and geographic regions that offer the highest margins for our products.

Our nickel deliveries represented 13% of global consumption for primary nickel in 2013. In addition to us, the largest suppliers in the nickel industry (each with its own integrated facilities, including nickel mining, processing, refining and marketing operations) are Mining and Metallurgical Company Norilsk Nickel ("Norilsk"), Jinchuan Nonferrous Metals Corporation ("Jinchuan"), Glencore Xstrata and BHP Billiton. Together with us, these companies accounted for about 47% of global refined primary nickel production in 2013.

While stainless steel production is a major driver of global nickel demand, stainless steel producers can use nickel products with a wide range of nickel content, including secondary nickel (scrap). The choice between primary and secondary nickel is largely based on their relative prices and availability. In recent years, secondary nickel has accounted for about 44-47% of total nickel used for stainless steels, and primary nickel has accounted for about 53-56%. Nickel pig iron, a low-grade nickel product made in China from imported lateritic ores (primarily from the Philippines and Indonesia), is primarily suitable for use in stainless steel production. With higher nickel prices and strong demand from the stainless steel industry, Chinese domestic production of nickel pig iron and low-grade ferro-nickel continues to expand. In 2013, Chinese nickel pig iron and ferro-nickel production is estimated to have been 490,000 metric tons, representing 25% of world primary nickel supply. We expect that the implementation of the Indonesian mining law, which restricts the export of unprocessed ores, may affect Chinese nickel pig iron and ferro-nickel production going forward.

Competition in the nickel market is based primarily on quality, reliability of supply and price. We believe our operations are competitive in the nickel market because of the high quality of our nickel products and our relatively low production costs.

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2.2 Copper

2.2.1 Operations

We conduct our copper operations at the parent-company level in Brazil and through our subsidiaries in Canada and Chile.

Mining Site/Location	Location	Description/History	Mineralization/Operations	Mining Title	Power Source	Access/Transportation
Brazil						
Vale/Sossego	Carajás, state of Pará.	Two main copper ore bodies, Sossego and Sequeirinho and a processing facility to concentrate the ore. Sossego was developed by Vale and started production in 2004.	The copper ore is mined using the open-pit method, and the run-of-mine is processed by means of standard primary crushing and conveying, SAG milling (a semi-autogenous mill that uses a large rotating drum filled with ore, water and steel grinding balls to transform the ore into a fine slurry), ball milling, copper concentrate flotation, tailings disposal, concentrate thickening, filtration and load out.	Mining concession for indefinite period.	Supplied through the national electricity grid. Acquired from Eletronorte, pursuant to power purchase agreements or produced directly by Vale.	We truck the concentrate to a storage terminal in Parauapebas and then transport it via the EFC railroad to the Ponta da Madeira maritime terminal in São Luís, in the state of Maranhão. We constructed an 85-kilometer road to link Sossego to Parauapebas.
Vale/Salobo	Carajás, state of Pará.	Salobo I processing plant is ramping up to a total capacity of 100,000 tpy of copper in concentrates. Salobo is expected to reach a total capacity of 200,000 tpy by 2016, after Salobo II expansion.	Our Salobo copper and gold mine is mined using the open-pit method, and the run-of-mine is processed by means of standard primary and secondary crushing, conveying, roller press grinding, ball milling, copper concentrate flotation, tailings disposal, concentrate thickening, filtration and load out.	Mining concession for indefinite period.	Supplied through the national electricity grid. Acquired from Eletronorte, pursuant to power purchase agreements or produced directly by Vale.	We truck the concentrate to a storage terminal in Parauapebas and then transport it via the EFC railroad to the Ponta da Madeira maritime terminal in São Luís, in the state of Maranhão. We constructed a 90-kilometer road to link Salobo to Parauapebas.

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Mining Site/Location	Location	Description/History	Mineralization/Operations	Mining Title	Power Source	Access/Transportation
Canada						
Vale Canada	Canada Sudbury, Ontario	See *Base metals Nickel Operations*	We produce two intermediate copper products, copper concentrates and copper anodes, and we also produce electrowon copper cathode as a by-product of our nickel refining operations.	Please refer to the table in our Nickel Operations		
Vale Canada/ Voisey's Bay	Canada Voisey's Bay, Newfoundland and Labrador	See *Base metals Nickel Operations*	At Voisey's Bay, we produce copper concentrates.	Please refer to the table in our Nickel Operations		
Zambia						
Lubambe	Zambian Copperbelt	Lubambe (previously Konkola North) copper mine, which includes an underground mine, plant and related infrastructure. TEAL (our 50/50 joint venture with ARM) has an 80% stake in Lubambe. Zambia Consolidated Copper Mines Investment Holding PLC Ltd. holds the remaining (20%) stake.	Nominal production capacity of 45,000 metric tons per year of copper in concentrates. Production started in October 2012.	Mining concessions expiring in 2033.	Long-term energy supply contract with Zesco (Zambian state owned power supplier).	Copper concentrates are transported by truck to local smelters.

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2.2.2 Production

The following table sets forth information on our copper production.

Mine	Type	Production for the year ended December 31, 2011	2012	2013
		(thousand metric tons)		
Brazil:				
Salobo	Open pit	-	13	65
Sossego	Open pit	109	110	119
Canada:				
Sudbury	Underground	101	79	103
Voisey's Bay	Open pit	51	42	36
Thompson	Underground	1	3	2
External(1)	-	31	29	24
Chile:				
Tres Valles(2)	Open pit and underground	9	14	11
Zambia:				
Lubambe(3)	Underground	-	1	9
Total		302	290	370

(1) We process copper at our facilities using feed purchased from unrelated parties.
(2) We sold Tres Valles mine in December 2013. The 2013 production is by the end of October.
(3) Vale's attributable production capacity of 40%.

2.2.3 Customers and sales

We sell copper concentrates from Sossego and Salobo phase I under medium and long-term contracts to copper smelters in South America, Europe, India and Asia. We have medium-term copper supply agreements with Glencore Canada Corporation for the sale of copper anodes and most of the copper concentrates produced in Sudbury. We sell copper concentrates from Voisey's Bay under medium-term contracts to customers in Europe. We sell electrowon copper from Sudbury in North America under short-term sales agreements.

2.2.4 Competition

The global copper market is highly competitive. Producers are integrated mining companies and custom smelters, covering all regions of the world, while consumers are principally wire rod and copper-alloy producers. Competition occurs mainly on a regional level and is based primarily on production costs, quality, reliability of supply and logistics costs. The world's largest copper cathode producers are Corporación Nacional del Cobre de Chile ("Codelco"), Aurubis AG, Glencore Xstrata, Freeport-McMoRan Copper & Gold Inc. ("Freeport-McMoRan") and Jiangxi Copper Corporation Ltd., operating at the parent-company level or through subsidiaries. Our participation in the global copper market is marginal.

Copper concentrate and copper anode are intermediate products in the copper production chain. Both the concentrate and anode markets are competitive, having numerous producers but fewer participants and smaller volumes than in the copper cathode market due to high levels of integration by the major copper producers.

In the copper concentrate market, mining occurs on a world basis with a predominant share from South America, while consumers are custom smelters located in Europe and Asia. Competition in the custom copper concentrate market occurs mainly on a global level and is based on production costs, quality, logistics costs and reliability of supply. The largest competitors in the copper concentrate market are BHP Billiton, Antofagasta plc, Freeport McMoRan, Glencore Xstrata, Codelco and Rio Tinto, operating at the parent-company level or through subsidiaries. Our market share in 2013 was about 4% of the total custom copper concentrate market.

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The copper anode/blister market has very limited trade within the copper industry; generally, anodes are produced to supply each company's integrated refinery. The trade in anodes/blister is limited to those facilities that have more smelting capacity than refining capacity or to those situations where logistics cost savings provide an incentive to source anodes from outside smelters. The largest competitors in the copper anode market in 2013 included Codelco, Glencore Xstrata, China Nonferrous Metals and Anglo American, operating at the parent-company level or through subsidiaries.

2.3 PGMs and other precious metals

As by-products of our Sudbury nickel operations in Canada, we recover significant quantities of PGMs, as well as small quantities of gold and silver. We also recover gold as a by-product of our operations at our Salobo and Sossego copper mines in Carajás, in the Brazilian state of Pará. We operate a processing facility in Port Colborne, Ontario, which produces PGMs, gold and silver intermediate products using feed from our Sudbury operation. We have a refinery in Acton, England, where we process our intermediate products, as well as feeds purchased from unrelated parties and toll-refined materials. In 2013, PGM concentrates from our Canadian operations supplied about 55% of our PGM production, which also includes metals purchased from unrelated parties. Our base metals marketing department sells our own PGMs and other precious metals, as well as products from unrelated parties and toll-refined products, on a sales agency basis.

In February 2013, we sold to Silver Wheaton 25% of the gold produced as a by-product at our Salobo copper mine, in Brazil, for the life of that mine, and 70% of the gold produced as a by-product at our Sudbury nickel mines, in Canada, for 20 years. Pursuant to the gold stream contract, Silver Wheaton received 34,325 oz of gold in 2013.

The following table sets forth information on our precious metals production.

Mine(1)	Type	2011	2012	2013
		(thousand troy ounces)		
Sudbury:				
Platinum	Underground	174	134	145
Palladium	Underground	248	251	352
Gold	Underground	182	69	91
Salobo:				
Gold	Open pit	-	20	117
Sossego:				
Gold	Open pit	90	75	78

(1) Production figures exclude precious metals purchased from unrelated parties and toll-refined materials.

2.4 Cobalt

We recover significant quantities of cobalt, classified as a minor metal, as a by-product of our nickel operations. In 2013, we produced 1,550 metric tons of refined cobalt metal at our Port Colborne refinery, 685 metric tons of cobalt in a cobalt-based intermediate product at our nickel operations in Canada and New Caledonia, and our remaining cobalt production consisted of 1,297 metric tons of cobalt contained in other intermediate products (such as nickel concentrates). As a result of the ramp-up of VNC operations in New Caledonia, our production of cobalt intermediate as a by-product of our nickel production will increase. We sell cobalt on a global basis. Our cobalt metal is electro-refined at our Port Colborne refinery and has very high purity levels (99.8%), which is superior to the LME contract specification. Cobalt metal is used in the production of various alloys, particularly for aerospace applications, as well as the manufacture of cobalt-based chemicals.

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The following table sets forth information on our cobalt production.

Mine	Type	Production for the year ended December 31, 2011	2012	2013
			(metric tons)	
Sudbury	Underground	593	589	853
Thompson	Underground	158	96	292
Voisey's Bay	Open pit	1,585	1,221	1,256
New Caledonia	Open pit	245	385	1,117
External sources(1)	-	93	52	13
Total		2,675	2,343	3,532

(1) These figures do not include tolling of feeds for unrelated parties.

3. Fertilizer nutrients

3.1 Phosphates

We operate our phosphates business through subsidiaries and joint ventures, as set forth in the following table.

Company	Location	Our share of capital Voting	Total	Partners
		(%)		
Vale Fertilizantes	Uberaba, Brazil	100.0	100.0	
MVM Resources International, B.V.	Bayóvar, Peru	51.0	40.0	Mosaic, Mitsui & Co
Vale Cubatão.	Cubatão, Brazil	100.0	100.0	

Vale Fertilizantes is a producer of phosphate rock, phosphate fertilizers ("P") (e.g., monoammonium phosphate ("MAP"), dicalcium phosphate ("DCP"), triple superphosphate ("TSP") and single superphosphate ("SSP")) and nitrogen ("N") fertilizers (e.g., ammonia and ammonium nitrate). It is the largest producer of phosphate and nitrogen crop nutrients in Brazil. Vale Fertilizantes operates the following phosphate rock mines, through concessions for indefinite period: Catalão, in the state of Goiás, and Tapira, Patos de Minas and Araxá, all in the state of Minas Gerais, and Cajati, in the state of São Paulo, in Brazil. In addition, Vale Fertilizantes has nine processing plants for the production of phosphate and nitrogen nutrients, located at Catalão, Goiás; Araxá, Patos de Minas and Uberaba, Minas Gerais; Guará, Cajati, and three plants in Cubatão, São Paulo. In July 2013, we concluded the sale of Araucária operations for US$234 million to Petrobras.

Since 2010 we have also operated the Bayóvar phosphate rock mine in Peru, with nominal capacity of 3.9 Mtpy, through a concession for indefinite period.

The following table sets forth information about our phosphate rock production.

Mine	Type	Production for the year ended December 31, 2011	2012	2013
			(thousand metric tons)	
Bayóvar	Open pit	2,544	3,209	3,546
Catalão	Open pit	947	1,026	1,057
Tapira	Open pit	2,011	2,068	1,869
Patos de Minas	Open pit	44	44	53
Arax	Open pit	1,231	1,084	1,111
Cajati	Open pit	582	550	640

Total	7,359	7,982	8,277

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The following table sets forth information about our phosphate and nitrogen nutrients production.

Product	Production for the year ended December 31, 2011	2012	2013
		(thousand metric tons)	
Monoammonium phosphate (MAP)	823	1,201	1,128
Triple superphosphate (TSP)	811	913	905
Single superphosphate (SSP)	2,638	2,226	2,102
Dicalcium phosphate (DCP)	580	511	444
Ammonia	619	475	347
Urea	628	483	219
Nitric acid	468	478	416
Ammonium nitrate	458	490	419

3.2 Potash

We conduct potash operations in Brazil at the parent-company level, with mining concessions of indefinite duration. We have leased Taquari-Vassouras, the only potash mine in Brazil (in Rosario do Catete, in the state of Sergipe), from Petrobras since 1992. In April 2012, we extended the lease for 30 more years. The following table sets forth information on our potash production.

Mine	Type	Production for the year ended December 31, 2011	2012	2013	2013 Process Recovery
			(thousand metric tons)		(%)
Taquari-Vassouras	Underground	625	549	492	85.9

3.3 Customers and sales

All potash sales from the Taquari-Vassouras mine are to the Brazilian market. In 2013, our production represented approximately 6% of total potash consumption in Brazil. We have a strong presence and long-standing relationships with the major market participants in Brazil, with more than 60% of our sales generated from four long-term customers.

Our phosphate products are mainly sold to fertilizer blenders. In 2013, our sales represented approximately 27% of total phosphate consumption in Brazil, with imports representing 56% of total supply. In the high-concentration segment our production supplied more than 32% of total Brazilian consumption, with products like MAP and TSP. In the low-concentration phosphate nutrients segment our sales represented approximately 33% of total Brazilian consumption, with products like SSP.

3.4 Competition

The industry is divided into three major nutrients: potash, phosphate and nitrogen. There are limited resources of potash around the world, with Canada, Russia and Belarus being the most important sources, each of which having only a few producers. The industry presents a high level of investment and a long time required for a project to mature. In addition, the potash industry is highly concentrated, with the 10 major producers accounting for more than 95% of total world production capacity. While potash is a scarcer resource, phosphate is more available, but all major exporters are located in the northern region of Africa (Morocco, Algeria and Tunisia) and in the United States. The top five phosphate rock producers (China, Morocco, United States, Russia and Brazil) account for 79% of global production, of which roughly 14% is exported. However, higher value-added products such as MAP and DAP are usually traded instead of phosphate rock due to cost efficiency.

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Brazil is one of the largest agribusiness markets in the world due to its high production, exports and consumption of grains and biofuels. It is the fourth-largest consumer of fertilizers in the world and one of the largest importers of potash, phosphates, phosphoric acid and urea. Brazil imports 93% of its potash consumption, which amounted to 8.1 Mtpy of KCl (potassium chloride) in 2013, 15% higher than 2012, from Canadian, German, Russian, Belarusian and Israeli producers, in descending order. In terms of global consumption, China, the United States, Brazil and India represent 58% of the total, with Brazil alone representing 17% of the total. Our fertilizer projects are highly competitive in terms of cost and logistics to supply the Brazilian market.

Most phosphate rock concentrate is consumed locally by downstream integrated producers, with the seaborne market corresponding to 14% of total phosphate rock production. Major phosphate rock exporters are concentrated in North Africa, mainly through state-owned companies, with Moroccan OCP Group holding 30% of the total seaborne market. Brazil imports 56% of the total phosphate nutrients it needs through both phosphate fertilizer products and phosphate rock. The phosphate rock imports supply non-integrated producers of phosphate fertilizer products such as SSP, TSP and MAP.

Nitrogen-based fertilizers are derived primarily from ammonia (NH3), which, in turn, is made from nitrogen present in the air and natural gas, making this an energy-intensive nutrient. Ammonia and urea are the main inputs for nitrogen-based fertilizers. Consumption of nitrogen-based fertilizers has a regional profile due to the high cost associated with transportation and storage of ammonia, which requires refrigerated and pressurized facilities. As a result, only 11% of the ammonia produced worldwide is traded. North America is the main importer, accounting for 33% of global trade. Main exporting regions are Central America, Russia, Eastern Europe and the Middle East.

4. Infrastructure

4.1 Logistics

We have developed our logistics business based on the transportation needs of our mining operations and we also provide transportation services for other customers.

We conduct our logistics businesses at the parent-company level and through subsidiaries and joint ventures, as set forth in the table below. One of these subsidiaries is VLI, which provides integrated logistics solutions through 9,742 km of railroads (FCA, FNS, EFVM and EFC), five inland terminals with a total storage capacity of 509,320 tons and three maritime terminals and ports operations. We currently own 100% of the stock of VLI, but we have agreed to sell interests in VLI to Mitsui, FI-FGTS and Brookfield, and upon closing, we will hold a 37.6% stake in VLI. We currently account for VLI in our financial statements as an asset held for sale. For more information, see *Business overview Significant changes in our business Sale of stakes in VLI.*

Company	Business	Location	Our share of capital		Partners
			Voting	Total	
			(%)		
Vale	Railroad (EFVM and EFC), port and maritime terminal operations	Brazil			
VLI(1)	Railroad, port, inland terminal and maritime terminal operations. Holding of certain cargo logistics assets	Brazil	37.6	37.6	FI-FGTS, Mitsui and Brookfield
FCA(1)(2)	Railroad operations	Brazil	37.6	37.6	FI-FGTS, Mitsui and Brookfield
FNS(1)(2)	Railroad operations	Brazil	37.6	37.6	FI-FGTS, Mitsui and Brookfield
MRS	Railroad operations	Brazil	46.8	47.6	CSN, Usiminas and Gerdau
CPBS	Port and maritime terminal operations	Brazil	100.0	100.0	
PTVI	Port and maritime terminal operations	Indonesia	59.3	59.3	Sumitomo, public investors

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Company	Business	Location	Our share of capital		Partners
			Voting	Total	
			(%)		
Vale Logística Argentina	Port operations	Argentina	100.0	100.0	
CEAR(3)	Railroad	Malawi	43.4	43.4	Portos e Caminhos de Ferro de Moçambique, E.P.
CDN(4)	Railroad and maritime terminal operations	Mozambique	43.4	43.4	Portos e Caminhos de Ferro de Moçambique, E.P.
CLN	Railroad and port operations	Mozambique	80.0	80.0	Portos e Caminhos de Ferro de Moçambique, E.P.
Vale Logistics Limited	Railroad operations	Malawi	100.0	100.0	
Transbarge Navegación	Paraná and Paraguay Waterway System (Convoys)	Paraguay	100.0	100.0	
VNC	Port and maritime terminal operations	New Caledonia	80.5	80.5	Sumic, SPMSC

(1) Vale currently owns 100% of the total and voting stock of VLI. Upon completion of the sales to Mitsui, FI-FGTS and Brookfield, Vale will hold the voting and total stakes indicated in this table. Vale, Mitsui, FI-FGTS and Brookfield will jointly control VLI through a shareholders' agreement.

(2) FCA and FNS are controlled by VLI.

(3) Vale controls its interest in CEAR through an 85% interest in SDCN.

(4) Vale controls its interest in CDN through an 85% interest in SDCN.

4.1.1 Railroads

Brazil

Vitória a Minas railroad ("*EFVM*"). The EFVM railroad links our Southeastern System mines in the Iron Quadrangle region in the Brazilian state of Minas Gerais to the Tubarão Port, in Vitória, in the Brazilian state of Espírito Santo. We operate this 905-kilometer railroad under a 30-year renewable concession, which expires in 2027. The EFVM railroad consists of two lines of track extending for a distance of 601 kilometers to permit continuous railroad travel in opposite directions, and single-track branches of 304 kilometers. Industrial manufacturers are located in this area and major agricultural regions are also accessible to it. VLI has rights to use railroad transportation capacity on our EFVM railroad. In 2013, the EFVM railroad transported a daily average of 321,890 metric tons of iron ore, or a total of 77.53 billion ntk of iron ore and other cargo, of which 15.56 billion ntk, or 20.1%, consisted of cargo transported for customers, including iron ore for Brazilian customers. The EFVM railroad also carried 890 thousand passengers in 2013. In 2013, we had a fleet of 321 locomotives and 15,212 wagons at EFVM.

Carajás railroad ("*EFC*"). The EFC railroad links our Northern System mines in the Carajás region in the Brazilian state of Pará to the Ponta da Madeira maritime terminal, in São Luis, in the Brazilian state of Maranhão. We operate the EFC railroad under a 30-year renewable concession, which expires in 2027. EFC extends for 892 kilometers from our Carajás mines to our Ponta da Madeira maritime terminal complex facilities located near the Itaqui Port. Its main cargo is iron ore, principally carried for us. VLI has rights to use railroad transportation capacity on our EFC railroad. In 2013, the EFC railroad transported a daily average of 296,155 metric tons of iron ore. In 2013, the EFC railroad carried a total of 102.03 billion ntk of iron ore and other cargo, 3.50 billion ntk of which was cargo for customers, including iron ore for Brazilian customers. EFC also carried 308 thousand passengers in 2013. EFC supports the largest train, in terms of capacity, in Latin America, which measures 3.4 kilometers, weighs 41,838 gross metric tons when loaded and has 330 cars. In 2013, EFC had a fleet of 266 locomotives and 16,434 wagons.

The principal items of cargo of the EFVM and EFC railroads are:

- iron ore and iron ore pellets, carried for us and customers;
- steel, coal, pig iron, limestone and other raw materials carried for customers with steel mills located along the railroad;

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agricultural products, such as soybeans, soybean meal and fertilizers; and

other general cargo, such as pulp, fuel and chemical products.

We charge market prices for customer freight, including iron ore pellets originating from joint ventures and other enterprises in which we do not have a 100% equity interest. Market prices vary based on the distance traveled, the type of product transported and the weight of the freight in question, and are regulated by the Brazilian transportation regulatory agency, ANTT (*Agência Nacional de Transportes Terrestres*).

Ferrovia Centro-Atlântica ("*FCA*"). FCA is a subsidiary of VLI, which operates the central-east regional railway network of the Brazilian national railway system under a 30-year renewable concession, which expires in 2026. The central east network has 7,220 kilometers of track, extending into the states of Sergipe, Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro, Goiás and the Federal District of Brazil. It connects with our EFVM railroad near the cities of Belo Horizonte, in the state of Minas Gerais, and Vitória, in the state of Espírito Santo. FCA operates on the same track gauge as our EFVM railroad and provides access to the port of Santos, in the state of São Paulo. In 2013, the FCA railroad transported a total of 13.92 billion ntk of cargo, essentially all of it for customers. In 2013, FCA had a fleet of 891 locomotives and 16,744 wagons, including owned and leased.

Ferrovia Norte-Sul railroad ("*FNS*"). FNS is a wholly-owned subsidiary of VLI, which has a 30-year renewable subconcession for the commercial operation of a 724-kilometer stretch of the FNS railroad in Brazil. Since 1989, we have operated a segment of FNS, which connects to the EFC railroad, enabling access to the port of Itaqui, in São Luís, where our Ponta da Madeira maritime terminal is located. A 452-kilometer extension was concluded in December 2008. In 2013, the FNS railroad transported a total of 2.46 billion ntk of cargo for customers. This new railroad creates a new corridor for the transportation of general cargo, mainly for the export of soybeans, rice and corn produced in the center-northern region of Brazil. In 2013, FNS had a fleet of 41 locomotives and 639 wagons, including owned and leased.

MRS Logística S.A. ("*MRS*"). The MRS railroad is 1,643 kilometers long and links the Brazilian states of Rio de Janeiro, São Paulo and Minas Gerais. In 2013, the MRS railroad carried a total of 156.1 million metric tons of cargo, including 68.4 million metric tons of iron ore and other cargo from Vale.

Africa

We are developing the Nacala Corridor, which will connect the Moatize site to the Nacala-à-Velha maritime terminal, located in Nacala, Mozambique, and which crosses into the Republic of Malawi. The Nacala Corridor consists of railway and port infrastructure, including greenfield and existing railways in Mozambique and Malawi and a new coal port in Mozambique. These projects will allow for the expansion of Moatize and support our operations in Central and Eastern Africa. In Mozambique, we are developing the greenfield projects under two concession agreements held by our subsidiary Corredor Logístico Integrado de Nacala S.A. ("CLN"), which will expire in 2043, subject to renewal, and we will rehabilitate existing railroads under a concession held by our subsidiary Corredor de Desenvolvimento do Norte S.A. ("CDN"), which will expire in 2035. In Malawi, we are developing a greenfield railroad under a concession held by our subsidiary Vale Logistics Limited ("VLL"), which will expire in 2041, subject to renewal, and we will rehabilitate existing railroads under a concession held by our subsidiary Central East African Railway Company Limited ("CEAR"), which was extended in 2013 for a 30-year period from the commencement of rail services under VLL's greenfield railway concession. We will also invest in the construction of railway links from Moatize to a new deep water maritime terminal to be built in Nacala-à-Velha by CLN. We continue to consider partnerships for the utilization and potential future development of the Nacala Corridor.

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4.1.2 Ports and maritime terminals

Brazil

We operate a port and maritime terminals principally as a means to complete the delivery of our iron ore and iron ore pellets to bulk carrier vessels serving the seaborne market. See *Bulk materials Iron ore pellets Operations*. We also use our port and terminals to handle customers' cargo. In 2013, 1.2% of the cargo handled by our port and terminals represented cargo handled for customers.

Tubarão Port. The Tubarão Port, which covers an area of 18 square kilometers, is located near the Vitória Port in the Brazilian state of Espírito Santo and contains the iron ore maritime terminal, which we operate directly, and the Praia Mole Terminal and the Terminal de Produtos Diversos, which are operated by VLI.

The iron ore maritime terminal has two piers. Pier I can accommodate two vessels at a time, one of up to 170,000 DWT on the southern side and one of up to 200,000 DWT on the northern side. Pier II can accommodate one vessel of up to 405,000 DWT at a time, limited at 23 meters draft. In Pier I there are two ship loaders, which can load up to 13,500 metric tons per hour each. In Pier II there are two ship loaders that work alternately and can each load up to 16,000 metric tons per hour continuously. In 2013, 101.6 million metric tons of iron ore and iron ore pellets were shipped through the terminal for us. The iron ore maritime terminal has a storage yard with a capacity of 3.4 million metric tons.

Praia Mole terminal is principally a coal terminal and handled 9.8 million metric tons in 2013.

Terminal de Produtos Diversos handled 7.4 million metric tons of grains and fertilizers in 2013.

Ponta da Madeira maritime terminal. Our Ponta da Madeira maritime terminal is located near the port of Itaqui, in the Brazilian state of Maranhão. Pier I can accommodate vessels of up to 420,000 DWT and has a maximum loading rate of 16,000 tons per hour. Pier II can accommodate vessels of up to 155,000 DWT and has a maximum loading rate of 8,000 tons per hour. Pier III, which has two berths and three shiploaders, can accommodate vessels of up to 200,000 DWT at the south berth and 180,000 DWT at the north berth (or two vessels of 180,000 DWT simultaneously), subject to tide conditions, and has a maximum loading rate of 8,000 metric tons per hour in each shiploader. Pier IV (south berth) is able to accommodate vessels of up to 420,000 DWT and have two ship loaders that work alternately with a maximum loading rate of 16,000 tons per hour. Cargo shipped through our Ponta da Madeira maritime terminal consists principally of our own iron ore production, with the exception of Pier II, which is used for general cargo. Other cargo includes manganese ore produced by us and pig iron and soybeans for unrelated parties. In 2013, 107 million metric tons of iron ore were handled through the terminal. The Ponta da Madeira maritime terminal has a storage yard with a static capacity of 8.9 million tons, which will be expanded to 10.7 million tons.

Itaguaí maritime terminal Cia. Portuária Baía de Sepetiba ("CPBS"). CPBS is a wholly-owned subsidiary that operates the Itaguaí terminal, in the Sepetiba Port, in the Brazilian state of Rio de Janeiro. Itaguaí's maritime terminal has a pier with one berth that allows the loading of ships up to 18 meters of draft and approximately 200,000 DWT of capacity. In 2013, the terminal uploaded 21.9 million metric tons of iron ore.

Guaíba Island maritime terminal. We operate a maritime terminal on Guaíba Island in the Sepetiba Bay, in the Brazilian state of Rio de Janeiro. The iron ore terminal has a pier with two berths that allows the loading of ships of up to 350,000 DWT. In 2013, the terminal uploaded 39.9 million metric tons of iron ore.

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Inácio Barbosa maritime terminal ("TMIB"). Vale operates the Inácio Barbosa maritime terminal, located in the Brazilian state of Sergipe. The terminal is owned by Petrobras. Vale and Petrobras are parties to a service agreement that provides for the operation of this terminal by Vale until June 2014. VLI and Petrobras have entered into a consortium agreement that provides for the operation of TMIB by VLI for a 25-year period beginning after all governmental approvals are received. This consortium agreement has been approved by both CADE and the National Agency of Waterway Transportation ("ANTAQ") and is still subject to approval by the Brazilian Secretary of Ports ("SEP").

Santos maritime terminal ("TIPLAM"). VLI operates a maritime terminal in Santos, in the Brazilian state of São Paulo. The terminal has a pier that is equipped to receive ships of up to 67,000 DWT. In 2013, the terminal handled 2.3 million metric tons of ammonia and bulk solids.

Argentina

Vale Logística Argentina S.A. ("Vale Logística Argentina") operates a terminal at the San Nicolas port located in the province of Buenos Aires, Argentina, where Vale Logística Argentina has a permit to use a storage yard covering 20,000 square meters until October 2016 and an agreement with third parties for an extra storage yard of 27,000 square meters. We handled 1.17 million metric tons of iron and manganese ore through this port in 2013, which came from Corumbá, Brazil, via the Paraguay and Paraná rivers, for shipment to Brazilian, Asian and European markets. The loading rate of this port is 15,000 tons per day and the unloading rate is 11,000 tons per day.

Oman

Vale Oman Distribuition Center LLC ("VODC") operates a distribution center in Liwa, Sultanate of Oman. The maritime terminal has a 1.4 kilometer deep water jetty, which is integrated with a storage yard that has a throughput capacity to handle 40 Mtpy of iron ore and pellets per year. The loading nominal capacity is 10,000 tons per hour and the unloading nominal capacity is 9,000 tons per hour.

Indonesia

PTVI owns and operates two ports in Indonesia to support its nickel mining activities.

The Balantang Special Port is located in Balantang Village, South Sulawesi, and has two types of piers, with total capacity of 6,000 DWT: a barge slip for barges with capacity of up to 4,000 DWT for dry bulk cargo and a general cargo wharf for vessels of up to 2,000 DWT.

The Tanjung Mangkasa Special Port is located in Lampia Village, South Sulawesi, with mooring buoys that can accommodate vessels with capacity of up to 20,000 DWT, and a terminal that can accommodate fuel tanker vessels with capacity of up to 2,000 DWT, totaling capacity of 22,000 DWT.

New Caledonia

We own and operate a port in Prony Bay, Province Sud, New Caledonia. This port has three terminals, including a passenger ferry terminal able to berth two ships up to 50m long, a dry bulk wharf where vessels of up to 55,000 DWT can unload at a rate of 10,000 tons per day and a general cargo wharf where vessels up to 215m long can berth. The general cargo wharf can move containers at a rate of 10 per hour and liquid fuels (LPG, HFO, Diesel) at a rate of 600 cubic meters per hour, and break-bulk. The port's container yard, covering an area of approximately 13,000 square meters, can receive up to 800 units. A bulk storage yard is linked to the port by a conveyor and has a storage capacity of 90,000 tons of limestone, 95,000 tons of sulfur, and 60,000 tons of coal.

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4.1.3 Shipping

We continue to develop and operate a low-cost fleet of vessels, comprised of our own ships and ships hired pursuant to medium and long-term contracts, to support our bulk materials business. At the end of 2013, 29 of our vessels were in operation, including 15 Valemax vessels, with a capacity of 400,000 DWT each, and 14 other vessels (capesizes, ore carriers and very large ore carriers) with capacities ranging from150,000 to 250,000 DWT. We also leased 16 Valemax vessels under long-term contracts. We expect the delivery of four more owned Valemax vessels from Chinese shipyard in 2014. To support our iron ore delivery strategy, Vale owns and operates two floating transfer stations in Subic Bay, Philippines that transfer iron ore from Valemax vessels to smaller vessels that deliver the cargo to its destinations. We expect this service to enhance our ability to offer our iron ore products in the Asian market at competitive prices and to increase our market share in China and the global seaborne market. In 2013, we shipped approximately 135 million metric tons of iron ore and pellets on a CFR basis.

In the Paraná and Paraguay waterway system, we transport iron ore and manganese ores through our subsidiary Transbarge Navegación, which transported 2.09 million tons through the waterway system in 2013, and our subsidiary Vale Logística Argentina, which loaded 1.17 million tons of ore at San Nicolas port into ocean-going vessels in 2013. In 2010, we also purchased two new convoys (two pushers and 32 barges) that will begin operations in 2014.

We operate a fleet of 24 tug boats in maritime terminals in Brazil, specifically in Vitória (in the state of Espírito Santo), Trombetas and Vila do Conde (in the state of Pará), São Luís (in the state of Maranhão), Mangaratiba (in the state of Rio de Janeiro) and Aracaju (in the state of Sergipe).

4.2 Energy

We have developed our energy assets based on the current and projected energy needs of our operations, with the goal of reducing our energy costs and minimizing the risk of energy shortages.

Brazil

Energy management and efficient supply in Brazil are priorities for us, given the uncertainties associated with changes in the regulatory environment and the risk of rising electricity prices. In 2013, our installed capacity in Brazil was 1.2 GW. We use the electricity produced by these plants for our internal consumption needs. We currently have stakes in nine hydroelectric power plants and four small hydroelectric power plants in operation. The hydroelectric power plants of Igarapava, Porto Estrela, Funil, Candonga, Aimorés, Capim Branco I, Capim Branco II and Machadinho are located in the Southeastern and Southern regions, and Estreito is located in the Northern region. Once the transactions we have undertaken with CEMIG GT are complete, the joint venture Aliança Geração will hold our and CEMIG GT's interests in the following hydroelectric power plants: Porto Estrela, Igarapava, Funil, Capim Branco I e II, Aimorés and Candonga. See *Business Overview Significant changes in our business Restructuring our investments in power generation*.

We currently have a 9% stake in Norte Energia, the company established to develop and operate the Belo Monte hydroelectric plant in the Brazilian state of Pará. Upon completion of the transactions we entered into with CEMIG GT, we will indirectly hold a 4.59% stake in Norte Energia through Aliança Norte Energia. Our participation in the Belo Monte project gives us the right to purchase 9% of the electricity generated by the plant, which has already been contracted through a long term power purchase agreement entered into with Norte Energia. This power purchase agreement will not be affected by the transactions described in *Business Overview Significant changes in our business Restructuring our investments in power generation*.

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We also produce palm oil in the Brazilian state of Pará, which will be used to produce biodiesel. The biodiesel will be blended with regular diesel to produce a fuel called B20 (with 20% of biodiesel), which will be used to power our fleet of locomotives, trucks and heavy-duty machinery in the Northern System operations.

Canada

In 2013, our wholly-owned and operated hydroelectric power plants in Sudbury generated 20% of the electricity requirements of our Sudbury operations. The power plants consist of five separate generation stations with an installed generator nameplate capacity of 56 MW. The output of the plants is limited by water availability, as well as by constraints imposed by a water management plan regulated by the provincial government of Ontario. Over the course of 2013, average demand for electrical energy was 197 MW to all surface plants and mines in the Sudbury area.

In 2013, diesel generation provided 100% of the electric requirements of our Voisey's Bay operations. We have six diesel generators on-site, of which normally only four are in operation, producing 12 MW.

Indonesia

Energy costs are a significant component of our nickel production costs for the processing of lateritic and saprolitic ores at PTVI operations in Indonesia. A major portion of PTVI's electric furnace power requirements is supplied at a low cost by its three hydroelectric power plants on the Larona River: (i) the Larona plant, which has an average generating capacity of 165 MW, (ii) the Balambano plant, which has an average capacity of 110 MW and (iii) the Karebbe plant, with 90 MW of average generating capacity. These plants help reduce production costs by substituting oil used for power generation with hydroelectric power, reduce CO_2 emissions by replacing non-renewable power generation, and enable us to increase our current nickel production capacity in Indonesia.

5. Other investments

We own a 50.0% stake in California Steel Industries, Inc. ("CSI"), a producer of flat-rolled steel and pipe products located in the United States. The remainder is owned by JFE Steel. CSI's annual production capacity is approximately 2.8 million metric tons of flat rolled steel and pipe. In addition, we have a 26.9% stake in the ThyssenKrupp Companhia Siderúrgica do Atlântico ("TKCSA") integrated steel slab plant in the Brazilian state of Rio de Janeiro. The plant started operations in 2010, and produced 3.6 Mt in 2013. The plant will ultimately have a production capacity of 5.0 Mtpy and will consume 8.5 million metric tons of iron ore and iron ore pellets per year, supplied exclusively by Vale. We are also involved in two other steel projects in Brazil: Companhia Siderúrgica do Pecém ("CSP"), which is currently under construction, and Aços Laminados do Pará ("Alpa"), which is under review pending discussions with the Brazilian government.

We own minority interests in two bauxite mining businesses that are both located in Brazil: Mineração Rio do Norte S.A. ("MRN") and Mineração Paragominas S.A. ("Paragominas"). We have agreed to transfer our interests in Paragominas to Hydro in two equal tranches in 2014 and 2016.

We also have an onshore and offshore hydrocarbon exploration portfolio in Brazil and Peru. This portfolio is under review, and some concessions are being relinquished while others are in the process of being assigned, subject to regulatory approvals.

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RESERVES

Presentation of information concerning reserves

The estimates of proven and probable ore reserves at our mines and projects and the estimates of mine life included in this annual report have been prepared by our staff of experienced geologists and engineers, unless otherwise stated, and calculated in accordance with the technical definitions established by the SEC. Under the SEC's Industry Guide 7:

> Reserves are the part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination.
>
> Proven (measured) reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, working or drill holes; grade and/or quality are computed from the results of detailed sampling; and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.
>
> Probable (indicated) reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.

We periodically revise our reserve estimates when we have new geological data, economic assumptions or mining plans. During 2013, we performed an analysis of our reserve estimates for certain projects and operations, which is reflected in new estimates as of December 31, 2013. Reserve estimates for each operation assume that we either have or expect to obtain all of the necessary rights and permits to mine, extract and process ore reserves at each mine. For some of our operations, the projected exhaustion date includes stockpile reclamation that occurs after mining has ceased. Where we own less than 100% of the operation, reserve estimates have not been adjusted to reflect our ownership interest. Certain figures in the tables, discussions and notes have been rounded. For a description of risks relating to reserves and reserve estimates, see *Risk factors*.

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Our reserve estimates are based on certain assumptions about future prices. We have determined that our reported reserves could be economically produced if future prices for the products identified in the following table were equal to the three-year average historical prices through December 31, 2013. For this purpose, we used the three-year historical average prices set forth in the following table.

Commodity	Three-year average historical price (US$ per metric ton, unless otherwise stated)	Pricing source
Iron ore:		
Vale(1)	144.87	Average Platts IODEX (62% Fe CFR China, US$/dmt)
Samarco(2) 147	166.29	Average realized price for pellets (US$/dmt)
Coal:		
Metallurgical Moatize	187.00	Medium volatile hard coking coal FOB Queensland (source: Platts)
Metallurgical Integra underground	143.65	Average realized semi hard coking coal price
Metallurgical Integra open cut	124.98	Average semi soft coking coal realized price
Metallurgical Carborough Downs	188.20	Average hard coking coal realized price
Metallurgical Isaac Plains	150.08	Average semi hard coking coal realized price
PCI Carborough Downs	156.16	Average PCI realized price
PCI Isaac Plains(3)	141.99	Average PCI realized price
Thermal Integra open cut	101.00	Average thermal realized price
Thermal Isaac Plains	93.77	Average thermal realized price
Base metals:		
Nickel(4)	8.38	LME Ni (US$/lb)
Copper	3.64	Average realized price (US$/lb)
Nickel by-products:		
Platinum	1,590.00	Average realized price (US$/oz)
Palladium	718.00	Average realized price (US$/oz)
Gold	1,543.00	Average realized price (US$/oz)
Cobalt(4)	13.75	99.3% low cobalt metal (US$/lb) (source: Metal Bulletin)
Fertilizer nutrients:		
Phosphate	174.00	Average benchmark price for phosphate concentrate, FOB Morocco (source: Fertilizer Week)
Potash	425	Average benchmark price for potash, FOB Vancouver (source: Fertilizer Week)
Manganese(5):		
Manganese lump ore	203.72	Average realized price (US$/dmt)
Manganese sinter feed	179.35	Average realized price (US$/dmt)

(1) The economic assessment of our iron ore reserves is based on the average Platts IODEX prices, as adjusted to reflect the effects of freight, moisture and the quality premium for our iron ore.

(2) US$ per dry metric ton of iron ore pellets is used for pricing at Samarco.

(3) Both semi soft coking coal (SSCC) and PCI are considered the same product at the operation in compiling the average three yearly sales price.

(4) Premiums (or discounts) are applied to the nickel and cobalt spot prices at certain operations to derive realized prices. These premiums (or discounts) are based on product form, long-term contracts, packaging and market conditions.

(5) Prices mostly on a Delivery Duty Unpaid (DDU) China basis.

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Iron ore reserves

The following tables set forth our iron ore reserves and other information about our iron ore mines. Total iron ore reserves increased 10% from 2012 to 2013, reflecting new reserves from the Capanema and Conta História deposits and the updated geological and reserve models to incorporate new cutoff limits and drilling data for deposits at Alegria, Fábrica Nova and Fazendão (Southeastern System). In addition, we included reserves supported by a new process to treat hard itabirites from Galinheiro and Sapecado (Southern System). Other modifications reflect depletion from 2013 operations.

Summary of total iron ore reserves(1)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Southeastern System	2,112.0	48.0	3,135.7	45.5	5,247.7	46.5	3,318.3	49.1
Southern System	2,081.2	45.7	3,518.4	43.6	5,599.6	44.4	5,435.4	44.8
Midwestern System	6.6	62.8	24.8	62.2	31.4	62.3	33.6	62.2
Northern System	4,760.5	66.7	2,423.4	66.6	7,184.0	66.7	7,278.2	66.7
Vale Total	8,960.3	57.4	9,102.3	50.5	18,062.7	53.9	16,065.5	55.6
Samarco(2)	1,867.7	40.1	1,078.4	38.8	2,946.1	39.7	2,976.5	39.7
Total	10,828.0	54.4	10,180.7	49.2	21,008.8	51.9	19,042.0	53.1

(1) Tonnage is stated in millions of metric tons of wet run-of-mine, based on the following moisture contents: Southeastern System 4.1%; Southern System 4.2%; Midwestern System 5.9%; Northern System 6.0%; and Samarco 6.5%. Grade is % of Fe.

(2) Reserves of Samarco's Alegria iron ore mines. Our equity interest in Samarco is 50.0% and the reserve figures have not been adjusted to reflect our ownership interest.

Iron ore reserves per mine in the Southeastern System(1)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Itabira site								
Conceição	482.4	45.8	102.4	47.7	584.8	46.1	607.5	46.3
Minas do Meio	202.7	51.5	69.8	48.8	272.6	50.8	295.7	50.8
Minas Centrais site								
Água Limpa(2)	20.3	42.0	6.7	42.7	27.0	42.2	33.0	42.2
Brucutu	210.1	50.4	260.3	48.3	470.3	49.3	501.4	49.5
Apolo	292.4	57.4	339.7	55.1	632.1	56.1	632.1	56.1
Mariana site								
Alegria	213.3	46.3	143.5	44.0	356.8	45.4	157.8	48.3
Fábrica Nova	379.2	43.6	779.1	40.9	1,158.3	41.8	770.9	44.7
Fazendão	311.6	45.7	307.6	40.7	619.2	43.2	319.8	49.9
Capanema			610.7	47.1	610.7	47.1		
Conta História			515.9	45.4	515.9	45.4		

Total Southeastern System	2,112.0	48.0	3,135.7	45.5	5,247.7	46.5	3,318.3	49.1

(1) Tonnage is stated in millions of metric tons of wet run-of-mine, based on the following moisture contents: Itabira site 1.5%; Minas Centrais site 6.8%; Mariana site 3.9%. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: 100m × 100m to proven reserves and 200m × 200m to probable reserves.

(2) Vale's equity interest in Água Limpa is 50.0% and the reserve figures have not been adjusted to reflect our ownership interest.

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Iron ore reserves per mine in the Southern System(1)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Minas Itabiritos site								
Segredo	147.6	51.6	98.0	44.3	245.5	48.7	249.2	48.8
João Pereira	648.5	41.0	338.2	40.8	986.7	40.9	1,011.2	41.1
Sapecado	345.1	45.1	261.5	42.6	606.6	44.0	550.0	44.8
Galinheiro	260.9	45.6	892.8	43.5	1,153.8	44.0	973.6	44.7
Vargem Grande site								
Tamanduá	52.7	59.9	350.0	47.5	402.8	49.2	412.3	49.4
Capitão do Mato	229.1	51.2	957.4	45.3	1,186.5	46.5	1,198.1	46.7
Abóboras	314.9	41.8	602.3	40.1	917.1	40.7	924.6	40.8
Paraopeba site								
Jangada	23.0	66.7	12.7	66.4	35.7	66.6	43.1	66.6
Capão Xavier	59.4	65.0	5.5.	64.1	64.9	65.0	73.3	65.0
Total Southern System	2,081.2	45.7	3,518.4	43.6	5,599.6	44.4	5,435.4	44.8

(1) Tonnage is stated in millions of metric tons of wet run-of-mine. Grade is % of Fe, based on the following moisture contents: Minas Itabiritos site 5.1%; Vargem Grande site 3.2%; Paraopeba site 3.7%. Approximate drill hole spacings used to classify the reserves were: 100m × 100m to proven reserves and 200m × 200m to probable reserves.

Iron ore reserves per mine in the Midwestern System(1)(2)(3)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Urucum	6.6	62.8	24.8	62.2	31.4	62.3	33.6	62.2
Total Midwestern System	6.6	62.8	24.8	62.2	31.4	62.3	33.6	62.2

(1) The Midwestern System is comprised of the Urucum and Corumbá mines.

(2) We are conducting a review of Corumbá's reserve estimate, which we expect to disclose in the next cycle.

(3) Tonnage is stated in millions of metric tons of wet run-of-mine, based on the following moisture contents: 5.9%. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: 70m × 70m to proven reserves and 140m × 140m to probable reserves.

Iron ore reserves per mine in the Northern System(1)

Proven	2013	Probable	2013	Total	2013	Total	2012

	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Serra Norte site								
N4W	1,099.6	66.5	275.1	66.1	1,374.7	66.5	1,405.5	66.5
N4E	240.8	66.5	84.4	66.0	325.2	66.4	345.1	66.4
N5	231.3	67.0	705.8	67.3	937.1	67.2	980.6	67.2
Serra Sul								
S11	3,045.8	66.8	1,193.7	66.7	4,239.6	66.7	4,239.6	66.7
Serra Leste								
SL1	143.0	65.7	164.4	65.1	307.4	65.4	307.4	65.4
Total Northern System	4,760.5	66.7	2,423.4	66.6	7,184.0	66.7	7,278.2	66.7

(1) Tonnage is stated in millions of metric tons of wet run-of-mine, based on the following moisture contents: Serra Norte 8.3%; Serra Sul 4.6%; Serra Leste 4.3%. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: 150m × 100m to proven reserves and 300m × 200m to probable reserves, except SL1 which is 100m × 100m to proven reserves and 200m × 200m to probable reserves.

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Iron ore reserves per Samarco(1)(2)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Samarco								
Alegria Norte/Centro	1,058.1	42.0	704.2	40.2	1,762.3	41.3	1,780.5	41.4
Alegria Sul	750.8	37.6	352.8	36.1	1,103.6	37.1	1,115.8	37.1
Germano	58.8	39.7	21.4	39.8	80.2	39.8	80.2	39.8
Total Samarco	1,867.7	40.1	1,078.4	38.8	2,946.1	39.7	2,976.5	39.7

(1) Tonnage is stated in millions of metric tons of wet run-of-mine based on moisture content of 6.5%. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: Alegria Norte/Centro, 150m × 100m to proven reserves and 300m × 200m to probable reserves; Alegria Sul, 100m × 100m to proven reserves and 200m × 200m to probable reserves.

(2) Vale's equity interest in Samarco mines is 50.0% and the reserve figures have not been adjusted to reflect our ownership interest.

Southeastern System iron ore mines

	Type	Operating since	Projected exhaustion date	Vale interest (%)
Itabira site				
Conceição	Open pit	1957	2025	100.0
Minas do Meio	Open pit	1976	2022	100.0
Minas Centrais site				
Água Limpa	Open pit	2000	2016	50.0
Brucutu	Open pit	1994	2023	100.0
Apolo	Open pit		2038	100.0
Mariana site				
Alegria	Open pit	2000	2033	100.0
Fábrica Nova	Open pit	2005	2040	100.0
Fazendão	Open pit	1976	2048	100.0
Capanema	Open pit		2057	100.0
Conta História	Open pit		2052	100.0

Southern System iron ore mines

	Type	Operating since	Projected exhaustion date	Vale interest (%)
Minas Itabiritos site				
Segredo	Open pit	2003	2047	100.0
João Pereira	Open pit	2003	2046	100.0
Sapecado	Open pit	1942	2047	100.0
Galinheiro	Open pit	1942	2047	100.0
Vargem Grande site				
Tamandu	Open pit	1993	2038	100.0
Capitão do Mato	Open pit	1997	2058	100.0
Abóboras	Open pit	2004	2050	100.0
Paraopeba site				
Jangada	Open pit	2001	2018	100.0
Capão Xavier	Open pit	2004	2018	100.0

	Midwestern System iron ore mines			
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Urucum	Open pit	1994	2029	100.0

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Northern System iron ore mines				
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Serra Norte				
N4W	Open pit	1994	2032	100.0
N4E	Open pit	1984	2028	100.0
N5	Open pit	1998	2035	100.0
Serra Sul				
S11	Open pit		2064	100.0
Serra Leste				
SL1	Open pit		2065	100.0

Samarco iron ore mines				
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Samarco				
Alegria Norte/Centro	Open pit	2000	2053	50.0
Alegria Sul	Open pit	2000	2053	50.0
Germano	Open pit		2037	50.0

Manganese ore reserves

The following tables set forth manganese reserves and other information about our mines. Total manganese reserves increased 2% from 2012 to 2013. This increase in Urucum's reserves in 2013 reflects an updated geological model to incorporate new drilling data and an additional seam.

Manganese ore reserves(1)(2)								
	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Azul	30.1	40.3	7.8	39.5	37.9	40.1	42.0	40.2
Urucum	9.8	46.2	1.8	46.5	11.6	46.3	5.9	45.1
Morro da Mina	8.7	25.3	5.7	24.8	14.4	25.1	14.6	25.1
Total	48.6	38.8	15.3	34.9	63.9	37.9	62.5	37.1

(1) Tonnage is stated in millions of metric tons of wet run-of-mine. Grade is % of Mn.

(2) The average moisture of the manganese ore reserves is: Azul (16.2%), Urucum (4.2%), Morro da Mina (3.4%).

Manganese ore mines				
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Azul	Open pit	1985	2022	100.0
Urucum	Underground	1976	2026	100.0
Morro da Mina	Open pit	1902	2053	100.0

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Coal reserves

Our coal reserve estimates have been provided on an in-place material basis after adjustments for depletion, moisture content, anticipated mining losses and dilution, but excluding any adjustment for losses associated with beneficiation of raw coal mined to meet saleable product requirements.

		Coal ore reserves(1)							
		ROM(2)						Marketable Reserves(3)	
	Coal type	Proven 2013	Probable 2013	Total	2013 (calorific value)	Total	2012 (calorific value)	2013	2012
		(tonnage)		(tonnage)		(tonnage)		(tonnage)	(tonnage)
Integra Coal:									
Integra Open-cut	Metallurgical & thermal	14.9	4.5	19.4	29.7 (thermal)	21	30.1	10.1	10.9
Integra Underground Middle Liddell Seam	Metallurgical	0.6	6.3	6.9		8.7		4.7	5.7
Integra Underground Hebden Seam	Metallurgical	0.0	29.5	29.5		30.8		20.6	2.8
Total Integra Coal		15.5	40.3	55.8		60.5		35.4	19.4
Carborough Downs Underground(4)	Metallurgical & PCI	24.0	2.8	26.8	31.2 (PCI)	27.5	31.2 (PCI)	17.4	18.9
Isaac Plains North Open Cut	Metallurgical, PCI & thermal	10.7	0.1	10.8	30.1 (PCI) 28.3 (thermal)	15.5	30.1 (PCI) 28.3 (thermal)	8.2	11.9
Moatize	Metallurgical & thermal l	288.8	1,148.2	1,437.0		1,498.6	25.9	515.0	537.1
Total		339	1,191.4	1,530.4		1,602.1		576.0	605.3

(1) The reserves stated above by deposit are on a 100% shareholding basis. Vale's ownership interest in accordance with the table below should be used to calculate the portion of reserves directly attributable to Vale.

(2) Tonnage is stated in millions of metric tons. Reserves are reported on a variable basis in regard to moisture: Integra Open Cut on ROM estimated basis, Integra Underground on ROM estimated basis, Carborough Downs on air dried basis, and Isaac Plains North on ROM estimated basis + 2%.Moatize is reported on in situ 6.5% moisture basis. Calorific value of product coal derived from beneficiation of ROM coal is typically stated in MJ/kg. Calorific value is used in marketing thermal and PCI coals.

(3) Tonnage is stated in millions of metric tons.

(4) In calculating reserves, gas drainage is assumed to have been completed in accordance with the mine plan. Reduced reserves reflect the omission of certain blocks and related development as a result of adverse economic conditions.

Reserves at Integra Open Cut, the Middle Liddell Seam for Integra Underground, Carborough Downs and Isaac Plains decreased in 2013 mainly due to depletion. Reserves for the Hebden Seam for Integra Underground decreased slightly following an update to the reserve model. Total Moatize ROM reserves decreased 4.1% from 2012 to 2013 reflecting depletion and adjustments due to the revised land use license

agreement.

Coal mines				
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Integra Coal:				
Open-cut	Open pit	1991	2021	61.2
Middle Liddell Seam	Underground	1999	2016	61.2
Hebden Seam	Underground		2031	61.2
Carborough Downs	Underground	2006	2020	85.0
Isaac Plains	Open pit	2006	2017	50.0
Moatize	Open pit	2011	2042	95.0

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Nickel ore reserves

Our nickel reserve estimates are of in-place material after adjustments for depletion and mining losses (or screening and drying in the cases of PTVI and VNC) and recoveries, with no adjustments made for metal losses due to processing.

	Nickel ore reserves(1)							
	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Canada								
Sudbury	52.4	1.26	49.0	1.23	101.4	1.25	97.9	1.16
Thompson	3.9	2.03	20.0	1.70	23.9	1.75	25.6	1.74
Voisey's Bay	14.0	2.77	3.2	0.67	17.2	2.38	19.5	2.43
Indonesia								
PTVI	94.2	1.81	33.3	1.74	127.5	1.79	104.8	1.78
New Caledonia								
VNC	57.2	1.34	67.0	1.49	124.2	1.42	122.5	1.44
Brazil								
Onça Puma	57.3	1.74	38.1	1.41	95.3	1.61	82.4	1.52
Total	279.0	1.65	210.6	1.46	489.5	1.57	452.7	1.53

(1) Tonnage is stated in millions of dry metric tons. Grade is % of nickel.

In Canada, reserves at our Sudbury operations increased due primarily to mineral reserve additions at Copper Cliff Mine, specifically from Kelly Lake and 178 orebodies. Reserves at our Thompson and Voisey's Bay operations decreased due to depletions. Mineral reserves at PTVI increased mainly due to the addition of new block reserves, which was partially offset by losses caused by depletion, pit designs and updates to ore block models. Mineral reserves at VNC increased slightly due to the conversion of mineral resources to mineral reserves in the north portion of the Goro Plateau. Reserves at Onça Puma increased due to mine optimization work, including a new mine dilution strategy.

	Nickel ore mines			
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Canada				
Sudbury	Underground	1885	2039	100.0
Thompson	Underground	1961	2033	100.0
Voisey's Bay	Open pit	2005	2022	100.0
Indonesia				
PTVI	Open pit	1977	2035	59.3
New Caledonia				
VNC	Open pit	2011	2043	80.5
Brazil				
Onça Puma	Open pit	2011	2054	100.0

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Copper ore reserves

Our copper reserve estimates are of in-place material after adjustments for depletion and mining losses and recoveries, with no adjustments made for metal losses due to processing.

Copper ore reserves(1)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Canada								
Sudbury	52.4	1.70	49.0	1.32	101.4	1.51	97.9	1.48
Voisey's Bay	14.0	1.56	3.2	0.37	17.2	1.34	19.5	1.36
Brazil								
Sossego	121.7	0.78	15.8	0.70	137.5	0.77	150.7	0.79
Salobo	641.6	0.76	494.8	0.64	1,136.4	0.71	1,122.6	0.72
Total	829.7	0.84	562.8	0.70	1,392.5	0.78	1,390.7	0.79

(1) Tonnage is stated in millions of dry metric tons. Grade is % of copper.

In Canada, our copper ore reserve estimates at our Sudbury operations increased. At our Voisey's Bay operations, reserves decreased for the same reasons discussed above in connection with the nickel reserves. This is because these deposits are polymetallic. In Brazil, reserves at Sossego decreased compared to 2012 due to mine depletions. The increase of reserves at Salobo is due to cutoff grade changes and an improved pit design.

Copper ore mines

	Type	Operating since	Projected exhaustion date	Vale interest (%)
Canada				
Sudbury	Underground	1885	2039	100.0
Voisey's Bay	Open pit	2005	2022	100.0
Brazil				
Sossego	Open pit	2004	2024	100.0
Salobo	Open pit	2012	2065	100.0

PGMs and other precious metals reserves

We expect to recover significant quantities of precious metals as by-products of our Sudbury, Sossego and Salobo operations. Our reserve estimates are of in-place material after adjustments for mining depletion and mining losses and recoveries, with no adjustments made for metal losses due to processing.

Precious metals reserves(1)

	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Canada								
Sudbury								
Platinum	52.4	0.8	49.0	1.1	101.4	0.9	97.9	0.8
Palladium	52.4	1.0	49.0	1.3	101.4	1.1	97.9	1.0
Gold	52.4	0.4	49.0	0.4	101.4	0.4	97.9	0.4
Brazil								
Sossego								

Gold	121.7	0.2	15.8	0.2	137.5	0.2	150.68	0.2
Salobo								
Gold	641.6	0.4	494.8	0.3	1,136.4	0.4	1,122.6	0.4
Total Gold	920.5	0.4	657.6	0.4	1,578.1	0.5	1,567.0	0.4

(1) Tonnage is stated in millions of dry metric tons. Grade is grams per dry metric ton.

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In Sudbury our mineral reserve estimates for platinum, palladium and gold increased for the reasons discussed above in connection with the nickel reserves. In Brazil, reserves at Sossego decreased from last year due to mine depletions. The increase of reserves at Salobo is due to cutoff grade changes and an improved pit design.

	Precious metals mines			
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Canada				
Sudbury	Underground	1885	2039	100.0
Brazil				
Sossego	Open pit	2004	2024	100.0
Salobo	Open pit	2012	2065	100.0

Cobalt ore reserves

We expect to recover significant quantities of cobalt as a by-product of our Canadian operations and from the VNC project. Our cobalt reserve estimates are of in-place material after adjustments for depletion and mining losses (or screening in the case of VNC) and recoveries, with no adjustments made for metal losses due to processing.

	Cobalt ore reserves(1)							
	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Canada								
Sudbury	52.4	0.04	49.0	0.04	101.4	0.04	97.9	0.04
Voisey's Bay	14.0	0.13	3.2	0.03	17.2	0.11	19.5	0.12
New Caledonia								
VNC	57.2	0.12	67.0	0.11	124.2	0.11	122.5	0.11
Total	123.6	0.09	119.2	0.08	242.8	0.08	239.9	0.08

(1) Tonnage is stated in millions of metric tons. Grade is % of cobalt.

Our cobalt reserve estimates increased in 2013 for the reasons discussed above in connection with the nickel reserves.

	Cobalt ore mines			
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Canada				
Sudbury	Underground	1885	2039	100.0
Voisey's Bay	Open pit	2005	2022	100.0
New Caledonia				
VNC	Open pit	2011	2043	80.5

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Phosphate reserves

Our phosphate reserve estimates reflect mine production and sales in 2013. Reserves at Bayovar increased by 84% due to the inclusion of two additional phosphate seams in the mining plan and a new mining strategy that uses a higher dilution in order to maximize recovery. Our phosphate reserves estimates are of in-place material after adjustments for mining dilution.

	Phosphate reserves(1)							
	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Bayóvar	166.0	16.3	249.9	14.9	415.9	15.5	225.4	17.2
Catalão	44.5	10.5	8.3	10.2	52.8	10.4	57.9	10.6
Tapira	235.6	7.1	445.4	6.7	680.9	6.8	691.2	6.8
Araxá(2)	89.2	12.0	42.8	11.0	132.1	11.7	138.6	11.6
Cajati	68.0	5.6	46.4	4.7	114.4	5.2	120.0	5.2
Salitre			205.7	11.4	205.7	11.4	205.7	11.4
Total	603.3	10.4	998.5	9.8	1601.8	10.1	1438.8	9.58

(1) Tonnage is stated in millions of dry metric tons. Grade is % of P_2O_5.

(2) Proven reserves of secondary ore for Araxá were reclassified as probable reserves as a result of new process flowsheet development.

	Phosphate rock ore mine			
	Type	Operating since	Projected exhaustion date	Vale interest (%)
Bayóvar	Open pit	2010	2045	40.0(1)
Catalão	Open pit	1982	2020	100.0
Tapira	Open pit	1979	2054	100.0
Araxá	Open pit	1977	2027	100.0
Cajati	Open pit	1970	2035	100.0
Salitre	Open pit		2033	100.0

(1) Vale holds 51% of the voting capital and 40% of the total capital of MVM Resources International, B.V., the entity that controls Bayóvar.

Potash ore reserves

Our reserve estimates are of in-place material after adjustments for depletion and mining losses and recoveries, with no adjustments made for metal losses due to processing. Tonnage at Taquari-Vassouras increased by 32% due to a new mine design, with higher dilution to maximize ore recovery and which reduces the cutoff grade to have a higher volume of products. Our total potash reserves also increased due to the inclusion of Carnalita Project, located at Sergipe state, Brazil, which is still subject to approval of our Board of Directors.

	Potash ore reserves(1)(2)							
	Proven	2013	Probable	2013	Total	2013	Total	2012
	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage	Grade
Taquari-Vassouras(3)	7.8	26.0	5.1	21.1	12.9	24.1	9.8	28.0
Carnalita Project(4)	247.1	12.1	54.1	12.1	301.5	12.1		

(1) Tonnage is stated in millions of dry metric tons. Grade is % of KCl.

(2) Tonnage is before processing recovery.

(3) Silvinite potash reserves.

(4) Carnalite potash reserves.

	Potash ore mines			
	Type	**Operating since**	**Projected exhaustion date**	**Vale interest (%)**
Taquari-Vassouras(1)	Underground	1986	2018	100.0
Carnalita Project	Solution mining		2042	100.0

(1) We have a 30-year lease with Petrobras, which was signed in 2012.

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CAPITAL EXPENDITURES

We have an extensive program of investments in the organic growth of our businesses. The figures discussed in this section are for project execution and sustaining existing operations.

The 2014 investment budget approved by our Board of Directors is US$9.3 billion for project execution, reflecting a 8.2% decrease compared to the 2013 investment budget, and US$4.5 billion for sustaining existing operations, reflecting a 11.1% decrease compared to 2013. These decreases reflect stricter discipline in capital allocation, a stronger focus on maximizing efficiency and minimizing costs and a future project pipeline that is smaller, but with higher potential to generate substantial value for our shareholders.

A large part of the capital expenditure budget will be invested in Brazil (62.7%) and in Mozambique (22.2%). The remainder has been allocated to investments in Australia, Canada, China, Indonesia, Malaysia, Malawi, New Caledonia and Peru, among other countries.

	2012 expenditures	2013 expenditures	2014 budget	
	(US$ million)	(US$ million)	(US$ million)	(% of total)
Project execution	11,580	9,648	9,299	67.2%
Investments to sustain existing operations	4,616	4,585	4,547	32.8%
Total	US$16,196	US$14,233	US$13,847	100.0%

The following table summarizes by major business area the breakdown of our capital expenditures in 2012 and 2013 and our investment budget for 2014.

	2012		2013		2014 budget	
	(US$ million)	(% of total)	(US$ million)	(% of total)	(US$ million)	(% of total)
Ferrous minerals	7,882	48.7	7,150	50.3	8,313	60.0
Coal	1,150	7.1	1,511	10.6	2,779	20.1
Base metals	3,693	22.8	3,027	21.3	1,813	13.1
Fertilizer nutrients	1,836	11.3	1,159	8.1	452	3.3
Logistics for general cargo(1)	592	3.7	603	4.2	-	-
Energy	292	1.8	214	1.5	188	1.4
Steel	348	2.1	315	2.2	264	1.9
Other	403	2.5	254	1.8	37	0.3
Total	US$16,196	100.0%	US$14,233	100.0%	US$13,847	100.0%

(1) Investments in logistics dedicated to a particular business segment are included with that segment in our capital expenditure data. In 2014, we excluded logistics for general cargo from the total budget.

We are developing a focused organic growth portfolio, with fewer projects but with higher expected rates of return. Our main initiatives are responsible for 83% of the US$9.3 billion budgeted for project execution in 2014. These programs include:

The expansion of our top-quality integrated iron ore operations in Carajás, with 2014 budgeted expenditures in the amount of US$3.3 billion, consisting of S11D, CLN S11D, Serra Leste projects and the conclusion of Carajás plant 2 (formerly known as Additional 40 Mtpy) and CLN 150;

Construction and ramp-up of our world-class integrated Moatize/Nacala coal operation, with 2014 budgeted expenditures in the amount of US$2.6 billion;

Capacity replacement, increase and quality improvement in the iron ore from the Southern and Southeastern Systems, with 2014 budgeted expenditures in the amount of US$1.1 billion, including the Conceição Itabiritos II, Vargem Grande Itabiritos, Cauê Itabiritos projects and the conclusion of Conceição Itabiritos;

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Global distribution network of iron ore in the amount of US$436 million, including investments in the construction of the Teluk Rubiah distribution center (in the amount of US$278 million), vessels (in the amount of US$155 million) and barges (in the amount of US$3 million); and

Salobo II, with 2014 budgeted expenditures in the amount of US$332 million, which will increase our production of copper and gold.

The following table sets forth total expenditures in 2013 for our main investment projects and expenditures budgeted for those projects in 2014, together with estimated total expenditures for each project and the estimated start-up date of each project as of December 31, 2013.

			Executed CAPEX		Expected CAPEX	
Business area	**Main projects(1)**	**Actual or Estimated Start-up**	**2013(2)**	**Total**	**2014**	**Total(3)**
				(US$ million)		
Iron ore	Carajás Plant 2(4)	2H13	547	3,020	174	3,475
	Carajás Serra Sul S11D	2H16	818	2,631	1,091	8,089
	CLN 150(4)	2H13	518	3,778	69	3,931
	CLN S11D	1H14 to 2H18	696	1,156	1,914	11,582
	Serra Leste	2H14	140	432	34	478
	Conceição Itabiritos(4)	2H13	249	1,030	73	1,174
	Vargem Grande Itabiritos	2H14	376	1,292	376	1,910
	Conceição Itabiritos II	2H14	228	652	240	1,189
	Cauê Itabiritos	2H15	233	353	373	1,504
	Teluk Rubiah	2H14	490	1,003	278	1,371
Pellet plants	Tubarão VIII	1H14	194	1,084	154	1,321
Coal mining and logistics	Moatize II	2H15	383	839	761	2,068
	Nacala Corridor	2H14	932	1,341	1,812	4,444
Copper mining	Salobo II	1H14	294	1,054	332	1,707
Nickel mining and refining	Long Harbour(5)	1H14	1,030	4,186	40	4,250
	Totten(4)	2H13	172	712	47	759
Steelmaking	CSP(6)	2H15	297	873	197	2,570

(1) Projects approved by the Board of Directors.

(2) All figures presented on a cash basis.

(3) Estimated total capital expenditure cost for each project, including expenditures in prior periods.

(4) Projects delivered in 2013.

(5) We completed the construction in 2013, have initiated commissioning activities and expect to commence production in the second quarter of 2014.

(6) Expected CAPEX and funding is relative to Vale's stake in the project.

The paragraphs below describe the status of each project as of December 31, 2013 and have not been updated to reflect any developments after that date.

Bulk materials and logistics projects

Iron ore mining and logistics projects:

Carajás Serra Sul S11D. Development of a mine and processing plant, located in the southern range of Carajás, in the Brazilian state of Pará. The project has an estimated nominal capacity of 90 Mtpy. We are continuing the off-site electromechanical assembly of modules. We received the installation license in July 2013. The project is 48% complete, with total realized expenditures of US$2.6 billion. The start-up is expected in the second half of 2016.

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CLN S11D. Increase in the logistics capacity of the Northern System to support the S11D project, including the duplication of approximately 570 km of railway, construction of a rail spur with 101 km, acquisition of wagons and locomotives and onshore and offshore expansions at Ponta da Madeira maritime terminal. This project is expected to increase EFC's estimated nominal logistics capacity to approximately 230 Mtpy. We have obtained the environmental installation license and the authorization from ANTT for civil works required for the construction. Earthworks for railway duplication and civil works of the rail spur to connect the mine to the EFC are in progress. The project is 13% complete, with total realized expenditures of US$1.2 billion. The start-up is expected from the first half of 2014 to second half of 2018.

Serra Leste. Construction of a new processing plant located in Carajás, in the Brazilian state of Pará. The project has an estimated nominal capacity of 6 Mtpy. The installation license has already been issued. We have concluded eletromechanical assembly of the substation and energizing the processing plant, and we have intiated the pre-stripping and commissioning of the iron ore treatment facility. The project is 78% complete, with total realized expenditures of US$432 million. The start-up is expected in the second half of 2014.

Vargem Grande Itabiritos. Construction of a new iron ore treatment plant in the Southern System, with an estimated nominal additional capacity of 10 Mtpy. We are currently assembling steel structures and equipment for the iron ore beneficiation plant and conducting civil works for the long distance conveyor belt and Andaime railway terminal. We expect to receive the environmental operating license in the second half of 2014. The project is 80% complete, with total realized expenditures of US$1.3 billion. The start-up is expected in the second half of 2014.

Conceição Itabiritos II. Adaptation of the plant to process low-grade itabirites, located in the Southeastern System. The project has an estimated nominal capacity of 19 Mtpy, without net additional capacity. We have completed the assembly of steel structures of the flotation cells and civil works for the ball mill with feed type system. We are currently conducting civil engineering work and steel structure and equipment electromechanical assembly. The project is 79% complete, with total realized expenditures of US$652 million. The start-up is expected in the second half of 2014.

Cauê Itabiritos. Adaptation of the plant to process low-grade itabirites, located in the Southeastern System. The project has an estimated nominal capacity of 24 Mtpy, with net additional capacity of 4 Mtpy in 2017. We have started the electromechanical assembly of the quaternary screening and grinding. We are conducting civil works and have received the steel structure and equipment. The project is 47% complete, with total realized expenditures of US$353 million. The start-up is expected in the second half of 2015.

Teluk Rubiah. Construction of a distribution center in Teluk Rubiah, Malaysia, with a private jetty with enough depth to receive 400,000 DWT vessels and a storage yard. The distribution center will have a throughput of 30 Mtpy of iron ore products. The import system is already commissioned and ready to receive the first vessel. The preliminary, construction and installation environmental licenses have been issued. The operating license is expected to be issued in the first half of 2014. The project is 94% complete, with total realized expenditures of US$1.0 billion. The start-up of the integrated system (import and export systems) is expected in the second half of 2014.

Pellet plant projects:

Tubarão VIII. Eighth pellet plant at our existing complex at the Tubarão Port, Espírito Santo, Brazil, with expected production capacity of 7.5 Mtpy. We have performed tests with pelletizing cargo and are in the final stage of the commissioning activities. We expect to receive the operating license in the first half of 2014. The plant is 95% complete, with total realized expenditures of US$1.1 billion. The start-up is expected in the first half of 2014.

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Coal mining and logistics projects:

Moatize II. New pit and duplication of the Moatize coal handling processing plant (CHPP), as well as all related infrastructure, located in Tete, Mozambique. The project will increase Moatize's total nominal capacity to 22 Mtpy, mostly comprised of coking coal. We concluded earthworks and are well advanced in civil works, with concrete foundations at the primary crusher, CHPP and heavy duty vehicles area. The project is 53% complete, with total realized expenditures of US$839 million. The start-up is expected in the second half of 2015.

Nacala Corridor. Railway and port infrastructure connecting Moatize site to the Nacala-à-Velha maritime terminal, located in Nacala, Mozambique. The total realized expenditures is US$1.3 billion. The greenfield sections in Mozambique and Malawi are 56% complete, and the first train is expected to be operational by the end of 2014 with rail capacity at 11 Mtpy. Construction on rehabilitating existing railway sections will extend through 2016 and increase capacity up to 18 Mtpy.

Base metals projects

Copper mining project:

Salobo II. Salobo expansion, raising of the tailing dam height and increasing the mine capacity, located in Marabá, in the Brazilian state of Pará. The project is expected to provide an additional estimated nominal capacity of 100,000 tpy of copper in concentrate. We have concluded testing of the pipes from the filtering facility and are progressing on the electromechanical assembly of the plant. The project is 93% complete, with total realized expenditures of US$1.1 billion. The start-up is expected in the first half of 2014.

Steel projects

Companhia Siderúrgica do Pecém ("*CSP*"). Construction of a steel slab plant in the Brazilian state of Ceará in partnership with Dongkuk Steel Mill Co. and Posco, two major steel producers in South Korea. The project will have an estimated nominal capacity of 3.0 Mtpy. Vale holds 50% of the joint venture. The civil construction and electromechanical work are in progress. We have already obtained preliminary and installation environmental licenses. US$873 million of expenditures have been realized. The start-up is expected in the second half of 2015.

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REGULATORY MATTERS

We are subject to a wide range of governmental regulation in all the jurisdictions in which we operate worldwide. The following discussion summarizes the kinds of regulation that have the most significant impact on our operations.

Mining rights and regulation of mining activities

Mining and mineral processing are subject to extensive regulation. In order to conduct these activities, we are generally required to obtain and maintain some form of governmental or private permits, which may include concessions, licenses, claims, tenements, leases or permits (all of which we refer to below as "concessions"). The legal and regulatory regime applicable to the mining industry and governing concessions differs among jurisdictions, often in important ways. In most jurisdictions, including Brazil, mineral resources belong to the State and may only be exploited pursuant to a governmental concession. In other jurisdictions, such as Ontario in Canada, a substantial part of our mining operations is conducted pursuant to mining rights we own (private permits). Government agencies are typically in charge of granting mining concessions and monitoring compliance with mining law and regulations.

The table below summarizes our principal concessions and other similar rights. In addition to the concessions described below, we have exploration licenses and exploration applications covering 5.63 million hectares in Brazil and 10.6 million hectares in other countries.

Location	Concession or other right	Approximate area covered (in hectares)	Expiration date
Brazil	Mining concessions (including applications)	662,076	Indefinite
Canada	Mining concessions (terminology varies among provinces)	279,977	2014-2034
Indonesia(1)	Contract of work	190,510	2025
Australia	Mining leases	19,209	2015-2041
New Caledonia	Mining concessions	21,269	2015-2051
Peru(2)	Mining concessions	154,867	Indefinite
Argentina	Mining concessions	161,628	Indefinite
Chile	Mining concessions	71,433	Indefinite
Mozambique(3)	Mining concessions	23,780	2032
Guinea	Mining concessions	102,400	2035

(1) May be entitled to at least one 10-year extension.

(2) The area reported reflects only licenses involving mining activities.

(3) Our mining concession covers 23,780 hectares. The definitive land license granted by the Council of Ministers, which is required to mine and utilize our concession, currently covers 22,096 hectares.

There are several proposed or recently adopted changes in mining legislation and regulations in the jurisdiction where we have operations that could materially affect us. These include the following:

Brazil. In June 2013, the Brazilian government sent to Congress a bill with proposed changes to the Brazilian mining law. This bill provides for: the preservation of the main provisions for existing mining rights as of the date of its enactment; a

new royalties regime; a new regime for mining concessions; and the creation of a mining agency. The bill is under discussion in Congress.

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Indonesia. A mining law that came into effect in 2009 introduced a new licensing regime (*Ijin Usaha Pertambangan*, or IUP) and called for certain adjustments to, and ultimate replacement of, existing mining contracts with the Indonesian government. Regulations implementing that law have gradually been promulgated by the government, but more are expected in 2014. PTVI does not currently hold any licenses under the IUP regime. As required by the 2009 mining law, PTVI started the renegotiation of its contract of work in 2012, which is expected to be completed in the first half of 2014. The Indonesian government seeks to renegotiate six strategic issues with each contract of work holder: (1) size of the concession area; (2) term and form of contract extension; (3) financial obligations (royalties and taxes); (4) divestment; (5) domestic processing and refining; and (6) priority use of domestic goods and services. See additional comments below on mining royalties.

New Caledonia. A mining law passed in 2009 requires mining projects to obtain authorization, rather than a declaration, from governmental authorities. We submitted an updated application for this authorization in March 2014. While under the law the authorities may take up to three years to issue the authorization, we currently expect to receive it within the next twelve months. Our existing mining declaration will remain valid and effective until our application is approved. Although we believe it is unlikely that our application will be rejected, the authorities may impose new conditions in connection with the authorization. The local authorities of New Caledonia proposed the creation of a protected wetland area, which will cover 27% of the surface area of the total VNC tenements and could affect potential mining activities. The proposed protected wetland area boundary also overlaps with the footprint of the next tailings storage facility, which may result in additional capital costs.

Guinea. We own a 51% interest in VBG Vale BSGR Limited, which holds iron ore concession rights in Simandou South (Zogota) and iron ore exploration permits in Simandou North (Blocks 1 & 2) in Guinea. VBG has also made an application for concession rights over Simandou North Blocks 1 & 2 and is awaiting a determination from the Government of Guinea. VBG has suspended work pending the outcome of the review of its concession described below.

A mining code adopted in 2011 and amended in 2013 imposes on all iron ore mining projects a requirement for 15% government participation free of charge, and allows the government to purchase an additional 20% stake. The mining code has also introduced more stringent requirements for all mining companies with existing operations in Guinea, including as regards mining tax, customs duties, employment, training, transparency and anti-corruption obligations. The 2013 amendments, which were aimed at addressing certain legal uncertainties created by the 2011 mining code, introduced new restrictive rules on matters such as taxes and royalties, foreign exchange regulations, transfers of interests in mining rights and marketing rights.

Additionally, the Government of Guinea has launched a contract review process to harmonize existing mining contracts with the new mining code. Regulations provide that the contract review process may result in the cancellation or the renegotiation of mining rights depending on the findings and the recommendations of a technical committee responsible for conducting the contract review process. Following its review of the mining titles, the technical committee has notified VBG that it intends to recommend that the Government of Guinea revoke the mining rights held by VBG. We do not have access to the full report of the technical committee, but we understand that its determination is based on corrupt practices in relation to the award of the VBG mining rights, before Vale acquired its interests in VBG. As far as we are aware, the technical committee has not alleged any wrongdoing by Vale. Vale acquired its interest in VBG after the completion of extensive due diligence conducted by outside advisors and on the basis of representations that VBG had obtained its mining rights lawfully and without any improper promises or payments. If the technical committee recommends revocation and the Government decides to accept that recommendation, Vale may lose its entire investment in the Simandou project subject to any rights to recourse Vale may have.

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Mozambique. The government proposed to Congress a bill with a new mining code in December 2012. Expected changes in the new code include introducing national preference for procurement, subjecting transfers of mining rights and share capital participation to Mozambican law and governmental approval, requiring foreign companies to partner with local service providers and reducing periods for exploration activities. Additionally, the resettlement regulation enacted in June 2012 contains stricter requirements that may result in increased costs and delays in the implementation of our projects. In addition, the Government of Mozambique passed a new regulation on explosives that came into effect in August 2013, which may result in significant increases in the cost of importing explosives critical to the operation of our mining activities in Tete. Following concerns from various companies in the extractive sector, the Government is currently reviewing the possibility of decreasing these new taxes, but it is not yet certain if and when such changes will be implemented.

Royalties and other taxes on mining activities

We are required in many jurisdictions to pay royalties or taxes on our revenues or profits from mineral extractions and sales. These payments are an important element of the economic performance of a mining operation. The following royalties and taxes apply in some of the jurisdictions in which we have our largest operations:

Brazil. We pay a royalty known as the CFEM (*Compensação Financeira pela Exploração de Recursos Minerais*) on the revenues from the sale of minerals we extract, net of taxes, insurance costs and costs of transportation. The current rates on our products are: 2% for iron ore, copper, nickel, fertilizers and other materials; 3% on bauxite, potash and manganese ore; and 1% on gold.

Brazilian states. Several Brazilian states impose a tax on mineral production (*Taxa de Fiscalização de Recursos Minerais* TFRM), which is assessed at rates ranging from R$0.50 to R$2.5697 per metric ton of minerals produced in or transferred from the state.

Canada. The Canadian provinces in which we operate charge us a tax on profits from mining operations. Profit from mining operations is generally determined by reference to gross revenue from the sale of mine output and deducting certain costs, such as mining and processing costs and investment in processing assets. The statutory mining tax rates are 10% in Ontario; with graduated rates up to 17% in Manitoba; and a combined mining and royalty tax rate of 16% in Newfoundland and Labrador. The mining tax paid is deductible for corporate income tax purposes.

Indonesia. Our subsidiary PTVI pays a royalty fee on, among other items, nickel produced in its concession area. The royalty payment is based on sales volume (for contained nickel matte, US$78 per metric ton, and for contained cobalt, US$140 per metric ton for total production below 500 tons, or US$156 per metric ton for total production above 500 tons). In 2013, the royalty payment was equal to 0.68% of revenues from the sale of nickel in matte products, while the average yearly royalty payment for the period from 2010 to 2013 was equal to 0.63% of revenues from the sale of nickel in matte products, including the additional royalty payment in 2011 for production beyond 160 million pounds in 2010. As part of ongoing renegotiations of our existing mining contract, as required by the new mining law, the Indonesian government is seeking to review our royalty regime.

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Australia. Royalties are payable on revenues from the sale of minerals. In the state of Queensland, for coal, the applicable royalty is 7% of the value (net of freight, late dispatch and other certain costs) up to A$100 per ton; 12.5% of the value between A$100 and A$150 per ton; and 15% thereafter. In the state of New South Wales, for coal, the applicable royalty is a percentage of the value of production total revenue (which is net of certain costs and levies) less allowable deductions of 6.2% for deep underground mines, 7.2% for underground mines and 8.2% for open cut mines. There is also a supplementary royalty payable of 1.95% (for coal recovered between December 1, 2012 and June 30, 2013) and 1% (for coal recovered on or after July 1, 2013) of the value of coal recovered. In July 2012, the Australian government introduced a mineral resource rent tax, MRRT. The MRRT taxes profits over a certain threshold generated from the exploitation of coal and iron ore resources in Australia. The tax is levied at an effective rate of 22.5% of assessable profit and is deductible for corporate income tax purposes. Unlike state royalties, which are based on the volume and value of the resource, the MRRT is based on profits. However, companies may credit state-based royalties against the MRRT. For the year ended December 31, 2013, Vale Australia was not liable for any MRRT.

Mozambique. The Government proposed a new tax regime for the mining and oil sectors in September 2013. With regards to the mining tax regime, the proposal has concepts and provisions that can affect mining projects in Mozambique, including a new royalty assessment rule, increase of mining production taxes, separate accounting for each mining title, among others. The new proposal is not clear with respect to the stabilization and security of the mining contracts signed prior to the proposed tax regime.

Environmental regulations

We are also subject to environmental regulations that apply to the specific types of mining and processing activities we conduct. We require approvals, licenses, permits or authorizations from governmental authorities to operate, and in most jurisdictions the development of new facilities requires us to submit environmental impact statements for approval and often to make investments to mitigate environmental impacts. We must also operate our facilities in compliance with the terms of the approvals, licenses, permits or authorizations.

We are taking several steps to improve the efficiency of the licensing process, including stronger integration of our environmental and project development teams, the implementation of a Best Practices Guide for Environmental Licensing and the Environment, the deployment of highly-skilled specialist teams, closer interaction with environmental regulators and the creation of an Executive Committee to expedite internal decisions regarding licensing.

Environmental regulations affecting our operations relate, among other matters, to emissions into the air, soil and water; recycling and waste management; protection and preservation of forests, coastlines, caves, watersheds and other features of the ecosystem; water use; climate change and decommissioning and reclamation. Environmental legislation is becoming stricter worldwide, which could lead to greater costs for environmental compliance. In particular, we expect heightened attention from various governments to reducing greenhouse gas emissions as a result of concern over climate change. There are several examples of environmental regulation and compliance initiatives that could affect our operations. In Canada and Indonesia, we are making significant capital investments to ensure compliance with air emission regulations that address, among other things, sulfur dioxide, particulates and metals. In Australia, we started acquiring and acquitting permits from the federal government in June 2013 under the carbon pricing scheme. This scheme may be repealed under the new federal government (elected in 2013) and replaced with a new carbon reduction scheme. The details and timing for this new scheme are yet to be finalized.

A proposed new law in the South Province of New Caledonia will impose stricter limits on emissions of nitrogen oxide and sulphur oxide and particulates from large combustion power stations, which will affect the power station that supplies electricity to VNC. To meet these standards, this 100 MW power station will need to be upgraded, which is expected to result in the increase in the price of power paid by VNC.

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In Canada, more stringent water effluent regulations are being proposed, which may affect our operations. In the UK, a recent effluent regulatory change has been introduced, which resulted in a significant increase in soil disposal and other environmental compliance costs at our Clydach facility.

In Brazil, there is legislation for the protection of caves, including a broad decree published in October 1990 and revised in 2008. As a consequence of that revision, the Ministry of Environment published an ordinance in 2009 that established a methodology to classify the relevance of caves. These regulations require us to conduct extensive technical studies and to engage in complex discussions with Brazilian environmental regulators. These discussions are ongoing, and as a result, we cannot yet assess the final impact of these regulations on our operations. However, it is possible that in certain of our iron ore mining operations or projects, we may be required to limit or modify our mining plans or to incur additional costs to preserve caves or to compensate for the impact on them, with potential consequences for production volumes, costs or reserves in our iron ore business.

Regulation of other activities

In addition to mining and environmental regulation, we are subject to comprehensive regulatory regimes for some of our other activities, including rail transport, port operations and electricity generation. We are also subject to more general legislation on workers' health and safety, safety and support of communities near mines, and other matters. The following descriptions relate to some of the other regulatory regimes applicable to our operations:

Brazilian railway regulation. Our Brazilian railroad business operates pursuant to concession contracts granted by the federal government, and our railroad concessions are subject to regulation and supervision by the Brazilian Ministry of Transportation and the transportation regulatory agency (ANTT). Our railroad concession contracts have duration of 30 years and may be renewed at the federal government's discretion. The FCA and MRS concessions expire in 2026, and the concessions for EFC and EFVM expire in 2027. VLI also owns a subconcession for commercial operation of a 720-kilometer segment of the FNS railroad in Brazil, which expires in 2037. The actual prices we charge can be negotiated directly with the users of such services, subject to tariff ceilings approved by ANTT for each of the concessionaires and each of the different products transported. ANTT regulations also require concessionaires to give trackage rights to other concessionaires, make investments in the railway network, meet certain productivity requirements, among other obligations.

Brazilian port regulation. Port operations in Brazil are subject to regulation and supervision by ANTAQ, the federal agency in charge of maritime transportation, and the Secretary of Ports of the Federal Government (SEP). In June 2013, a new law provided a new set of rules for projects and existing terminals. The statute removed restrictions on servicing third party cargo and permitted ANTAQ's involvement in determining third party access to private terminals. In 2014, the private terminals will execute new contracts with SEP in order to adapt the provisions to the new regime.

Regulation of chemicals. Some of our products are subject to regulations applicable to the marketing, distribution and use of chemical substances present in their composition. For example, the European Commission has adopted a European Chemicals Policy, known as REACH ("Registration, Evaluation and Authorization of Chemicals"). Under REACH, European manufacturers and importers are required to register substances prior to their entry into the European market and in some cases may be subject to an authorization process. A company that fails to comply with the REACH regulations could face fines and penalties.

Regulation of the seaborne transport of iron ore and iron ore fines. The International Maritime Organization has prepared amendments to existing rules governing safe shipping of products, including iron ore.

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II. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

OVERVIEW

We delivered a strong operational performance in 2013, with solid results across all of our lines of business. Our cost-cutting efforts, discipline in capital expenditures and focus on our core business throughout the year improved our financial position, and we were able to lay the foundations for future growth in volume and free cash flow.

We registered record sales volumes in 2013 in iron ore and pellets, with 306 Mt, along with record sales of copper, gold and coal, and our highest nickel sales since 2008. Even as our sales volumes increased, we achieved substantial reductions in costs and expenses, in part through the simplification of our organizational structure.

By continuing to focus selectively on a narrower exploration and project development portfolio, we have been able to maintain our commitment to growth while reducing both 2013 research and development expenditures and capital expenditures. We also successfully sold non-core assets and investments in 2013 totaling US$6.0 billion, which demonstrated our continued commitment to the simplification of our asset base and management focus. Our cash generation allowed us to distribute dividends of US$4.5 billion in 2013.

We succeeded in mitigating some significant uncertainties in our business in 2013, allowing management to focus on our operational and strategic objectives. In particular, we elected to participate in the REFIS, a federal tax settlement program for payment of amounts relating to Brazilian corporate income tax and social contribution, in order to settle the claims related to the net income of our non-Brazilian subsidiaries and affiliates from 2003 to 2012.

Our receipt of implementation licenses for the S11D project and associated logistics was an important advance in a key part of our plan to increase our iron ore production beyond 2016. We also received authorization to mine additional areas around the N4 mine, which will support our production plans for 2014 and our growth program for 2015 and 2016.

We completed a number of projects necessary to expand our iron ore production in the period from 2014 to 2016: Conceição Itabiritos, Carajás plant 2 (formerly known as Additional 40 Mtpy), and CLN 150, including Pier IV with its first berth in Ponta da Madeira. In addition, we ramped up base metals projects at Salobo I, Onça Puma and New Caledonia, and we completed other key projects at Long Harbour and Totten. These investments mark the end of an investment cycle and position our business to achieve our cash generation target in the coming years.

Underpinning our solid performance this year is a relentless focus on health and safety. Our health and safety indicators improved in 2013, with our total recordable injury frequency rate (TRIFR) decreasing from 2.8 to 2.6 per million hours worked. We remain focused on achieving a record of zero harm in our operations.

Sales volumes

Our financial performance depends, among other factors, on the volume of production at our facilities. We publish a quarterly production report, which is available on our website and filed with the SEC on Form 6-K. Increases in the capacity of our facilities resulting from our capital expenditure program have an important effect on our performance. Our results are also affected by acquisitions and dispositions of businesses or assets, and they may be affected in the future by new acquisitions or dispositions. For more information on acquisitions since the beginning of 2013, see *Information on the company Business overview Significant changes in our business*.

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The following table sets forth, for our principal products, the total volumes we sold in each of the periods indicated.

	Year ended December 31,		
	2011	2012	2013
	(thousand metric tons)		
Iron ore	257,287	258,061	264,631
Iron ore pellets	41,861	45,382	40,991
Manganese	1,032	1,745	2,115
Ferroalloys	386	267	183
Coal:			
Thermal coal	5,342	3,134	726
Metallurgical coal	2,330	4,864	7,353
Nickel	252	232	261
Copper	302	285	353
PGMs (oz)	446	386	510
Gold (oz)	198	168	297
Silver (oz)	2,626	1,862	2,154
Cobalt	2.721	2.033	2,939
Potash	568	581	531
Phosphates:			
MAP	907	1,221	1,133
TSP	594	713	681
SSP	2,501	2,446	1,969
DCP	556	474	461
Phosphate rock	2,652	3,314	3,154
Nitrogen	1,278	1,342	890

Average realized prices

The following table sets forth our average realized prices for our principal products for each of the periods indicated. We determine average realized prices based on gross operating revenues, which reflect the price charged to customers including items, principally value-added tax, that we deduct in arriving at net operating revenues.

	Year ended December 31,		
	2011	2012	2013
	(US$ per metric ton, except where indicated)		
Iron ore	143.46	105.41	107.43
Iron ore pellets	195.98	148.89	150.22
Manganese	165.70	134.10	157.37
Ferroalloys	1,443.01	1,340.82	1,303.92
Coal:			
Thermal coal	95.54	82.39	81.17
Metallurgical coal	235.27	171.38	129.34
Nickel	22,680.41	17,866.38	14,900.24
Copper	8,420.73	7,595.44	6,709.18
Platinum (US$/oz)	1,716.81	1,590.87	1,469.78
Gold (US$/oz)	1,558.55	1,755.52	1,339.37
Silver (US$/oz)	31.64	33.82	20.02
Cobalt (US$/lb)	15.63	12.27	10.95
Potash	505.28	530.12	417.32
Phosphates:			
MAP	679.65	646.58	571.86
TSP	585.98	526.67	472.51
SSP	281.53	268.58	271.88
DCP	679.63	628.36	611.54
Phosphate rock	112.80	124.82	90.68
Nitrogen	612.01	597.01	610.27

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Major factors affecting prices

Iron ore and iron ore pellets

Demand for our iron ore and iron ore pellets is a function of global demand for carbon steel. Demand for carbon steel, in turn, is strongly influenced by global industrial production. Iron ore and iron ore pellets are priced based on a wide array of quality levels and physical characteristics. Various factors influence price differences among the several types of iron ore, such as the iron content of specific ore deposits, the various beneficiation and purifying processes required to produce the desired final product, particle size, moisture content and the type and concentration of contaminants (such as phosphorus, alumina, silica and manganese ore) in the ore. Fines, lump ore and pellets typically command different prices.

Demand from China has been a principal driver of world demand and prices. Chinese iron ore imports reached 820 million metric tons in 2013, 10.1% above the 745.5 million metric tons imported in 2012 and 19.4% higher than 2011 levels, due mainly to the continued growth in Chinese steel production throughout 2013. We expect China's economic growth to continue during 2014, mainly driven by domestic demand. The reforms announced by the national government of China at the end of 2013 may affect demand for steel, as local governments will likely face budgetary restrictions on investments in infrastructure construction. On the other hand, demand from the property sector is expected to continue to grow, supported by continued urbanization. As a result, we expect iron ore demand from the steel industry to continue to grow, but at a slower pace.

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. In 2012, there was a significant shift from agreements to price our iron ore on a quarterly basis, using the current quarter's three-month average of price indices, to using pricing options based on spot prices. That shift exposed us to greater price volatility, but it also allowed us to capture more value by bringing our point of sale closer to key Asian markets.

Coal

Demand for metallurgical coal is driven by steel demand, and future growth continues to be expected across Asia and the Indian sub-continent. Asia accounts for more than half of the steel market and consumes 75% of seaborne metallurgical coal. Chinese seaborne demand increased by 48%, to 77 million metric tons in 2013 compared to 52 million metric tons in 2012.

Despite firm demand, prices have remained depressed by the excess of supply. Seaborne exports grew by 11% in 2013, fueled by Australian exports, which grew by 9% in 2012 and 18% in 2013, gaining market share and accounting for 58% of seaborne trade. Due to the current over-supplied market, there is no incentive to expand metallurgical coal supply in the short term. Moreover, high-cost production has been displaced, which resulted in mine closures in 2013.

Demand for thermal coal is closely related to electricity consumption, which continues to be driven by global economic growth and urbanization, with the highest levels of growth found in Asia and emerging markets. Demand decreased recently as natural gas gained market share. The appeal of natural gas increases as pollution concerns rise. In 2013, the production of shale gas in the United States reduced supply costs, and the gas price has a direct impact on coal prices. These trends are exacerbated by the oversupply of thermal coal, further depressing coal prices.

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Various other factors influence coal prices, including changing trends in mechanisms used to price metallurgical coal. Quarterly pricing remains predominant, but short term pricing trends continue to evolve slowly with more monthly pricing on term business, and a larger spot market in volume terms has been notable in 2013. The spot market for coal is mostly cleared in China, with some volume in India as well, although liquidity in the spot market is still limited. In 2013, there was only modest growth in the derivative market for metallurgical coal. Most of our term contracts are still priced on a quarterly basis, and alternate mechanisms are gradually being removed from the market. Price negotiations for thermal coal, which accounts for less than 10% of our coal sales, are held on spot and annual basis.

Nickel

Nickel is an exchange-traded metal, listed on the LME. Most nickel products are priced using a discount or premium to the LME price, depending on the nickel product's physical and technical characteristics. Demand for nickel is strongly affected by stainless steel production, which represents, on average, 66% of global nickel consumption.

We have short-term fixed-volume contracts with customers for the majority of our expected annual nickel sales. These contracts, together with our sales for non-stainless steel applications (alloy steels, high nickel alloys, plating and batteries), provide stable demand for a significant portion of our annual production. In 2013, 63% of our refined nickel sales were made for non-stainless steel applications, compared to the industry average for primary nickel producers of 34%, bringing more stability to our sales volumes. As a result of our focus on such higher-value segments, our average realized nickel prices for refined nickel have typically exceeded LME cash nickel prices.

Primary nickel (including ferro-nickel, nickel pig iron and nickel cathode) and secondary nickel (i.e., scrap) are competing nickel sources for stainless steel production. The choice between different types of primary and secondary nickel is largely driven by their relative price and availability. In recent years, secondary nickel has accounted for about 45% of total nickel used for stainless steels, and primary nickel has accounted for about 55%. In 2013, Chinese nickel pig iron and ferro-nickel production is estimated at 590,000 metric tons, representing 25% of world primary nickel supply, compared to 20% and 16% of the world's supply in 2012 and 2011, respectively. However, the implementation of the Indonesian mining law restricting the export of unprocessed ores may affect Chinese nickel pig iron and ferro-nickel production going forward. We estimate that Indonesia represents more than 80% of the critical saprolite ores used in the production of ferro-nickel in China and over 20% of world refined production. If it remains in place, the ban on Indonesian ore exports enacted in January 2014 is expected to have a significant impact on the market in the coming years.

Copper

Growth in copper demand in recent years has been driven primarily by Chinese imports, given the important role copper plays in construction in addition to electrical and consumer applications. Copper prices are determined on the basis of (i) prices of copper metal on terminal markets, such as the LME and the NYMEX, and (ii) in the case of intermediate products such as copper concentrate (which comprise most of our sales) and copper anode, treatment and refining charges negotiated with each customer. Under a pricing system referred to as MAMA ("month after month of arrival"), sales of copper concentrates and anodes are provisionally priced at the time of shipment, and final prices are settled on the basis of the LME price for a future period, generally one to three months after the shipment date.

Demand for refined copper grew by an estimated 5% in 2013, and China was responsible for an equivalent of 44% of worldwide consumption. The supply of refined copper increased with the 8% growth in global mine output in 2013, which reflect both the ramp-up of new projects and improvements at existing operations. Throughout 2013, prices remained under pressure. For 2014 and 2015, we expect mine production to continue expanding based on prior investments.

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Fertilizers

Demand for fertilizers is based on market fundamentals similar to those underlying global demand for minerals, metals and energy. Rapid per capita income growth in emerging economies generally causes dietary changes marked by an increase in the consumption of proteins, which ultimately contributes to increased demand for fertilizer nutrients, including potash and phosphates, as they help boost production of grains to feed more livestock. Demand is also driven by the demand for bio-fuels, which have emerged as an alternative source of energy to reduce world reliance on sources of climate-changing greenhouse gases, because key inputs for the production of biofuels sugar cane, corn and palm are intensive in the use of fertilizers.

Sales of fertilizers are mainly on a spot basis using international benchmarks, although some large importers in China and India often sign annual contracts. Seasonality is an important factor for price determination throughout the year, since agricultural production in each region depends on climate conditions for crop production.

In 2013, global fertilizer market conditions were weak as a result of lower prices due to declining demand for in India and China. As a result, some production was redirected from these markets to Brazil, where seasonal effects determined by the end of crop season were already weighing on prices.

Currency price changes

Our results of operations are affected in several ways by changes in currency exchange rates. The most important of these are the following:

Most of our revenues are denominated in U.S. dollars, while most of our costs of goods sold are denominated in other currencies, including the *real* (54% in 2013) and the Canadian dollar (14% in 2013). In 2013, 27% of our costs of goods sold were denominated in U.S. dollars. As a result, changes in exchange rates, particularly with respect to the U.S. dollar, affect our costs and operating margins.

Most of our long-term debt is denominated in currencies other than the *real* (US$20.539 billion at December 31, 2013, not considering accrued charges), principally the U.S. dollar. Because our functional currency for accounting purposes is the Brazilian *real*, changes in the value of the U.S. dollar against the *real* result in exchange gain or loss on our net liabilities.

We had *real*-denominated debt of US$7.131 billion at December 31, 2013, excluding accrued charges. Since most of our revenue is in U.S. dollars, we use swaps to convert our debt service from *reais* to U.S. dollars. Changes in the value of the U.S. dollar against the *real* result in fair value variation on these derivatives, affecting our financial results. For more information on our use of derivatives, see *Risk management*.

A decline in the value of the U.S. dollar tends to result in: (i) lower operating margins and (ii) higher financial results due to currency gains on our net U.S. dollar-denominated liabilities and fair value gains on our currency derivatives. Conversely, an increase in the value of the U.S. dollar tends to result in: (i) better operating margins and (ii) lower financial results due to exchange losses on our net U.S. dollar-denominated liabilities and fair value losses on our currency derivatives.

The U.S. dollar appreciated against the *real* during the first quarter of 2013, as Eurozone-related uncertainties diminished. Several factors, including lower output growth in Brazil, led to a sharp nominal appreciation of the U.S. dollar against the *real* during the second quarter of 2013. This escalation of the dollar was partially reversed for a short period, but resumed in the fourth quarter of 2013, remaining roughly stable thereafter. On average, the U.S. dollar was 10.5% stronger in 2013 against the *real* than in 2012. As of December 31, 2013, the U.S. dollar had appreciated 15.1% against the *real* relative to December 31, 2012.

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Compared to the Canadian dollar, the average value of the U.S. dollar in 2013 was 2.9% lower than in 2012, but as of December 31, 2013, the U.S. dollar had appreciated 7% against the Canadian currency relative to December 31, 2012.

Overall, in 2013 exchange rate fluctuations affected our operating margins positively but resulted in net foreign exchange losses and losses on derivatives, as described under *Critical accounting policies and estimates Derivatives*.

Effects of the REFIS in 2013

In November 2013, we elected to participate in the REFIS, a federal tax settlement program for payment of amounts relating to Brazilian corporate income tax and social contribution, in order to settle the claims related to the net income of our non-Brazilian subsidiaries and affiliates from 2003 to 2012. Before this settlement, the total amount of tax contingency for the period from 2003 to 2012, including the years for which tax assessments had not yet been issued, was estimated at US$19.4 billion (equivalent to R$45.0 billion, including R$17.1 billion in principal, R$9.8 billion in penalties, R$12.0 billion in interest and interest on penalties and R$6.0 billion in statutory fees).

Participating in the REFIS had an impact of US$6.7 billion (R$14.8 billion) on net income in 2013 as described in note 20 to our consolidated financial statements. In future years, financial expenses will include the interest component of the REFIS payments. Our future cash flows will be affected by the monthly installments. For more information about the REFIS, see *Legal proceedings Litigation on Brazilian taxation of foreign subsidiaries*.

Change in accounting presentation

We have discontinued the preparation of financial statements in accordance with U.S. GAAP. We have adopted IFRS, as issued by the IASB, as the basis for the preparation and presentation of our financial statements and reporting to the SEC beginning with our financial statements as of and for the year ending December 31, 2013 presented in this annual report. This annual report and future reports filed with the SEC will only present financial information prepared in accordance with IFRS.

We first adopted IFRS, as issued by the IASB, for our financial statements for the year ended December 31, 2010, which we published and filed with the CVM. Our transition date from Brazilian GAAP to IFRS was January 1, 2009, and we used certain mandatory or elective exceptions under IFRS 1 in those financial statements. Since we have previously adopted IFRS in Brazil, we are not a "first time adopter" of IFRS for purposes of this annual report on Form 20-F.

For a reconciliation of our financial statements in accordance with IFRS from U.S. GAAP, see Note 33 to our consolidated financial statements.

Change in accounting policies

In 2013, we started to account for our employment benefits according to IAS 19R. In accordance with its transition provisions, we applied this standard restrospectively to the years 2011 and 2012 as well. The revisions under IAS 19R (i) eliminated the "corridor" method for recognition of actuarial gains and losses; (ii) simplified the accounting for changes in the assets and liabilities of plans, recognizing in the income statement service costs and net interest cost based on the net benefit asset or liability; and (iii) provided for recognition in comprehensive income of remeasurements of actuarial gains and losses, return on plan assets (net of interest income on assets) and changes in the effect of the asset ceiling. For more information, see Note 6 to our consolidated financial statements.

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RESULTS OF OPERATIONS

In 2013, we generated net income attributable to the Company's stockholders of US$584 million compared to US$5.454 billion in 2012. This decrease was partly due to certain major non-recurring items in 2013, including: (i) US$4.048 billion of income taxes from continued operations paid in connection with the REFIS, after deductions, (ii) US$2.637 billion of net financial expenses related to the REFIS, (iii) US$2.940 billion of foreign exchange and monetary losses, (iv) US$2.298 billion in charges for impairment on assets, mainly related to the Rio Colorado potash project and (v) US$861 million of net fair value losses on foreign exchange and interest rate risk derivatives.

The following discussion addresses our continuing operations only, except as otherwise specified.

Revenues

In 2013, our net operating revenues increased 0.5% to US$46.767 billion, primarily as a result of increases in the sales volumes of base metals, iron ore and metallurgical coal and higher prices of iron ore, which were partially offset by lower prices for base metals, fertilizers and metallurgical coal, and a decrease in the sales volume of iron ore pellets and fertilizers. Net operating revenues of each business segment are discussed below under *Results of operations by segment*.

The following table summarizes our net operating revenues by product for the periods indicated.

	Year ended December 31,				
	2011	**% change**	**2012**	**% change**	**2013**
	(US$ million, except for %)				
Bulk materials:					
Iron ore	US$36,416	(26.0)%	US$26,931	4.5%	US$28,137
Iron ore pellets	7,938	(17.4)	6,560	(8.5)	6,000
Ferroalloys and manganese	676	(19.7)	543	(3.7)	523
Coal	1,058	3.2	1,092	(7.5)	1,010
Other ferrous products and services	585	(57.9)	246	(46.3)	132
Subtotal	46,673	(24.2)	35,372	1.2	35,802
Base metals:					
Nickel and other products(1)	8,118	(26.4)	5,975	(2.3)	5,839
Copper concentrate(2)	1,103	4.8	1,156	25.2	1,447
Subtotal	9,221	(22.7)	7,131	2.2	7,286
Fertilizers:					
Potash	273	6.2	290	(30.7)	201
Phosphates	2,300	9.0	2,507	(17.6)	2,065
Nitrogen	679	2.9	699	(32.9)	469
Others fertilizer products	70	5.7	74	6.8	79
Subtotal	3,322	7.5	3,570	(21.2)	2,814
Other products and services:(3)	859	(44.1)	480	80.2	865
Net operating revenues	US$60,075	(22.5)%	US$46,553	0.5%	US$46,767

(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) Includes pig iron and energy.

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The following table summarizes, for the periods indicated, the distribution of our net operating revenues based on the geographical location of our customers.

	Net operating revenues by destination					
	2011		2012		2013	
	(US$ million)	(% of total)	(US$ million)	(% of total)	(US$ million)	(% of total)
North America						
Canada	US$1,403	2.3%	US$1,015	2.2%	US$1,043	2.2%
United States	1,672	2.8	1,334	2.9	1,311	2.8
Mexico	114	0.2	29	0.1	29	0.1
	3,189	5.3	2,378	5.2	2,383	5.1
South America						
Brazil	8,644	14.4	6,926	14.9	6,190	13.2
Other	1,110	1.8	779	1.7	776	1.7
	9,754	16.2	7,705	16.6	6,966	14.9
Asia						
China	21,420	35.7	17,636	37.9	18,920	40.5
Japan	7,238	12.0	4,931	10.6	4,035	8.6
South Korea	2,780	4.6	2,103	4.5	1,795	3.8
Taiwan	1,281	2.1	901	1.9	982	2.1
Other	1,007	1.7	1,047	2.2	825	1.8
	33,726	56.1	26,617	57.1	26,558	56.8
Europe						
Germany	3,839	6.4	2,935	6.3	3,285	7.0
United Kingdom	1,351	2.2	920	2.0	1,003	2.1
Italy	1,908	3.2	1,310	2.8	1,055	2.3
France	804	1.3	658	1.4	977	2.1
Other	3,584	6.0	2,376	5.1	2,442	5.2
	11,486	19.1	8,199	17.6	8,762	18.7
Rest of the world	1,919	3.2	1,653	3.6	2,099	4.5
Total	US$60,075	100.0%	US$46,553	100.0%	US$46,767	100.0%

Operating costs and expenses

The following table summarizes the components of our operating costs and expenses for the periods indicated.

	Year ended December 31,				
	2011	**% change**	**2012**	**% change**	**2013**
	(US$ million, except for %)				
Cost of goods sold and services rendered	US$ (24,528)	3.5%	US$ (25,390)	(4.5)%	US$ (24,245)
Selling, general and administrative expenses	(2,271)	(4.4)	(2,172)	(40.1)	(1,302)
Research and evaluation expenses	(1,671)	(12.3)	(1,465)	(45.3)	(801)
Pre-operating and stoppage expenses	(1,293)	23.1	(1,592)	16.8	(1,859)
Other operating expenses, net	(1,482)	34.7	(1,996)	(50.7)	(984)
Impairment on non-current assets			(4,023)	(42.9)	(2,298)
Gain (loss) on measurement or sales of non-current assets	1,494		(506)	(57.5)	(215)
Total operating costs and expenses	US$ (29,751)	24.8%	US$ (37,144)	(14.6)%	US$ (31,704)

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Cost of goods sold and services rendered

The following table summarizes, for the periods indicated, the components of our cost of goods sold by their nature.

	Year ended December 31,				
	2011	**% change**	**2012**	**% change**	**2013**
			(US$ million)		
Outsourced services	US$ 4,156	11.8%	US$ 4,645	(18.1)%	US$ 3,805
Materials costs	3,716	13.6	4,222	(2.6)	4,112
Energy:					
Fuel	2,066	(5.8)	1,947	(7.3)	1,804
Electric energy	966	(10.7)	863	(23.2)	663
Subtotal	3,032	(7.3)	2,810	(12.2)	2,467
Acquisition of products:					
Iron ore and pellets	1,411	(50.4)	700	(42.1)	405
Nickel	606	(44.2)	338	36.7	462
Other	257	28.0	329	64.7	542
Subtotal	2,274	(39.9)	1,367	3.1	1,409
Personnel	3,017	13.1	3,413	(4.3)	3,265
Depreciation and depletion	2,452	49.2	3,659	1.8	3,724
Freight	1,956	43.2	2,801	13.9	3,189
Others	3,925	(37.0)	2,473	(8.0)	2,274
Total	US$24,528	3.5%	US$ 25,390	(4.5)%	US$ 24,245

2013 compared to 2012. In 2013, our cost of goods sold was US$24.245 billion, a decrease of 4.5%, or US$1.145 billion, compared to 2012. The decrease in costs was mainly a result of US$1.638 billion in nominal exchange rate variations and US$1.198 billion primarily from the renegotiation of contracts and the increased supply of energy from our own plants. Those effects were partially offset by an increase of US$1.691 billion in costs resulting from higher volumes sold, especially of iron ore, base metals and metallurgical coal.

Outsourced services costs (primarily for operational services such as waste removal, cargo freight and maintenance of equipment and facilities) decreased 18.1%, which was primarily driven by the depreciation of the Brazilian *real* against the U.S. dollar, reassessment of contracts with suppliers and the relocation of some personnel of our outsourced service providers to other operational activities due to the stoppage of some of our plants.

Materials costs decreased 2.6% reflecting the depreciation of the Brazilian *real* against the U.S. dollar, partially offset by an increase in costs of maintenance materials in our iron ore and phosphates operations, as a result of the maintenance activities we conducted in 2013.

Energy costs decreased 12.2%, primarily reflecting the depreciation of the Brazilian *real* against the U.S. dollar, lower prices and the increased use of energy from our power plants, which have a lower cost in our energy portfolio, despite higher fuel prices.

Costs of purchasing products from third parties increased 3.1%, primarily driven by increased purchases of precious metals to be processed at our refinery in Acton, England, to reduce idle capacity and sales of surplus energy at the spot market that we receive from our long-term energy contracts.

Personnel costs decreased 4.3%, primarily due to the depreciation of the Brazilian *real* against the U.S. dollar, partially offset by a 6% increase in wages.

Depreciation and depletion increased 1.8% reflecting the ramp-up of new projects, partially offset by the depreciation of the Brazilian *real* against the U.S. dollar.

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Freight costs increased 13.9%, primarily due to the increased volume of iron ore and iron ore pellets we sold on a CFR basis relative to sales on an FOB basis.

Other costs of goods sold decreased 8.0% in 2013. These costs consist mainly of leasing fees related to our joint-venture pelletizing assets, demurrage and royalties and a full year of TFRM, which is a tax on mineral production created by certain Brazilian states in 2012.

2012 compared to 2011. In 2012, our cost of goods sold was US$25.390 billion, an increase of 3.5%, or US$862 million, compared to 2011. The increase primarily resulted from US$4.414 billion related to equipment maintenance, enhancements to iron ore, pellets and nickel operations, the start-up of Salobo and higher personnel costs, which were only partially offset by decreases of US$1.246 billion in costs resulting from lower volumes sold, mainly base metals, and of US$2.258 billion from exchange rate variations.

Outsourced services costs (primarily for operational services such as waste removal, cargo freight and maintenance of equipment and facilities) increased 11.8%, which was primarily driven by (i) increased maintenance services after heavy rainfall in Brazil during the first months of 2012 and (ii) higher maintenance costs for our nickel operations in Canada during the first half of 2012, after the suspension of mining activities at Sudbury to address certain safety concerns. The increase was partially offset by the reallocation of some of our employees in the fourth quarter of 2012 as part of our effort to lower costs with outsourced services.

Materials costs increased 13.6% as result of maintenance work on our iron ore, pellet and nickel operations and higher prices for ammonia and oil products, which are key inputs in our fertilizer operations.

Energy costs decreased 7.3%, primarily reflecting the depreciation of the Brazilian *real* against the U.S. dollar and the divestment of our aluminum assets in February 2011. These factors were partially offset by increased prices of fuel (principally used in our nickel operations).

Costs of purchasing products from third parties decreased 39.9%, mainly driven by lower purchases of nickel and reduced iron ore and iron ore pellet prices. In the first half of 2011, we purchased a large amount of finished nickel to fill contracts because of problems with our Copper Cliff smelter in Sudbury.

Personnel costs increased 13.1%, primarily as a result of the higher number of employees we hired for project execution and an 8.0% wage increase in Brazil.

Depreciation and depletion expense increased 49.2% due to the ramp-up of new projects in 2012. It was partially offset by the depreciation of the Brazilian *real* against the U.S. dollar.

Other costs of goods sold decreased 37.0% in 2012. These costs consist mainly of freight, leasing fees related to our joint-venture pelletizing assets, demurrage and royalties.

Selling, general and administrative expenses

2013 compared to 2012. In 2013, selling, general and administrative expenses decreased 40.1%, or US$870 million, mainly as a result of the simplification of our organizational structure and the depreciation of the Brazilian *real* against the U.S. dollar, which was partially offset by the effects of a new two-year collective bargaining agreement in Brazil that increased wages by 6.0%.

2012 compared to 2011. In 2012, selling, general and administrative expenses decreased 4.4%, or US$99 million, mainly as a result of the depreciation of the Brazilian *real* against the U.S. dollar, which was partially offset by the impact of increased wages in Brazil by 8.0%.

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Research and development expenses

Our research and development expenses consist primarily of (i) expenditures for feasibility and other studies for new projects, (ii) expenditures on mineral exploration, which are recorded as expenses until the economic viability of the related mining activities can be established and (iii) expenditures to develop new processes and technological innovation.

2013 compared to 2012. In 2013, research and development expenses decreased 45.3%, which reflects the reduction of our portfolio of projects and the closure of certain exploration activities.

2012 compared to 2011. In 2012, research and development expenses decreased 12.3%, which reflects our focus on our most promising exploration projects and on a smaller number of projects under active study due to significant decreases in expenditures for feasibility and other studies for new project and mineral exploration, while expenditures for the development of new processes and technological improvements increased. The change reflected our renewed focus on long-term growth opportunities.

Pre-operating and stoppage expenses

Pre-operating expenses refers to expenses incurred by a project shortly before initial sales are made, and stoppage expenses are expenses incurred by suspension of projects and shut down of operations.

2013 compared to 2012. Pre operating and stoppage expenses increased by US$267 million in 2013, from US$1.592 billion in 2012 to US$1.859 billion in 2013, mainly due to the expense of US$381 million related to stoppage of our Rio Colorado project.

2012 compared to 2011. Pre operating and stoppage operation increased by US$299 million in 2012, from US$1.293 billion in 2011 to US$1.592 billion in 2012, mainly due to our Onça Puma and Vale New Caledonia projects.

Other operating expenses, net

Other operating expenses, net, include provisions for losses, litigation and contingencies, among other items.

2013 compared to 2012. Other operating expenses, net, decreased by US$1.012 billion in 2013, from US$1.996 billion in 2012 to US$984 million in 2013, mainly due to the one-off effect of CFEM expenses incurred in 2012, as described below.

2012 compared to 2011. Other operating expenses, net, increased by US$514 million in 2012, from US$1.482 billion in 2011 to US$1.996 billion in 2012, mainly due to the recognition of US$542 million as a probable loss related to the deductibility of transportation costs in determining the amount of CFEM payments.

Impairment of non-current assets

2013 compared to 2012. In 2013, we recognized impairments of non-current assets amounting to US$2.298 billion. We recognized impairments of (i) US$2.116 billion with respect to our potash assets at the Rio Colorado project, following our decision to cancel the implementation of the project and (ii) US$182 million with respect to the temporary stoppage and uncertainty regarding the resumption of pelletizing plants in Brazil. See Note 16 to our consolidated financial statements.

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2012 compared to 2011. In 2012, we recognized impairments of non-current assets amounting to US$4.023 billion. We recognized impairments of (i) US$2.848 billion with respect to our nickel assets at Onça Puma, triggered by the failure of a furnace, (ii) US$1.029 billion with respect to coal assets in Australia due to increasing costs, falling market prices and reduced production levels, among other factors, and (iii) US$145 million with respect to other assets. See Note 14 to our 2012 consolidated financial statements.

Gain (loss) on measurement or sales of non-current assets

2013 compared to 2012. In 2013 we had a loss of US$215 million on the sale of assets at Tres Valles, while in 2012 we had a loss of US$506 million on the sale of assets, including (i) a US$22 million loss from the sale of our European manganese ferroalloy operations, (ii) a US$355 million loss from the sale of our coal operations in Colombia and (iii) a US$129 million loss from the sale of a wholly-owned subsidiary in the fertilizer business, Araucaria.

2012 compared to 2011. In 2012 we had a loss of US$506 million on the sale of assets, while in 2011 we had a gain of US$1.494 billion from the sale of our aluminum operations to Norsk Hydro.

Operating income

The following table provides, for the years indicated, information about our operating income (loss) by product and, for each product, as a percentage of net operating revenues from sales of that product. Operating income of each business segment is discussed below under *Results of operations by segment*.

	Year ended December 31,					
	2011		2012		2013	
	Segment operating income (loss)		Segment operating income (loss)		Segment operating income (loss)	
	(US$ million)	(% of net operating revenues)	(US$ million)	(% of net operating revenues)	(US$ million)	(% of net operating revenues)
Bulk materials:						
Iron ore	US$ 24,192	66.4%	US $12,482	46.3%	US$ 15,754	56.0%
Iron ore pellets	4,325	54.5	3,556	54.2	3,083	51.4
Manganese ore and ferroalloys	13	1.9	123	22.7	130	24.9
Coal	(484)		(2,031)	18.2	(668)	
Other ferrous products and services	109	18.6	(148)		(67)	
Base metals:						
Nickel and other products	1,044	13.1	(3,817)		(459)	
Copper concentrate	146	13.2	(76)		(127)	
Other					244	
Fertilizers:						
Potash	(87)		23	7.9	(2,525)	
Phosphates	243	10.6	100	4.0	(133)	
Nitrogen	6	0.9	(159)		(20)	
Other fertilizer products	70	100.0	74	100.0	77	97.5
Other	747	87.0	(718)		(226)	
Total	US$ 30,324	50.5%	US$ 9,409	20.2%	US$ 15,063	32.2%

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2013 compared to 2012. Operating income as a percentage of net operating revenues increased from 20.2% in 2012 to 32.2% in 2013. Disregarding the impact of impairment of non-current assets (US$4.023 billion in 2012 and US$2.298 billion in 2013), our operating income as a percentage of net operating revenues would have been 28.9% in 2012 and 37.1% in 2013. The principal elements in the improved margin were our efforts to cut costs and expenses, followed by higher prices and sales volumes for iron ore and the sale of the mineral rights related to the gold stream transaction with Silver Wheaton. These elements were partially offset by lower prices of base metals, fertilizers and metallurgical coal and volumes of iron ore pellets, the stoppage and impairment of our potash project in Argentina (Rio Colorado), the shutdown of Tubarão I and II and São Luis plants and the loss on the sale of Tres Valles.

2012 compared to 2011. Operating income as a percentage of net operating revenues decreased from 50.5% in 2011 to 20.2% in 2012. Without the impact of the US$4.023 billion impairment of fixed assets in 2012, operating income as a percentage of net operating revenues would have been 28.9% in 2012. The decline primarily resulted from significantly lower prices for all of our main products, while sales volumes showed little or no growth in 2012 for most of our operations. Other factors contributing to the decrease include the temporary stoppage of our nickel operations at Sudbury, pre-operating costs at Onça Puma and pre-operating costs and inventory adjustments at VNC.

Non-operating income (expenses)

The following table details our net non-operating income (expenses) for the periods indicated.

	Year ended December 31,		
	2011	**2012**	**2013**
	(US$ million)		
Financial income	US$ 701	US$ 411	US$ 643
Financial expenses	(2,715)	(2,421)	(5,002)
Gains (losses) on derivatives, net	75	(120)	(1,033)
Foreign exchange gains (losses), net	(1,382)	(1,918)	(2,765)
Indexation gains (losses), net	(228)	26	(175)
Non-operating income (expenses)	US$ (3,549)	US$ (4,022)	US$ (8,332)

2013 compared to 2012. Our non-operating expenses increased 107.2%, to US$8.332 billion in 2013 from US$4.022 billion in 2012. This increase principally resulted from:

An increase in financial expenses of US$2.581 billion, attributable primarily to the US$2.637 billion net effect of fines and interest recognized under the REFIS.

The net effect of fair value changes in derivatives, which represented a loss of US$1.033 billion in 2013 compared to a loss of US$120 million in 2012. This reflected the following main categories of derivatives transactions:

Currency and interest rate swaps. We recognized a net loss of US$861 million in 2013 from currency and interest rate swaps, compared to net loss of US$263 million in 2012. These swaps are primarily made to convert debt denominated in other currencies into U.S. dollars in order to protect our cash flow from exchange rate volatility.

Nickel derivatives. We recognized a net gain of US$11 million in 2013 compared to a gain of US$171 million in 2012. These derivatives are part of our nickel price protection program.

Bunker oil derivatives. We recognized a net loss of US$114 million in 2013 compared to a net gain of US$14 million in 2012. These derivatives are structured to minimize the volatility of the cost of maritime freight.

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Warrants. We recognized a net loss of US$60 million in 2013. These derivatives were part of the payment received under the 2013 gold sale contract with Silver Wheaton.

Net foreign exchange losses of US$2.765 billion in 2013 compared to net foreign exchange losses of US$1.918 billion in 2012, principally due in both years to the depreciation of the Brazilian *real* against the U.S. dollar.

A net indexation loss of US$175 million in 2013 compared to a gain of US$26 million in 2012, primarily due to the retrospective application of IAS 19 resulting in a gain for 2012.

An increase in other financial income of US$232 million, mainly due to fair value gains of US$214 million as a result of the sale of Hydro shares, which was classified as held for sale.

2012 compared to 2011. Our non-operating increased 13.3%, to US$4.022 billion in 2012 from US$3.549 billion in 2011. This increase principally resulted from:

A decrease in financial income of US$290 million, mainly due to a lower average cash balance.

A decrease in financial expenses of US$294 million, attributable in part to lower interest expense on domestic debt.

The net effect of fair value changes in derivatives, which represented a loss of US$120 million in 2012 compared to a gain of US$75 million in 2011. This reflected the following main categories of derivatives transactions:

Currency and interest rate swaps. We recognized a net loss of US$263 million in 2012 from currency and interest rate swaps, compared to net loss of US$96 million in 2011. These swaps are primarily made to convert debt denominated in other currencies into U.S. dollars in order to protect our cash flow from exchange rate volatility.

Nickel derivatives. We recognized a net gain of US$171 million in 2012 compared to a gain of US$103 million in 2011. These derivatives are part of our nickel price protection program.

Bunker oil derivatives. We recognized a net gain of US$1 million in 2012 compared to a net gain of US$37 million in 2011. These derivatives are structured to minimize the volatility of the cost of maritime freight.

Net foreign exchange losses of US$1.918 billion in 2012 compared to net foreign exchange losses of US$1.382 billion in 2011, principally due to the depreciation of the Brazilian *real* against the U.S. dollar in 2012 and 2011.

A net indexation gain of US$26 million in 2012 compared to a loss of US$228 million in 2011, primarily due to the monetary variation in social contribution taxes paid in the third quarter of 2011, which offset increases in assets subject to indexation. This net variation is mainly due to judicial deposits, which are adjusted by a Brazilian inflation index.

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Income taxes

For 2013, we recorded net income tax expense of US$6.833 billion, compared to an income tax expense of US$1.174 billion in 2012. In 2013, we had a tax expense from continued operations of US$4.048 billion in connection with the REFIS, a federal tax settlement program for payment of amounts relating to Brazilian corporate income tax and social contribution, in order to settle the claims related to the net income of our non-Brazilian subsidiaries and affiliates from 2003 to 2012. Our participation in the REFIS resulted in a substantial reduction in the amounts in dispute. For more information, see *Legal proceedings Litigation on Brazilian taxation of foreign subsidiaries* and Notes 6, 20 and 21 to our consolidated financial statements. The effective tax rate on our pretax income, excluding the income tax expense and financial expenses in connection with the REFIS, as well as the impairment of fixed assets, was 23.3%, which is lower than the statutory rate, mainly because of the tax benefit of shareholder distributions categorized as interest on shareholders' equity.

For 2012, we recorded an income tax gain of US$1.174 billion, resulting from the reversal of the US$1.236 billion deferred tax liability generated by the acquisition of Vale Fertilizantes S.A. (Vale Fertilizantes) by our subsidiary Mineração Naque S.A. (Naque) in 2010, which was followed by the merger of Naque and Vale Fertilizantes in June 2012. Excluding this factor, as well as the impact of the impairment of fixed assets, our effective tax rate was 17.2% in 2012.

In 2011, we had income tax expense of US$5.265 billion, and our effective tax rate was 18.9%.

Equity in results of affiliates, joint ventures and other investments

Our equity in the results of affiliates and joint ventures was a net gain of US$469 million in 2013, compared to a net gain of US$645 million in 2012 and US$1.138 billion in 2011. The decrease from 2011 to 2012 and from 2012 to 2013 was principally attributable to lower sales prices and lower results, respectively, for iron ore pellets through our joint venture Samarco.

Impairment on investments

In 2013, we recognized no impairment. In 2012, we recognized an impairment of US$1.941 billion on our investments, including (i) US$975 million on our interest in Norsk Hydro, due to volatility of aluminum prices and uncertainties about the European economy, (ii) US$883 million on our interest in CSA Thyssenkrupp due to changed expectations about future performance and (iii) US$83 million corresponding to Vale Soluções em Energia due to changes in our investment strategy.

Results of operations by segment

Bulk materials

2013 compared to 2012. Net operating revenues from sales of bulk materials increased to US$35.802 billion in 2013, from US$35.372 billion in 2012. The 1.2% increase primarily reflected higher prices and volumes of iron ore and higher metallurgical coal volumes, partly offset by lower volumes of iron ore pellets.

Our average realized prices were 1.9% higher for iron ore and 0.9% for iron ore pellets, reflecting the increase in the average value of Platt's IODEX 62% CFR China index in 2013 and higher sales on a CFR basis. The volume of our iron ore pellets sales in 2013 decreased by 9.7% due to the stoppage of our Tubarão I and II and São Luis pelletizing plant.

Our revenues from bulk materials in 2013 were positively affected by the 51.2% increase in metallurgical coal volumes that resulted from the ramp-up of Moatize and better performance at Carborough Downs due to improvements in mine operations. Although the demand for coal has increased in Asia due to higher consumption of steel, prices for coal have remained depressed by excess supply.

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Operating income on sales of bulk materials was US$18.232 billion in 2013 and US$13.982 billion in 2012. The 30.4% increase reflects higher operating income on iron ore, resulting from higher prices and sales volume. Margins were negatively affected by the impairment at pelletizing plant and lower coal prices.

2012 compared to 2011. Net operating revenues from sales of bulk materials decreased to US$35.372 billion in 2012 from US$46.673 billion in 2011. The 24.2% decrease primarily reflected lower prices for iron ore and iron ore pellets.

Our average realized prices were down 28.9% for iron ore and 23.7% for iron ore pellets due a decline in the average price premium and the general slowdown in global economic growth in 2012. After a sharp downward trend in prices in the third quarter of 2012 associated with a destocking cycle that resulted primarily from weak global demand for steel, market conditions improved in the last quarter. Both the supply response by high-cost producers to lower prices and the resumption of growth in Chinese demand influenced by investments in infrastructure and construction and sales of cars set the stage for a V-shaped recovery in prices. The volume of our iron ore sales in 2012 increased slightly (0.3%).

Our revenues from bulk materials in 2012 were positively affected by the 108.8% increase in metallurgical coal volumes that resulted from the ramp-up of Moatize and the recovery of Australian output. After the 2011 supply shock arising from the disruption of Australian production and exports due to heavy rains and flooding, prices of metallurgical coal have trended down, in line with the slower growth of global steel consumption, and the average realized price for metallurgical coal declined 27.2% in 2012. The volume of thermal coal we sold in 2012 decreased 41.3%, primarily resulting from the sale of our coal assets in Colombia, and our average realized prices for thermal coal fell 13.8%.

Operating income on sales of bulk materials was US$13.982 billion in 2012 and US$28.155 billion in 2011. The 50.3% decrease reflects lower operating income on iron ore and iron ore pellets, which decreased because of lower prices. Margins were negatively affected by wage increases, higher maintenance and higher freight cost, which were partially offset by the decrease in prices of iron ore and iron ore pellets acquired from third parties. We had a small operating loss on sales of coal in both periods.

Base metals

2013 compared to 2012. Net operating revenues from sales of base metals increased to US$7.286 billion in 2013 from US$7.131 billion in 2012. The 2.2% increase primarily reflected higher volume sold from Salobo operations, partially offset by lower prices for the segment.

We recorded an operating loss on sales of base metals of US$342 million in 2013, while we had an operating loss of US$3.893 billion in 2012. The decrease in SG&A and other expenses contributed positively to the result in 2013, while the loss on sale of Tres Valles contributed negatively with US$215 million. In 2012 we registered the US$2.848 billion impairment of our Onça Puma nickel assets.

2012 compared to 2011. Net operating revenues from sales of base metals decreased to US$7.131 billion in 2012 from US$9.221 billion in 2011. The 22.7% decrease primarily reflected lower prices and volumes of nickel sold due to weaker demand from the stainless steel industry. Positive expectations led to a price recovery in the fourth quarter of 2012, but the decline in our sales volume was due to the longer than expected temporary suspension of mining operations in Sudbury for a health and safety review, a decrease of in-process inventory sales and lower purchased finished nickel sales. Although revenues from sales of copper concentrate also declined due to lower prices, the decrease was partially offset by the start-up of Salobo.

We recorded an operating loss on sales of base metals of US$3.893 billion in 2012, while we had operating income of US$1.190 billion in 2011. This significant decline was primarily due to lower prices for base metals products, and the US$2.848 billion impairment of our Onça Puma nickel assets.

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Fertilizers

2013 compared to 2012. Net operating revenues from sales of fertilizers decreased to US$2.814 billion in 2013 from US$3.570 billion in 2012. The 21.2% decrease was a result of lower sales prices and volumes. The main reason for reduced volumes was the sale of Araucária, a nitrogen producing operation, on June 1, 2013.

Operating loss on sales of fertilizers was US$2.601 billion in 2013 compared to an operating income of US$38 million in 2012. The change primarily reflected the impairment of the Rio Colorado project amounting to US$2.116 billion.

2012 compared to 2011. Net operating revenues from sales of fertilizers increased to US$3.570 billion in 2012 from US$3.322 billion in 2011. The 7.5% increase was mainly a result of an overall increase in sales volume of phosphate nutrients and the increase in phosphates production at our operations in Bayóvar, Peru and our plant in Uberaba, state of Minas Gerais. The increase in sales volume was partially offset by lower realized prices of most of the phosphate nutrients.

Operating income on sales of fertilizers was US$38 million in 2012 and US$232 million in 2011. The 83.6% decrease primarily reflected the 58.8% decrease in operating income from the sale of phosphates as a result of higher costs and expenses. We had a small operating loss on sales of nitrogen in 2012.

LIQUIDITY AND CAPITAL RESOURCES

Overview

In the ordinary course of business, our principal funding requirements are for capital expenditures, dividend payments and debt service. We have historically met these requirements by using cash generated from operating activities and through borrowings, supplemented occasionally by dispositions of assets.

For 2014, we have budgeted capital expenditures of US$13.8 billion, including US$9.3 billion for project execution and US$4.5 billion for sustaining existing operations. Our Board of Executive Officers has proposed a minimum dividend payment for 2014 of US$4.2 billion, subject to approval by our Board of Directors. We paid US$4.5 billion in dividends in 2013.

We expect our operating cash flow and cash holdings to be sufficient to meet these anticipated requirements. We also regularly review acquisition and investment opportunities and, when suitable opportunities arise, we make acquisitions and investments to implement our business strategy. We may fund these investments with borrowings.

Sources of funds

Our principal sources of funds are operating cash flow and borrowings. The amount of operating cash flow is strongly affected by global prices for our products. In 2013, our operating activities generated cash flows from continued operations of US$14.542 billion, compared to US$15.721 billion in 2012, reflecting primarily the initial payment of US$2.594 billion we made under the REFIS in November 2013.

Our major new borrowing transactions in 2013 and 2014 are summarized below:

In June 2013, we entered into a new credit facility with Banco Nacional de Desenvolvimento Econômico Social ("BNDES") of R$109 million, or US$47 million, to finance the acquisition of equipment in Brazil.

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In November and December 2013, we entered into pre-export financing facilities that are linked to future receivables from export sales, in the total amount of US$1.38 billion. These facilities will mature in five and seven years.

In December 2013, we issued R$650 million (approximately US$276 million) in export credit notes that will mature in 2023 to Brazilian commercial banks.

In February 2014, we issued R$1.0 billion in infrastructure debentures that will mature between 2021 and 2029 to finance part of our CLN S11D Project.

In addition to the transactions described above, during 2013 we also borrowed US$1.24 billion under our existing financing agreements.

In March 2013, we received US$1.9 billion as part of the consideration for our sale to Silver Wheaton of 25% of the gold produced as a by-product at our Salobo copper mine for the life of that mine and 70% of the gold produced as a by-product at our Sudbury nickel mines for the next 20 years. We will also receive ongoing payments of the lesser of US$400 (which in the case of Salobo is subject to a 1% annual inflation adjustment) and the prevailing market price for each ounce of gold that we deliver in connection with the transaction. As further consideration, we also received ten million warrants exercisable into Silver Wheaton shares, with a strike price of US$65.0 and a 10-year term.

In July 2013, we entered into a five-year revolving credit facility with a syndicate of 16 commercial banks that added US$2.0 billion to the total amount available under our revolving credit facilities. Considering the existing US$3.0 billion facility that will mature in 2016, the total amount we have available under revolving credit lines is currently US$5.0 billion.

In 2013, we received proceeds of US$2.030 billion from the disposal of assets, including our minority stake in Hydro. See *Information on the company Business overview Significant changes in our business*.

Uses of funds

Capital expenditures

Capital expenditures in 2013 amounted to US$14.2 billion, including US$9.6 billion for project execution and US$4.6 billion dedicated to sustaining existing operations. Our actual capital expenditures may differ from those reported in our cash flow statements, because actual figures include some amounts that are treated as current expenses for accounting purposes, such as expenses for project development and maintenance of existing assets. There may also be differences due to the fact that some actual figures are converted into U.S. dollars at the exchange rate on the date of each cash disbursement, whereas figures reported in our cash flow statements are converted into U.S. dollars based on average exchange rates. For more information about the specific projects for which we have budgeted funds, see *Capital expenditures*.

Distributions and repurchases

We paid total dividends of US$4.5 billion in 2013 (including distributions classified as interest on shareholders' equity), consisting of US$2.250 billion in April and US$2.250 billion in October. The minimum dividend proposed by our Board of Executive Officers for 2014 is US$4.2 billion, subject to approval by our Board of Directors.

We did not repurchase any of our shares in 2013.

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Tax payments

We paid US$2.405 billion in income tax in 2013, disregarding the payments in connection with REFIS, compared with US$1.238 billion in 2012. In connection with our participation in the REFIS, we paid US$2.6 billion in income tax during 2013 and the remaining US$7.0 billion will be paid in 178 monthly installments.

Debt

At December 31, 2013, our outstanding debt was US$29.445 billion (including US$28.996 billion of principal and US$449 million of accrued interest) compared with US$30.270 billion at the end of 2012. At December 31, 2013, US$1.456 billion of our debt was secured by liens on some of our assets. At December 31, 2013, the debt amortization average term was 9.89 years, compared to 10.14 years in 2012.

At December 31, 2013, we had no outstanding short-term debt.

Our major categories of long-term indebtedness are as follows. The principal amounts given below include the current portion of long-term debt and exclude accrued charges.

U.S. dollar-denominated loans and financing (US$4.996 billion at December 31, 2013). This category includes export financing lines, loans from export credit agencies, and loans from commercial banks and multilateral organizations.

U.S. dollar-denominated fixed rate notes (US$13.820 billion at December 31, 2013). We have issued in public offerings several series of fixed-rate debt securities, directly by Vale and through our finance subsidiary Vale Overseas Limited, guaranteed by Vale, totaling US$12.757 billion. Our subsidiary Vale Canada has outstanding fixed rate debt in the amount of US$700 million.

Euro-denominated fixed rate notes (US$2.066 billion at December 31, 2013). We have issued in public offerings two series of fixed-rate debt securities denominated in Euro totaling €1.500 billion.

Other debt (US$8.114 billion at December 31, 2013). We have outstanding debt, principally owed to BNDES and Brazilian commercial banks, denominated in Brazilian *reais* and other currencies.

In addition to the indebtedness described above, we have a variety of credit lines. At December 31, 2013, these included the following:

A US$1.2 billion facility with The Export-Import Bank of China and the Bank of China Limited to finance the construction of 12 very large ore carriers. As of December 31, 2013, we had drawn US$985.5 million under this facility.

Credit lines for R$7.3 billion, or US$3.116 billion, with BNDES to finance our investment program. As of December 31, 2013, we had drawn the equivalent of US$1.97 billion under these facilities.

Facilities with BNDES totaling R$985 million, or US$421 million, to finance the acquisition of equipment in Brazil. As of December 31, 2013, we had drawn the equivalent of US$388 million under these facilities.

A R$3.9 billion, or US$1.7 billion, financing agreement with BNDES to finance part of the implementation of the CLN 150 Mtpy project, which will expand the logistics infrastructure in Vale's Northern System. As of December 31, 2013, we had drawn the equivalent of US$1.3 billion under this facility.

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In addition the credit lines described above, in January 2014, we signed a new credit line amounting to US$775 million with Export Development Canada that can be disbursed until July 2014. As of February 28, 2014, we had not made any drawing under this facility.

We have two revolving credit facilities with syndicates of international banks, which will mature in April 2016 and July 2018. At December 31, 2013, the total amount available under these facilities was US$5.0 billion, which can be drawn by Vale, Vale Canada and Vale International. As of December 31, 2013, we had not drawn any amounts under this facility.

Some of our long-term debt instruments contain financial covenants. Our principal covenants require us to maintain certain ratios, such as debt to EBITDA and interest coverage. We believe that our existing covenants will not significantly restrict our ability to borrow additional funds as needed to meet our capital requirements.

We have a 9% interest in Norte Energia, a joint venture formed to build the Belo Monte hydroelectric facility. We have committed to guarantee a portion, equal to our share ownership percentage, of the debt incurred by Norte Energia under a R$22.5 billion credit facility from BNDES and other lenders to finance the construction. We have also agreed to pledge our interest in Norte Energia to secure the financing. As part of the restructuring of our investments in power generation, we are in the process of selling 49% of our 9% interest in Norte Energia. As a result, our interest in the Belo Monte project will be reduced to 4.59%, and we are seeking to reduce our guarantee of the debt under the credit facility to the corresponding percentage.

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CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations at December 31, 2013. This table excludes other common non-contractual obligations that we may have, including pension obligations, deferred tax liabilities and contingent obligations arising from uncertain tax positions, all of which are discussed in the notes to our consolidated financial statements.

	Payments due by period				
	Total	Less than 1 year	2015-2016	2017-2018	Thereafter
			(US$ million)		
Long-term debt, including current portion, less accrued interest	US$28,996	US$1,326	US$3,226	US$6,436	US$18,008
Interest payments(1)	18,544	1,545	3,007	2,766	11,226
Operating lease obligations(2)	1,278	152	298	219	609
Purchase obligations(3)	13,074	6,602	3,895	1,319	1,258
Total	US$61,892	US$9,625	US$10,426	US$10,740	US$31,101

(1) Consists of estimated future payments of interest on our loans, financings and debentures, calculated based on interest rates and foreign exchange rates applicable at December 31, 2013 and assuming that (i) all amortization payments and payments at maturity on our loans, financings and debentures will be made on their scheduled payments dates, and (ii) our perpetual bonds are redeemed on the first permitted redemption date.

(2) Amounts include fixed payments related to the operating lease contracts for the pellet plants.

(3) Obligations to purchase materials. Amounts are based on contracted prices, except for purchases of iron ore from mining companies located in Brazil.

OFF-BALANCE SHEET ARRANGEMENTS

At December 31, 2013, we did not have any off-balance sheet arrangements as defined in the SEC's Form 20-F. For information on our contingent liabilities see Note 31 to our consolidated financial statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We believe that the following are our critical accounting policies. We consider an accounting policy to be critical if it is important to our financial condition and results of operations and if it requires significant judgments and estimates on the part of our management. For a summary of all of our significant accounting policies, see Note 3 to our consolidated financial statements.

Mineral reserves and useful life of mines

We regularly evaluate and update our estimates of proven and probable mineral reserves. Our proven and probable mineral reserves are determined using generally accepted estimation techniques. Calculating our reserves requires us to make assumptions about future conditions that are highly uncertain, including future ore and metal prices, currency prices, inflation rates, mining technology, availability of permits, production and capital costs. Changes in some or all of these assumptions could have a significant impact on our recorded proven and probable reserves.

One of the ways we make our ore reserve estimates is to determine the mine closure dates used in recording the fair value of our asset retirement obligations for environmental and site reclamation costs and the periods over which we amortize our mining assets. Any change in

our estimates of total expected future mine or asset lives could have an impact on the depreciation, depletion and amortization charges recorded in our consolidated financial statements under cost of goods sold. Changes in the estimated lives of our mines could also significantly impact our estimates of environmental and site reclamation costs, which are described in greater detail below.

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Environmental and site reclamation costs

Expenditures relating to ongoing compliance with environmental regulations are charged against earnings or capitalized as appropriate. These ongoing programs are designed to minimize the environmental impact of our activities.

We recognize a liability for the fair value of our estimated asset retirement obligations in the period in which they are incurred, if a reasonable estimate can be made. We consider the accounting estimates related to reclamation and closure costs to be critical accounting estimates because:

- we will not incur most of these costs for a number of years, requiring us to make estimates over a long period;
- reclamation and closure laws and regulations could change in the future or circumstances affecting our operations could change, either of which could result in significant changes to our current plans;
- calculating the fair value of our asset retirement obligations requires us to assign probabilities to projected cash flows, to make long-term assumptions about inflation rates, to determine our credit-adjusted risk-free interest rates and to determine market risk premiums that are appropriate for our operations; and
- given the significance of these factors in the determination of our estimated environmental and site reclamation costs, changes in any or all of these estimates could have a material impact on net income. In particular, given the long periods over which many of these charges are discounted to present value, changes in our assumptions about credit-adjusted risk-free interest rates could have a significant impact on the size of our provision.

Our Environmental Department defines the rules and procedures that should be used to evaluate our asset retirement obligations. The future costs of retirement of our mines and sites are reviewed annually, in each case considering the actual stage of exhaustion and the projected exhaustion date of each mine and site. The future estimated retirement costs are discounted to present value using a credit-adjusted risk-free interest rate. At December 31, 2013, we estimated the fair value of our aggregate total asset retirement obligations to be US$2.644 billion.

Impairment of long-lived assets and goodwill

We annually assess whether there is any objective evidence of impairment of our financial assets and long-lived, non-financial assets. For financial assets measured through amortized cost, we compare the carrying amount with the expected cash flows of the asset, adjusted to reflect the present value. For long-lived, non-financial assets (such as intangible assets or property plant and equipment), when there are indications of possible impairment, we conduct the test by comparing the recoverable value of these assets (which are grouped at the lowest levels for which there are separately identifiable cash flows of the corresponding cash-generating unit) to their carrying amount. If we identify the need for adjustment for a particular asset, we apply that adjustment consistently for the corresponding cash-generating unit. The recoverable amount for an asset is the higher of (i) its value in use and (ii) its fair value less the cost of selling it.

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We determine our discounted cash flows based on approved budgets, considering mineral reserves and mineral resources calculated by internal experts, costs and investments. These determinations also take into account our past performance, sales prices consistent with projections used in industry reports and information about market prices when available and appropriate. Cash flows used in our impairment testing are based on the life of each cash-generating unit, or on the consumption of reserve units in the case of minerals, and considering discount rates that reflect specific risks relating to the relevant assets in each cash-generating unit, depending on their composition and location.

For investments in affiliated companies with publicly-traded stock, we assess recoverability of assets when there is a prolonged or significant decline in market value. The balance of these investments is compared to the market value of the shares, when available. If the market value is less than the carrying value of these investments, and the decrease is considered prolonged and significant, we make the adjustment to the realizable value based on the price quoted in the market.

Goodwill balances arising from business combinations, intangible assets with indefinite useful lives and lands are tested for impairment at least once a year, regardless of any indication of impairment of their carrying value.

Derivatives

We are required to recognize all derivative financial instruments, whether designated in hedging relationships or not, on our balance sheet and to measure such instruments at fair value. The gain or loss in fair value is included in current earnings, unless the derivative to which the gain or loss is attributable qualifies for hedge accounting. We have entered into some cash flow hedges that qualify for hedge accounting. Unrealized fair value adjustments to cash flow hedges are recognized in other comprehensive income. We use well-known market participants' valuation methodologies to compute the fair value of instruments. To evaluate the financial instruments, we use estimates and judgments related to present values, taking into account market curves, projected interest rates, exchange rates, counterparty (credit) risk adjustments, forward market prices and their respective volatilities, when applicable. We evaluate the impact of credit risk on financial instruments and derivative transactions, and we enter into transactions with financial institutions that we consider to have a high credit quality. The exposure limits to financial institutions are proposed annually by the Executive Risk Committee and approved by the Board of Executive Officers. The financial institution's credit risk tracking is performed making use of a credit risk valuation methodology that considers, among other information, published ratings provided by international rating agencies and other management judgments. During 2013, we implemented hedge accounting for foreign exchange hedge and bunker costs hedge. At December 31, 2013, we had US$11 million of realized losses related to derivative instruments designated as cash flow hedges. In 2013, we recorded to the income statement net losses of US$1.033 billion in relation to derivative instruments.

Income taxes

We recognize deferred tax effects of tax loss carryforwards and temporary differences in our consolidated financial statements. We record a valuation allowance when we believe that it is more likely than not that tax assets will not be fully recoverable in the future.

When we prepare our consolidated financial statements, we estimate our income taxes based on regulations in the various jurisdictions where we conduct business. This requires us to estimate our actual current tax exposure and to assess temporary differences that result from deferring treatment of certain items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which we show on our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income. To the extent we believe that recovery is not likely, we record a provision against a tax expense in our statement of income. When we reduce the provision, we record a tax benefit in our statement of income.

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Determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax assets requires significant management judgment, estimates and assumptions about matters that are highly uncertain. For each income tax asset, we evaluate the likelihood of whether some portion or the entire asset will not be realized. The valuation allowance made in relation to accumulated tax loss carryforwards depends on our assessment of the probability of generation of future taxable profits within the legal entity in which the related deferred tax asset is recorded, based on our production and sales plans, selling prices, operating costs, environmental costs, group restructuring plans for subsidiaries and site reclamation costs and planned capital costs.

Litigation

We disclose material contingent liabilities unless the possibility of any loss arising is considered remote, and we disclose material contingent assets where the inflow of economic benefits is probable. We discuss our material contingencies in Note 19 to our consolidated financial statements.

We record an estimated loss from a loss contingency when information available prior to the issuance of our financial statements indicates that it is probable that a future event will confirm that an asset has been impaired or a liability has been incurred at the date of the financial statements, and the amount of the loss can be reasonably estimated. In particular, given the nature of Brazilian tax legislation, the assessment of potential tax liabilities requires significant management judgment. By their nature, contingencies will only be resolved when one or more future events occurs or fails to occur, and typically those events will occur a number of years in the future. Assessing such liabilities, particularly in the Brazilian legal environment, inherently involves the exercise of significant management judgment and estimates of the outcome of future events.

The provision for litigation at December 31, 2013, totaling US$1.276 billion, consists of provisions of US$709 million for labor, US$209 million for civil, US$330 million for tax and US$28 million for other claims. Claims where in our opinion, and based on the advice of our legal counsel, the likelihood of loss is reasonably possible but not probable, and for which we have not made provisions, amounted to a total of US$8.622 billion at December 31, 2013, including claims of US$2.900 billion for labor, US$768 million for civil, US$3.789 billion for tax and US$1.165 billion for other claims.

Employee post-retirement benefits

We sponsor defined benefit pension and other post-retirement benefit plans covering some of our employees. The determination of the amount of our obligations for these benefits depends on certain actuarial assumptions. These assumptions are described in Note 22 to our consolidated financial statements and include, among others, the expected long-term rate of return on plan assets and increases in salaries.

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RISK MANAGEMENT

The aim of our risk management strategy is to promote enterprise-wide risk management that supports our growth strategy, strategic plan, corporate governance practices and financial flexibility to support maintenance of investment grade status. We developed an integrated framework for managing risk, which considers the impact on our business of not only market risk factors (market risk), but also risks arising from third party obligations (credit risk), risks associated with inadequate or failed internal processes, people, systems or external events (operational risk) and risks associated with political and regulatory conditions in countries in which we operate (political risk).

In furtherance of this objective and in order to further improve our corporate governance practices, our Board of Directors has established a company-wide risk management policy and an Executive Risk Management Committee. The risk management policy requires that we regularly evaluate and monitor the corporate risk on a consolidated basis in order to guarantee that our overall risk level remains in accordance with the acceptable corporate risk guidelines.

See Note 25 to our consolidated financial statements for quantitative information about risks relating to financial instruments, including financial instruments entered into pursuant to our risk management policies.

Market risk

We are exposed to various market risk factors that can impact our financial stability and cash flow. An assessment of the potential impact of the consolidated market risk exposure is performed periodically to inform our decision making processes and growth strategy, ensure financial flexibility and monitor future cash flow volatility.

When necessary, market risk mitigation strategies are evaluated and implemented. Some of these strategies may incorporate financial instruments, including derivatives. The financial instrument portfolios are monitored on a monthly basis, enabling us to properly evaluate financial results and their impact on cash flow, and ensure correlation between the strategies implemented and the proposed objectives.

Considering the nature of our business and operations, the main market risk factors that we are exposed to are:

Foreign exchange rates and interest rates: our cash flows are exposed to the volatility of several currencies against the U.S. dollar. While most of our product prices are indexed to U.S. dollars, most of our costs, disbursements and investments are indexed to currencies other than the U.S. dollar, principally the Brazilian *real* and the Canadian dollar. We frequently use derivative instruments, primarily forward transactions and swaps, in order to reduce our potential cash flow volatility arising from this currency mismatch.

We are also exposed to interest rate risk on loans and financings. Our floating rate debt consists mainly of loans including export pre-payments, commercial bank loans and multilateral organization loans. In general, the U.S. dollar floating rate debt is subject to changes in LIBOR (London Interbank Offer Rate) in U.S. dollars. To mitigate the impact of interest rate volatility on our cash flows, we take advantage of natural hedges resulting from the correlation between commodity prices and U.S. dollar floating interest rates. If such natural hedges are not present, we may opt to obtain the same effect by using financial instruments.

Product prices and input costs: we are also exposed to market risks associated with commodities price volatilities. In line with our risk management policy, we may also employ risk mitigation strategies to manage this risk that can include forward transactions, futures contracts and zero-cost collars.

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Credit risk

We are exposed to credit risk arising from trade receivables, derivative transactions, guarantees, down payment for suppliers and cash investments. Our credit risk management process provides a framework for assessing and managing counterparties' credit risk and for maintaining our risk at an acceptable level.

Commercial credit risk management

We assign an internal credit rating to each counterparty using our own quantitative methodology for credit risk analysis, which is based on market prices, external credit ratings and financial information of the counterparty, as well as qualitative information regarding the counterparty's strategic position and history of commercial relations.

Based on the counterparty's credit risk, or based on our consolidated credit risk profile, risk mitigation strategies may be used to manage credit risk. The main credit risk mitigation strategies include credit risk insurance, letters of credit, corporate guarantees, mortgages, among others.

From a geographic standpoint, we have a diversified accounts receivable portfolio, with China, Europe, Brazil and Japan the regions with the most significant exposure. According to each region, different guarantees can be used to enhance the credit quality of the receivables. We monitor counterparty position in the portfolio periodically and we block additional sales to customers in delinquency.

Treasury credit risk management

To manage the credit exposure arising from cash investments and derivative instruments, our Board of Executive Officers approves, on an annual basis, credit limits by counterparty. Furthermore, the risk management department controls the portfolio diversification, the overall credit risk of the treasury portfolio and the risk of each counterparty by monitoring market information such as Credit Default Swaps (CDS) and Moody's Expected Default Frequency (EDF).

Operational risk

Operational risk management is the structured approach we take to manage uncertainty related to inadequate or failed internal processes, people and systems and to external events.

We mitigate operational risk with new controls and improvement of existing ones, new mitigation plans and transfer of risk through insurance. As a result, the Company seeks to have a clear view of its major risks, the cost-benefit on mitigation plans and the controls in place to monitor the impact of operational risk closely and to efficiently allocate capital to reduce it.

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III. SHARE OWNERSHIP AND TRADING

MAJOR SHAREHOLDERS

Valepar is Vale's controlling shareholder. Valepar is a special-purpose company organized under the laws of Brazil that was incorporated for the sole purpose of holding an interest in Vale. Valepar does not have any other business activity. Valepar acquired its controlling stake in Vale from the Brazilian government in 1997 as part of the first stage of Vale's privatization.

The following table sets forth information regarding ownership of Vale shares as of December 31, 2013 by the shareholders we know beneficially own more than 5% of any class of our outstanding capital stock, and by our directors and executive officers as a group.

	Common shares owned	% of class	Preferred shares owned	% of class
Valepar(1)	1,716,435,045	52.7%	20,340,000	1.0%
BNDESPAR(2)	206,378,881	6.3%	67,342,083	3.1%
Directors and executive officers as a group	31,816	Less than 1.0%	829,771	Less than 1.0%

(1) See the tables below for information about Valepar's shareholders.

(2) BNDESPAR is a wholly-owned subsidiary of BNDES. The figures do not include common shares beneficially (as opposed to directly) owned by BNDESPAR.

The Brazilian government also owns 12 golden shares of Vale, which give it veto powers over certain actions, such as changes to our name, the location of our headquarters and our corporate purpose as it relates to mining activities.

The table below sets forth information regarding ownership of Valepar common shares as of December 31, 2013.

	Common shares owned	% of class
Valepar shareholders		
Litel Participações S.A.(1)	637,443,857	49.00%
Eletron S.A.(2)	380,708	0.03%
Bradespar S.A.(3)	275,965,821	21.21%
Mitsui(4)	237,328,059	18.24%
BNDESPAR(5)	149,787,385	11.51%
Total	1,300,905,830	100.00%

(1) Litel owns 200,864,272 preferred class A shares of Valepar, which represents 71.41% of the preferred class A shares. LitelA, an affiliate of Litel, owns 80,416,931 preferred class A shares of Valepar, which represents 28.59% of the preferred class A shares. LitelB, also an affiliate of Litel, owns 15,175,602 preferred class C shares of Valepar, which represents 29.25% of the preferred class C shares.

(2) Eletron owns 19,205 preferred class C shares of Valepar, which represents 0.04% of the preferred class C shares.

(3) Bradespar is controlled by a control group consisting of Cidade de Deus Cia. Comercial Participações, Fundação Bradesco, NCF Participações S.A. and Nova Cidade de Deus Participações S.A. Bradespar owns 6,334,119 preferred class C shares of Valepar, which

represents 12.21% of the preferred class C shares. Brumado Holdings Ltda., a subsidiary of Bradespar, owns 7,587,000 preferred class C shares of Valepar, which represents 14.62% of the preferred class C shares.

(4) Mitsui owns 11,972,033 preferred class C shares of Valepar, which represents 23.08% of the preferred class C shares.

(5) BNDESPAR owns 10,793,499 preferred class C shares of Valepar, which represents 20.80% of the preferred class C shares.

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The table below sets forth information regarding ownership of Litel Participações S.A., one of Valepar's shareholders, as of December 31, 2013.

	Common shares owned	% of class
Litel Participações S.A. shareholders(1)		
BB Carteira Ativa	193,740,121	78.40%
Carteira Ativa II	31,688,443	12.82%
Carteira Ativa III	19,115,620	7.74%
Singular	2,583,919	1.05%
Caixa de Previdência dos Funcionários do Banco do Brasil	22	
Others	220	
Total	247,128,345	100.00%

(1) Each of BB Carteira Ativa and Carteira Ativa II is a Brazilian investment fund. BB Carteira Ativa is 100.00% owned by Caixa de Previdência dos Funcionários do Banco do Brasil ("Previ"). Carteira Ativa II is 100% owned by Funcef. Carteira Ativa III is 100% owned by Petros. Singular is 100% owned by Fundo de Investimentos em Cotas de Fundo de Investimento em Ações VRD ("FIC de FI em Ações VRD"). FIC de FI em Ações VRD is 100% owned by Fundação Cesp. Each of Previ, Petros, Funcef and Fundação Cesp is a Brazilian pension fund.

The shareholders of Valepar are parties to a shareholders' agreement, which expires in 2017. The Valepar shareholders' agreement also:

grants rights of first refusal on any transfer of Valepar shares and preemptive rights on any new issue of Valepar shares;

prohibits the direct acquisition of Vale shares by Valepar's shareholders unless authorized by the other shareholders party to the agreement;

prohibits encumbrances on Valepar shares (other than in connection with financing an acquisition of Vale shares);

requires each party generally to retain control of its special purpose company holding its interest in shares of Valepar, unless the rights of first refusal previously mentioned are observed;

allocates seats on Valepar's and Vale's boards among representatives of the parties;

commits the Valepar shareholders to support a Vale dividend policy of distributing 50% of Vale's net profit for each fiscal year, unless the Valepar shareholders commit to support a different dividend policy for a given year;

provides for the maintenance by Vale of a capital structure that does not exceed specified debt to equity thresholds;

requires the Valepar shareholders to vote their indirectly held Vale shares and to cause their representatives on Vale's Board of Directors to vote only in accordance with decisions made at Valepar meetings held prior to meetings of Vale's Board of Directors or shareholders; and

establishes supermajority voting requirements for certain significant actions relating to Valepar and to Vale.

Pursuant to the Valepar shareholders' agreement, Valepar cannot support any of the following actions with respect to Vale without the consent of at least 75% of the holders of Valepar's common shares:

any amendment of Vale's bylaws;

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any increase of Vale's capital stock by share subscription, creation of a new class of shares, change in the characteristics of the existing shares or any reduction of Vale's capital stock;

any issuance of debentures of Vale, whether or not convertible into shares of Vale, participation certificates upon compensation (*partes beneficiárias*), call options (*bônus de subscrição*) or any other security of Vale;

any determination of issuance price for any new shares of capital stock or other security of Vale;

any amalgamation, spin-off or merger to which Vale is a party, as well as any change to Vale's corporate form;

any dissolution, receivership, bankruptcy or any other voluntary act for financial reorganization or any suspension thereof;

the election and replacement of Vale's Board of Directors, including the Chairman of the Board, and any executive officer of Vale;

the disposal or acquisition by Vale of an equity interest in any company, as well as the acquisition of any shares of capital stock of Vale or Valepar;

the participation by Vale in a group of companies or in a consortium of any kind;

the execution by Vale of agreements relating to distribution, investment, sales exportation, technology transfer, trademark license, patent exploration, license to use and leases;

the approval and amendment of Vale's business plan;

the determination of the compensation of the executive officers and directors of Vale, as well as the duties of the Board of Directors and the Board of Executive Officers;

any profit sharing among the members of the Board of Directors or Board of Executive Officers of Vale;

any change in the corporate purpose of Vale;

the distribution or non-distribution of any dividends (including distributions classified as interest on shareholders' equity) on any shares of capital stock of Vale other than as provided in Vale's bylaws;

the appointment and replacement of Vale's independent auditor;

the creation of any "in rem" guarantee, granting of guarantees including rendering of sureties by Vale with respect to obligations of any unrelated party, including any affiliates or subsidiaries;

the passing of any resolution on any matter which, pursuant to applicable law, entitles a shareholder to withdrawal rights;

the appointment and replacement by the Board of Directors of any representative of Vale in subsidiaries, companies related to Vale or other companies in which Vale is entitled to appoint directors and officers; and

any change in the debt to equity threshold, as defined in the shareholders' agreement.

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In addition, the shareholders' agreement provides that any issuance of participation certificates by Vale and any disposition by Valepar of Vale shares requires the unanimous consent of all of Valepar's shareholders.

RELATED PARTY TRANSACTIONS

We have engaged, and expect to continue to engage, in arm's-length transactions with certain entities controlled by, or affiliated with, our controlling shareholders, including the following:

Bradesco Bradespar, a controlling shareholder of Valepar, is controlled by a group of entities that also control Banco Bradesco S.A. ("Bradesco"). Bradesco and its affiliates are full service financial institutions that have performed, and may perform in the future, certain investment banking, advisory or general financing and banking services for us and our affiliates, from time to time, in ordinary course of business.

Banco do Brasil Previ, a pension fund of the employees of Banco do Brasil, owns 100% of the investment fund BB Carteira Ativa, which holds the majority of the common equity of Litel Participações S.A., which holds 49% of the common equity of Valepar. Banco do Brasil appoints three out of the six members of Previ's senior management. An affiliate of Banco do Brasil is the manager of BB Carteira Ativa. Banco do Brasil is also a full service financial institution, and Banco do Brasil and its affiliates have performed, and may perform in the future, certain investment banking, advisory or general financing and banking services for us and our affiliates, from time to time, in ordinary course of business.

Mitsui We have commercial relationships in the ordinary course of our business with Mitsui, a large Japanese conglomerate and a shareholder of Valepar.

BNDES, the Brazilian state-owned development bank, is the parent company of one of our major shareholders, BNDESPAR.

We and BNDES are parties to a contract relating to authorizations for mining exploration. This contract, which we refer to as the Mineral Risk Contract, provides for the joint development of certain unexplored mineral deposits that form part of our Northern System, except for our iron ore and manganese deposits which were specifically excluded from the contract, as well as proportional participation in any profits earned from the development of such resources. In 2007, the Mineral Risk Contract was extended indefinitely, with specific rules for all exploration projects and exploration targets and mineral rights covered under the contract.

BNDES has provided us with credit lines of R$7.3 billion to finance our investment program, facilities totaling R$985 million to finance the acquisition of equipment in Brazil and a R$3.9 billion financing for our CLN 150 Mtpy project.

BNDES holds a total of R$871 million, or US$372 million, in debentures of our subsidiary Salobo Metais S.A. with a right to subscribe for Salobo's preferred shares in exchange for part of the outstanding debentures, which right expires two years after Salobo reaches an accumulated revenue equivalent to 200,000 tons of copper.

BNDESPAR also holds a total of R$1.407 billion, or US$601 million, in debentures that we issued to finance the expansion of the FNS railroad, which are exchangeable into FNS common shares beginning in December 2017, or at BNDESPAR's option, into a certain number of VLI common shares, after the eleventh anniversary of each issuance date.

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For more information on our transactions with BNDES, see *Operating and financial review and prospects Liquidity and capital resources*. BNDESPAR is in the control group of several Brazilian companies with which we have commercial relationships in the ordinary course of our business.

Our controlling shareholders Mitsui and BNDESPAR have direct investments in some of our subsidiaries. Mitsui has a minority stake in our subsidiary MVM Resources International B.V., which controls the Bayóvar (Peru) phosphate operations, and is part of a joint venture that holds an equity stake in our subsidiary VNC. BNDESPAR has a direct stake in our subsidiaries Vale Soluções em Energia S.A. and Vale Florestar Fundo de Investimento em Participações.

In December 2013, our Board of Directors approved our Policy on Related Party Transactions, which sets forth rules and principles to ensure transparency and arm's-length conditions in our transactions with related parties and other situations of potential conflicts of interest. Pursuant to that policy and our bylaws, our Governance and Sustainability Committee is responsible for issuing reports about potential conflicts of interest between us and our shareholders or management and for reviewing the procedure and terms of related party transactions that are submitted to our Board of Directors for approval. Under the policy, if we identify a conflict of interest with a shareholder, then that shareholder or its representative may not participate in any discussions related to the transaction at any shareholders' meeting and will only have access to publicly available information about the matter. The policy also prohibits the extension of any loans to related parties other than our subsidiaries and affiliated companies.

For information regarding investments in affiliated companies and joint ventures and for information regarding transactions with major related parties, see Notes 13 and 32 to our consolidated financial statements.

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DISTRIBUTIONS

Under our dividend policy, our Board of Executive Officers announces, by no later than January 31 of each year, a proposal to be approved by our Board of Directors of a minimum amount, expressed in U.S. dollars, that will be distributed in that year to our shareholders. Distributions may be classified either as dividends or interest on shareholders' equity, and references to "dividends" should be understood to include all distributions regardless of their classification, unless stated otherwise. We determine the minimum dividend payment in U.S. dollars, considering our expected free cash flow generation in the year of distribution. The proposal establishes two installments, to be paid in April and October of each year. Each installment is submitted to the Board of Directors for approval at meetings in April and October. Once approved, dividends are converted into and paid in *reais* at the Brazilian *real*/U.S. dollar exchange rates announced by the Central Bank of Brazil on the last business day before the Board meetings in April and October of each year. The Board of Executive Officers can also propose to the Board of Directors, depending on the evolution of our cash flow performance, an additional payment to shareholders of an amount over and above the minimum dividend initially established.

For 2014, our Board of Executive Officers has proposed a minimum dividend of US$4.2 billion, subject to approval by our Board of Directors. We pay the same amount per share on both common and preferred shares in accordance with our bylaws.

Under Brazilian law and our bylaws, we are required to distribute to our shareholders an annual amount equal to not less than 25% of the distributable amount, referred to as the mandatory dividend, unless the Board of Directors advises our shareholders at our shareholders' meeting that payment of the mandatory dividend for the preceding year is inadvisable in light of our financial condition. For a discussion of dividend distribution provisions under Brazilian corporate law and our bylaws, see *Additional information*.

The tax regime applicable to distributions to ADR and HDR holders and to non-resident shareholders will depend on whether those distributions are classified as dividends or as interest on shareholders' equity. See *Additional information Taxation Brazilian tax considerations.*

By law, we are required to hold an annual shareholders' meeting by April 30 of each year at which an annual dividend may be declared. Additionally, our Board of Directors may declare interim dividends. Under Brazilian corporate law, dividends are generally required to be paid to the holder of record on a dividend declaration date within 60 days following the date the dividend was declared, unless a shareholders' resolution sets forth another date of payment, which, in either case, must occur prior to the end of the fiscal year in which the dividend was declared. A shareholder has a three-year period from the dividend payment date to claim dividends (or payments of interest on shareholders' equity) in respect of its shares, after which we will have no liability for such payments. From 1997 to 2003, all distributions took the form of interest on shareholders' equity. In many years, part of the distribution has been made in the form of interest on shareholders' equity and part as dividends. See *Additional information Memorandum and articles of association Common shares and preferred shares*.

We make cash distributions on the common shares and preferred shares underlying the ADSs in *reais* to the custodian on behalf of the depositary. The custodian then converts such proceeds into U.S. dollars and transfers such U.S. dollars to be delivered to the depositary for distribution to holders of ADRs and HDRs, net of the depositary's fees. For information on taxation of dividend distributions, see *Additional information Taxation Brazilian tax considerations*.

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The following table sets forth the cash distributions we paid to holders of common shares and preferred shares for the periods indicated. Amounts have been restated to give effect to stock splits that we carried out in subsequent periods. We have calculated U.S. dollar conversions using the commercial selling rate in effect on the date of payment. Amounts are stated before any applicable withholding tax.

		Reais per share				
Year	**Payment date**	**Dividends**	**Interest on equity**	**Total**	**U.S. dollars per share at payment date**	**U.S. dollars total at payment date (US$ million)**
2008	April 30	0.20	0.24	0.44	0.26	1,250
	October 31	0.14	0.51	0.65	0.30	1,600
2009	April 30	0.52		0.52	0.24	1,255
	October 30		0.49	0.49	0.29	1,469
2010	April 30		0.42	0.42	0.24	1,250
	October 31		0.56	0.56	0.34	1,750
2011	January 31		0.32	0.32	0.19	1,000
	April 29		0.61	0.61	0.38	2,000
	August 26	0.93		0.93	0.58	3,000
	October 31	0.39	0.63	1.02	0.58	3,000
2012	April 30		1.08	1.08	0.59	3,000
	October 31	0.66	0.53	1.19	0.58	3,000
2013	April 30	0.15	0.71	0.86	0.44	2,250
	October 31	0.12	0.82	0.94	0.44	2,250

TRADING MARKETS

Our publicly traded share capital consists of common shares and preferred shares, each without par value. Our common shares and our preferred shares are publicly traded in Brazil on the BM&FBOVESPA, under the ticker symbols VALE3 and VALE5, respectively. Our common shares and preferred shares also trade on the LATIBEX, under the ticker symbols XVALO and XVALP, respectively. The LATIBEX is a non-regulated electronic market created in 1999 by the Madrid stock exchange in order to enable trading of Latin American equity securities.

Our common ADSs, each representing one common share, and our preferred ADSs, each representing one preferred share, are traded on the New York Stock Exchange ("NYSE"), under the ticker symbols VALE and VALE.P, respectively. Our common ADSs and preferred ADSs are traded on Euronext Paris, under the ticker symbols VALE3 and VALE5, respectively. JPMorgan Chase Bank serves as the depositary for both the common and the preferred ADSs. On February 28, 2014, there were 1,366,373,079 ADSs outstanding, 749,787,770 common ADSs and 616,585,309 preferred ADSs, representing 23.02% of our common shares and 29.24% of our preferred shares, or 25.47% of our total share capital.

Our common HDSs, each representing one common share, and our preferred HDSs, each representing one class A preferred share, are traded on the HKEx, under the stock codes 6210 and 6230, respectively. JPMorgan Chase Bank serves as the depositary for both the common and the preferred HDSs. On February 28, 2014, there were 593,700 HDSs outstanding, consisting of 562,300 common HDSs and 31,400 preferred HDSs.

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SHARE PRICE HISTORY

The following table sets forth trading information for our ADSs, as reported by the New York Stock Exchange and our shares, as reported by the BM&FBOVESPA, for the periods indicated. Share prices in the table have been adjusted to reflect stock splits.

	BM&F BOVESPA (*Reais* per share)				NYSE (US$ per share)			
	Common share		Preferred share		Common ADS		Preferred ADS	
	High	Low	High	Low	High	Low	High	Low
2009	50.30	27.69	43.37	23.89	29.53	11.90	25.66	10.36
2010	59.85	42.85	51.34	37.50	34.65	23.98	30.50	20.20
2011	60.92	38.59	53.41	36.54	37.02	20.51	32.50	19.58
2012	45.87	32.45	53.41	32.12	37.08	15.88	32.50	15.67
1Q	45.87	39.45	43.97	37.82	26.61	21.45	25.53	20.60
2Q	44.01	35.83	42.85	34.78	23.93	17.93	24.25	17.39
3Q	44.01	32.45	42.85	32.12	23.93	15.88	24.25	15.67
4Q	42.82	35.32	41.00	34.29	20.96	17.11	20.29	16.60
2013	44.10	28.39	42.60	26.00	21.49	12.63	20.88	11.47
1Q	44.1	33.58	42.60	32.39	21.49	16.98	20.88	16.23
2Q	36.19	28.45	34.08	26.70	18.25	12.94	17.14	11.97
3Q	37.85	28.39	33.68	26.00	16.81	12.63	14.98	11.47
4Q	38.47	33.2	34.44	30.47	17.08	14.43	15.33	13.28
Q4 2013 and Q1 2014								
October 2013.	35.89	33.45	32.84	30.47	16.66	15.07	15.12	13.78
November 2013.	38.47	33.54	34.44	30.87	17.08	14.72	15.33	13.45
December 2013	35.90	34.27	33.13	31.74	15.45	14.43	14.23	13.28
January 2014	34.81	30.93	31.92	28.15	14.53	12.90	13.26	11.82
February 2014.	34.92	32.13	30.96	29.00	14.73	13.18	12.99	11.88

DEPOSITARY SHARES

JPMorgan Chase Bank serves as the depositary for our ADSs and HDSs. ADR holders and HDR holders are required to pay various fees to the depositary, and the depositary may refuse to provide any service for which a fee is assessed until the applicable fee has been paid.

ADR holders and HDR holders are required to pay the depositary amounts in respect of expenses incurred by the depositary or its agents on behalf of ADR holders and HDR holders, including expenses arising from compliance with applicable law, taxes or other governmental charges, facsimile transmission or conversion of foreign currency into U.S. or Hong Kong dollars. In this case, the depositary may decide in its sole discretion to seek payment by either billing holders or by deducting the fee from one or more cash dividends or other cash distributions. The depositary may recover any unpaid taxes or other governmental charges owed by an ADR holder or HDR holder by billing such holder, by deducting the fee from one or more cash dividends or other cash distributions, or by selling underlying shares after reasonable attempts to notify the holder, with the holder liable for any remaining deficiency.

ADR holders are also required to pay additional fees for certain services provided by the depositary, as set forth in the table below.

Depositary service	Fee payable by ADR holders
Issuance, cancellation and delivery of ADRs, including in connection with share distributions, stock splits	US$5.00 or less per 100 ADSs (or portion thereof)
Distribution of dividends	US$0.02 or less per ADS
Withdrawal of shares underlying ADSs	US$5.00 or less per 100 ADSs (or portion thereof)
Transfers, combining or grouping of ADRs	US$1.50 or less per ADS

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HDR holders are also required to pay additional fees for certain services provided by the depositary, as set forth in the table below.

Depositary service	Fee payable by HDR holders
Issuance, cancellation and delivery of HDRs, including in connection with share distributions, stock splits	HK$0.40 or less per HDS (or portion thereof)
Distribution of dividends and other cash distributions	HK$0.40 or less per HDS
Transfer of certificated or direct registration HDRs	HK$2.50 or less per HDS
Administration fee assessed annually	HK$0.40 or less per HDS (or portion thereof)

The depositary reimburses us for certain expenses we incur in connection with the ADR and HDR programs, subject to a ceiling agreed between us and the depositary from time to time. These reimbursable expenses currently include legal and accounting fees, listing fees, investor relations expenses and fees payable to service providers for the distribution of material to ADR holders and HDR holders. For the year ended December 31, 2013, the depositary reimbursed us US$12 million in connection with the ADR and HDR programs.

PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

Vale did not engage in any share repurchase program during 2013.

IV. MANAGEMENT AND EMPLOYEES

MANAGEMENT

Board of Directors

Our Board of Directors sets general guidelines and policies for our business and monitors the implementation of those guidelines and policies by our executive officers. Our bylaws provide that the Board of Directors consist of 11 members and 11 alternates, each of whom serves on behalf of a particular director. All members (and their respective alternate) are elected for the same two-year term at a general shareholders' meeting, can be re-elected, and are subject to removal at any time. Our bylaws provide that the chief executive officer cannot serve as chairman of the Board of Directors.

The Board of Directors holds regularly scheduled meetings on a monthly basis and holds additional meetings when called by the chairman, vice-chairman or any two directors. Decisions of the Board of Directors require a quorum of a majority of the directors and are taken by majority vote. Alternate directors may attend and vote at meetings in the absence of the director for whom the alternate director is acting.

Our bylaws establish the following technical and advisory committees to the Board of Directors:

The Executive Development Committee is responsible for reporting on general human resources policies, analyzing and reporting on the adequacy of compensation levels for our executive officers, proposing and updating guidelines for evaluating the performance of our executive officers and reporting on policies relating to health and safety.

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The Strategy Committee is responsible for reviewing and making recommendations to the Board of Directors concerning the strategic guidelines and plan submitted annually to the Board by our executive officers, our annual and multi-annual investment budgets, investment or divestiture opportunities submitted by executive officers and mergers and acquisitions.

The Finance Committee is responsible for reviewing and making recommendations to the Board of Directors concerning our corporate risks and financial policies and the internal financial control systems, compatibility between the level of distributions to shareholders and the parameters established in the annual budget and the consistency between our general dividend policy and capital structure.

The Accounting Committee is responsible for recommending to the Board of the Directors the name of an employee to be responsible for our internal auditing, reporting on auditing policies and the execution of our annual auditing plan, tracking the results of our internal auditing, and identifying, prioritizing, and submitting recommendations to the executive officers.

The Governance and Sustainability Committee is responsible for evaluating and recommending improvements to the effectiveness of our corporate governance practices and the functioning of our Board of Directors, recommending improvements to the code of ethical conduct and our management system in order to avoid conflicts of interests between Vale and its shareholders or management, issuing reports on potential conflicts of interest between Vale and its shareholders or management and reporting on policies relating to corporate responsibility, such as environmental and social responsibility.

Nine of our 10 current directors (and nine of our 10 alternate directors) were appointed by Valepar. This includes an additional director appointed by Valepar, because no individual or group of common and preferred shareholders met the thresholds described under our bylaws and Brazilian corporate law. One director and his respective alternate are appointed by our employees, pursuant to our bylaws. Non-controlling shareholders holding common shares representing at least 15% of our voting capital, and preferred shares representing at least 10% of our total share capital, have the right to appoint one member and an alternate to our Board of Directors. Our employees and our non-controlling shareholders each have the right, as a class, to appoint one director and an alternate. All of our current directors were elected or re-elected, as the case may be, at our annual shareholders' meeting held on April 17, 2013, except for (i) Hidehiro Takahashi, who was elected alternate director of Fuminobu Kawashima at the Board of Directors meeting held on May 25, 2013 and (ii) Laura Bedeschi Rego de Mattos, who was elected alternate director of Luciano Coutinho at the Board of Directors meeting on February 26, 2014. Their terms will expire at the Ordinary General Shareholder's meeting of 2015, except for Ms. Laura Bedeschi and Mr. Hidehiro Takahashi whose term will expire at the General Shareholder's meeting of 2014.

The following table lists the current members of the Board of Directors and each director's alternate.

Director(1)	Year first elected	Alternate director(1)	Year first elected
Dan Antonio Marinho Conrado (chairman)	2012	Marco Geovanne Tobias da Silva	2011
Mário da Silveira Teixeira Júnior (vice-chairman)	2003	Luiz Maurício Leuzinger	2012
Marcel Juviniano Barros	2012	Francisco Ferreira Alexandre	2013
Robson Rocha	2011	Sandro Kohler Marcondes	2011
Vacant(3)		Hayton Jurema da Rocha	2013
Renato da Cruz Gomes	2001	Luiz Carlos de Freitas	2007
Fuminobu Kawashima	2011	Hidehiro Takahashi(4)	2013
Oscar Augusto de Camargo Filho	2003	Eduardo de Oliveira Rodrigues Filho	2011
Luciano Galvão Coutinho	2007	Laura Bedeschi Rego de Mattos(5)	2014
José Mauro Mettrau Carneiro da Cunha	2010	Vacant	
João Batista Cavaglieri(2)	2013	Eduardo Fernando Jardim Pinto(2)	2013

(1) Appointed by Valepar and approved at the shareholders' meeting unless otherwise indicated.

(2) Appointed by our employees and approved at the shareholders' meeting.

(3) Vacant since August 2013. Mr. Hayton Jurema da Rocha has been attending the Board of Directors' meetings during the vacancy of the respective effective member position.

(4) Mr. Hidehiro Takahashi was elected alternate director of Fuminobu Kawashima at the Board of Directors meeting held on May 25, 2013.

(5) As a result of the resignation of Mr. Caio Marcelo de Medeiros Melo in February 2014, Ms. Laura Bedeschi was appointed by the Board of Directors as alternate of Mr. Luciano Coutinho, until the General Shareholder's Meeting of 2014.

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Below is a summary of the business experience, activities and areas of expertise of our current directors.

Dan Antonio Marinho Conrado, 49: Chairman of Vale's Board of Directors since October 2012.

Other current director or officer positions: Chief Executive Officer of Previ, the pension fund of the employees of Banco do Brasil S.A. ("Banco do Brasil"), since June 2012; Chairman of Valepar since November 2012; Chief Executive Officer of Valepar since October 2012; Alternate Member of the Board of Directors of Mapfre BBSH2 Participações S.A., a publicly-held insurance company, since June 2011.

Professional experience: Member of the Board of Directors of FRAS-LE S.A., a publicly-held friction materials manufacturer, from April 2010 to March 2013; Alternate Member of the Board of Directors of Aliança do Brasil, a publicly-held insurance company, from June 2010 to June 2011; Alternate Member of the Board of Directors of BRASILPREV S.A., a publicly-held pension fund, from January 2010 to March 2010; Director for Marketing and Communications for Banco do Brasil S.A., a publicly-held financial institution, in 2009, where he also served as Director of Distribution, from 2010 to 2011, and Vice-President for Retail, Distribution and Operations, from December 2011 to May 2012; Member of the Fiscal Council of Centrais Elétricas de Santa Catarina S.A., a publicly-held electric utility company, from April 2000 to April 2002; Member of the Fiscal Council of WEG S.A. ("WEG"), a publicly-held engines manufacturer and full industrial electrical systems provider, from April 2002 to April 2005.

Academic background: Degree in Law from Universidade Dom Bosco, Mato Grosso do Sul; MBA degree from COPPEAD /Universidade Federal do Rio de Janeiro ("UFRJ") and an MBA degree from Instituto de Ensino e Pesquisa em Administração ("INEPAD").

Mário da Silveira Teixeira Júnior, 68: Director of Vale since April 2003, Vice-Chairman of Vale's Board of Directors since May 2003.

Other current director or officer positions: Vice-Chairman of the Board of Directors of Valepar since May 2007; Member of Vale's Strategy Committee since March 2006; Member of the Board of Directors of Banco Bradesco S.A. ("Banco Bradesco"), a publicly-held financial institution, since March 1999; Member of the Board of Directors of Bradespar S.A. ("Bradespar"), a publicly-held investment holding company, since April 2002; Member of the Board of Directors of Bradesco Leasing S.A. Arrendamento Mercantil, a subsidiary of Banco Bradesco engaged in the provision of financial leasing operations, since July 2004; Member of the Board of Directors of BBD Participações S.A. since August 2006; Member of the Board of Directors and Strategy Committee of BSP Empreendimentos Imobiliários S.A. since October 2011 and April 2013; and Member of the Board of Directors of BSP Park Estacionamentos e Participações S.A since November 2012.

Professional experience: Chief Executive Officer of Bradespar, from July 2001 to March 2002; Executive Vice-President, from March 1998 to march 1999; Executive Managing Officer, from March 1992 to March 1998; and Department Officer at Banco Bradesco from January 1984 to March 1992; Officer of Bradesco S.A. Corretora de Títulos e Valores Mobiliários, a subsidiary of Banco Bradesco that provides securities brokerage and research services, from March 1983 to January 1984; Executive Vice-President of the Associação Nacional dos Bancos de Investimento ("ANBID"), an association of investment banks, from August 1994 to August 1996; Member of the Board of Directors of the Associação Brasileira das Companhias Abertas ("ABRASCA"), an association of Brazilian publicly held companies, from May 1996 to July 2000; Vice-Chairman of the Board of Directors of BES Investimento do Brasil S.A. Banco de Investimento, an investment bank and subsidiary of Banco Espírito Santo, from February 2001 to February 2007; Member of the Board of Directors of Companhia Siderúrgica Nacional CSN, a publicly-held steel company, from March 1996 to April 2000; of Latasa S.A. ("Latasa"), now called Rexam Beverage Can South America S.A., an aluminum products manufacturer, from April 1992 to April 2000; of São Paulo Alpargatas S.A., a clothing and sporting goods manufacturer, from March 1996 to April 1999; of Tigre S.A. Tubos e Conexões, a pipe and construction materials manufacturer, from April 1997 to April 1998; of Everest Leasing S.A. Arrendamento Mercantil, a leasing company affiliated with Banco Bradesco, from February 2004 to July 2004; as well as the electric utility companies Companhia Paulista de Força e Luz CPFL, from November 1997 to April 2005; CPFL de Energia S.A., from August 2001 to April 2005; Companhia Piratininga de Força e Luz, from April 2003 to April 2005; and the electric utility holding companies CPFL Energia S.A. ("CPFL Energia"), from March 2000 to April 2006; and VBC Energia S.A. from March 1997 to April 2005.

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Academic background: Degree in Civil Engineering and in Business Administration from Universidade Presbiteriana Mackenzie, São Paulo.

Marcel Juviniano Barros, 51: Director of Vale since October 2012.

Other current director or officer positions: Officer of Securities of Previ since June 2012 and Member of Vale's Executive Development Committee since February 2013.

Professional experience: Held several positions in over 34 years at Banco do Brasil, a publicly-held financial institution, including the positions of Union Auditor and General-Secretary of the National Confederation of Financial Branch Workers, where he coordinated international networks.

Academic background: Degree in History from Fundação Municipal de Ensino Superior de Bragança Paulista.

Robson Rocha, 55: Director of Vale since April 2011.

Other current director or officer positions: Vice-President for Human Resources Management and Sustainable Development of Banco do Brasil since April 2010.

Professional experience: Vice-Chairman of CPFL Energia from April 2010 to April 2011; Member of the Board of Directors of Banco Nossa Caixa S.A. from May to November 2009; Officer of Banco do Brasil from May 2008 to April 2009.

Academic background: Degree in Business Administration from UNICENTRO Newton Paiva, Belo Horizonte; post-graduate degree in Strategic Management and Basic General Training for Senior Executives from Universidade Federal de Minas Gerais ("UFMG"); Master's degree in Marketing from Fundação Ciências Humanas Pedro Leopoldo; and an MBA degree in Finance from Fundação Dom Cabral.

Hayton Jurema da Rocha, 56: Alternate member of the board of directors of Vale since April 2013.

Other current director or officer positions: Director for Marketing and Communications for Banco do Brasil.

Professional Experience: Chief Executive Officer of the healthcare company CASSI Caixa de Assistência de Funcionários do Branco do Brasil from 2010 to 2011; Superintendent of Banco do Brasil for the states of Alagoas (1995), Pernambuco (1996 to 1998), Bahia (1999 to 2000) and the Federal District (2003 to 2005); Human Resources director of Banco do Brasil (from 2000 to 2002); member of the fiscal council of WEG from 2010 to 2013.

Academic background: Degree in Economics from the Federal University of the State of Alagoas; MBA degree from the Federal University of the State of Pernambuco; specialization in Marketing from the Pontifícia Universidade Católica do Rio de Janeiro.

Renato da Cruz Gomes, 61: Director of Vale since April 2001.

Other current director or officer positions: Executive Officer and Member of the Board of Directors of Valepar since 2001; Investor Relations Executive Officer of Bradespar since 2000; and Member of Vale's Governance and Sustainability Committee since December 2001.

Professional experience: Various positions at BNDES from 1976 to 2000; Member of the Board of Directors of Iochpe Maxion S.A., a publicly-held company with investments in the auto parts and railway equipment industries, Globo Cabo S.A., now called Net Serviços de Comunicação S.A. ("Net"), a Brazilian cable TV operator, Latasa and the Brazilian pulp and paper manufacturers Aracruz Celulose S.A., now called Fibria S.A., and Bahia Sul Celulose S.A., now called Suzano Celulose S.A.

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Academic background: Degree in Engineering from UFRJ and post-graduate degree in Management Development from Sociedade de Desenvolvimento Empresarial ("SDE").

Fuminobu Kawashima, 61: Director of Vale since April 2011.

Other current director or officer positions: Representative Director and Executive Vice President of Mitsui, a publicly-held trading company, since June 2012.

*Professional exp*erience: Senior Executive Managing Officer at Mitsui from June 2011 to May 2012, where he also served as Executive Managing Officer and Chief Operating Officer of the Marine & Aerospace business unit from April 2010 to March 2011, Managing Officer and Chief Operating Officer of the Energy business unit from 2007 to 2010; Director of Japan Australia LNG (MIMI) Pty Ltd., an oil and gas company, from 2005 to 2007; Director of Mitsui Oil Co. Ltd., a petroleum products company, from 2007 to 2009 and Director of Kyokuto Petroleum Industries Ltd., an oil refinery, from 2007 to 2009.

Academic background: Degree in Economics from Hitotsubashi University in Japan; post-graduate degree in Economic Development from Keble College, Oxford.

Oscar Augusto de Camargo Filho, 76: Director of Vale since September 2003.

Other current director or officer positions: Director of Valepar since 2003; Member of Vale's Strategy and Executive Development Committee since 2003; partner of CWH Consultoria Empresarial, a business consulting firm since 2003.

Professional experience: Chairman of the Board of Directors of MRS from 1996 to 2003 and Chief Executive Officer and Member of the Board of Directors of CAEMI Mineração e Metalurgia S.A. ("CAEMI"), a mining holding company that was acquired by Vale in 2006, from 1990 to 2003, where Mr. Camargo Filho also held various positions from 1973 to 2003; various positions at Motores Perkins S.A., including commercial officer and sales and services manager, from 1963 to 1973.

Academic background: Law degree from USP and post graduate degree in International Marketing from Cambridge University.

Luciano Galvão Coutinho, 67: Director of Vale since August 2007.

Other current director or officer positions: President of BNDES since 2007; Member of the Board of Directors of Petróleo Brasileiro S.A. Petrobras since April 2013 and Member of Vale's Strategic Committee, since May 2009.

Professional experience: Partner of LCA Consultores, a business consulting firm, from 1995 until 2007 and partner of Macrotempo Consultoria, also a business consulting firm, from 1990 to 2007; Member of the Board of Directors of Ripasa S.A. Celulose e Papel, a paper manufacturer, from 2002 to 2005, and of Guaraniana, now Neoenergia S.A., an energy company, from 2003 to 2004, and Executive Secretary of the Ministry of Science and Technology from 1985 to 1988. Mr. Coutinho is an invited professor at the Universidade Estadual de Campinas ("UNICAMP") and has been a visiting professor at USP, the University of Paris XIII, the University of Texas and the Ortega y Gasset Institute.

Academic background: Degree in Economics from USP; Master's degree in Economics from the Economic Research Institute of USP and a Ph.D. in Economics from Cornell University.

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José Mauro Mettrau Carneiro da Cunha, 64: Director of Vale since June 2010.

Other current director or officer positions: Member of the Board of Directors of a number of publicly-held Brazilian telecommunication companies, including Calais Participações S.A. since 2007, Telemar Participações S.A. since 2008 and Oi S.A. since 2009 (as Chairman); Member of the Board of Directors of Santo Antonio Energia S.A., a Brazilian energy company, since 2008; Chairman of the Board of Directors since 2007 of Dommo Empreendimentos Imobiliários, a holding company.

Professional experience: Chief Executive Officer of Oi S.A. in 2013; Member of the Board of Directors of Tele Norte Celular Participações S.A., from 2008 to 2012, Tele Norte Leste Participações S.A. from 2007 to 2012, Telemar Norte Leste S.A. from 2007 to 2012, Coari Participações S.A. from 2007 to 2012, TNL PCS S.A. from 2007 to 2012, where he served as chairman, Lupatech S.A., a publicly-held oil and gas production support company, from 2006 to 2012, Log-In from 2007 to 2011, Braskem S.A., a Brazilian petrochemical company, from 2007 to April 2010, where he previously served as Vice-President of Strategic Planning from 2003 to 2005 and as Director, from 2007 to 2010, Politeno Indústria e Comércio S.A., a manufacturer of polyethylene and thermoplastic resins, from 2003 to 2004, Banco do Estado do Espírito Santo ("BANESTES"), a financial institution, from 2008 to 2009, LIGHT Serviços de Eletricidade S.A., an energy distributor, from 1997 to 2000, Aracruz Celulose S.A., a paper manufacturer, from 1997 to 2002, and TNL from 1999 to 2003, where he also served as an Alternate Member of the Board of Directors in 2006.

Academic background: Degree in Mechanical Engineering from Universidade Católica de Petrópolis in Rio de Janeiro; executive education program in management at the Anderson School of Management at the University of California at Los Angeles.

João Batista Cavaglieri, 57: Director of Vale since April 2013

Professional experience: Vale employee since 1973, when he was licensed to hold the position of treasurer of SINDFER ES/MG (Sindicato dos Trabalhadores em Empresas Ferroviárias dos Estados do Espírito Santo e Minas Gerais). Interim president of SINDFER ES/MG from 2002 to 2005, and since then current president of SINDFER ES/MG. Member of the Board of Directors of Vale from 2007 to 2009.

Academic background: High school diploma and degree in mechanical maintenance from SENAI.

Executive officers

The executive officers are responsible for day-to-day operations and the implementation of the general policies and guidelines set forth by the Board of Directors. Our bylaws provide for a minimum of six and a maximum of 11 executive officers. The executive officers hold weekly meetings and hold additional meetings when called by any executive officer. Under Brazilian corporate law, executive officers must be Brazilian residents.

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The Board of Directors appoints executive officers for two-year terms and may remove them at any time. The following table lists our current executive officers.

	Year of appointment	Position	Age
Murilo Pinto de Oliveira Ferreira	2011	Chief Executive Officer	60
Luciano Siani Pires	2012	Chief Financial Officer and Executive Officer for Investor Relations	44
José Carlos Martins	2004	Executive Officer (Ferrous Minerals and Strategy)	64
Galib Abrahão Chaim	2011	Executive Officer (Implementation of Capital Projects)	63
Humberto Ramos de Freitas	2011	Executive Officer (Logistics and Mineral Research)	60
Gerd Peter Poppinga	2011	Executive Officer (Base Metals Operations and Information Technology)	54
Vânia Lucia Chaves Somavilla	2011	Executive Officer (Human Resources, Health and Safety, Sustainability and Energy)	53
Roger Allan Downey	2012	Executive Officer (Fertilizer and Coal)	46

Below is a summary of the business experience, activities and areas of expertise of our current executive officers.

Murilo Pinto de Oliveira Ferreira, 60: Chief Executive Officer of Vale and Member of Vale's Strategy and Disclosure Committees since May 2011.

Professional experience: Executive Officer of Vale with responsibility over several different departments from 2005 to 2008, including Aluminum, Holdings, Business Development, Energy, Nickel and Base Metals; Chief Executive Officer of Vale Canada from 2007 to 2008 and member of the Board of Directors from 2006 to 2007; Chairman of the Board of Directors of Alunorte from 2005 to 2008, MRN from 2006 to 2008 and Valesul Alumíno S.A., a subsidiary of Vale involved in the production of aluminum, from 2006 to 2008; Member of the Board of Commissioners of PTVI, from 2007 to 2008. Mr. Ferreira has been a Member of the Board of Directors of several companies, including Usiminas, a Brazilian steel company, from 2006 to 2008, and was a partner at Studio Investimentos, an asset management firm with a focus on the Brazilian stock market, from October 2009 to March 2011.

Academic background: Degree in Business Administration from FGV in São Paulo; post-graduate degree in Business Administration and Finance from FGV in Rio de Janeiro and an executive education program in M&A at the IMD, Lausanne, Switzerland.

Luciano Siani Pires, 44: Chief Financial Officer and Executive Officer for Investor Relations of Vale since August 2012 and Member of Vale's Executive Risk Management, Finance and Disclosure Committees since August 2012.

Professional experience: Alternate Member of the Board of Directors of Vale, from 2005 to 2007; Global Director of Strategic Planning, from 2008 to 2009 and in 2011, and Global Director of Human Resources, from 2009 to 2011 of Vale; Member of the Board of Directors of Valepar, from 2007 to 2008; Several executive positions at BNDES, including Executive Secretary and Chief of Staff of the Presidency, Head of Capital Markets and Head of Export Finance, from 1992 to 2008; Consultant at McKinsey & Company from 2003 to 2005; Member of the Board of Directors of Telemar Participações S.A., from 2005 to 2008; Member of the Board of Directors of Suzano Papel e Celulose S.A., from 2005 to 2008.

Academic background: Degree in Mechanical Engineering from Pontifícia Universidade Católica do Rio de Janeiro and an MBA degree in Finance from the Stern School of Business, New York University.

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José Carlos Martins, 64: Executive Officer for Ferrous Minerals and Strategy of Vale since November 2011.

Other current director or officer positions: Member of the Board of Directors of Samarco.

Professional experience: Executive Officer of Vale with responsibility over several different departments since 2004, including Marketing, Sales and Strategy, Ferrous Minerals, and New Business Development; Member of the Board of Directors of Usiminas from 2005 to 2006 and from 2008 to 2009; President of South America Aluminum Can Production and Marketing for Rexam PLC, a global consumer packaging group; President of Latasa from 1999 until Rexam PLC bought Latasa in 2003; Executive Officer for Steel Production of CSN from 1997 until 1999; and Chief Executive Officer at Aços Villares, a steel manufacturer, where Mr. Martins also held several other important positions from 1986 until 1996.

Academic background: Degree in Economics from Pontifícia Universidade Católica in São Paulo.

Galib Abrahão Chaim, 63: Executive Officer for Implementation of Capital Projects of Vale since November 2011.

Professional experience: Project Director of Vale for the Department of Coal for projects in Australia, Mozambique, Zambia and Indonesia and Country Manager for Mozambique from 2005 to 2011; Industrial Director for Alunorte from 1994 to 2005; Industrial Superintendent for Albras from 1984 to 1994; and Technical Superintendent of MRN from 1979 to 1984.

Academic Background: Degree in Engineering from the Universidade Federal de Minas Gerais; Master's degree in Business Administration from Fundação Getúlio Vargas.

Humberto Ramos de Freitas, 60: Executive Officer for Logistics and Mineral Research of Vale since November 2011.

Other current director or officer positions: Chairman of the Board of ABTP Associação Brasileira de Terminais Portuários, a non-profit organization that deals with issues related to Brazilian ports, since May 2009.

Professional experience: Member of the Board of Directors of MRS from December 2010 to October 2012; Logistics Operations Director of Vale from September 2009 to June 2010; Director for Ports and Navigation of Vale from March 2007 to August 2009; President and Chief Executive Officer, from August 2003 to February 2007, of Valesul Alumínio S.A., a subsidiary of Vale involved in the production of aluminum; General Superintendent of Ports for CSN from December 1997 to November 1999.

Academic background: Degree in Metallurgical Engineering from the Ouro Preto School of Mines; Executive Development Program at the Kellogg School of Management at Northwestern University; Advanced Management and Business Development Partnership (EDP) programs from Fundação Dom Cabral; senior executive education program at M.I.T.

Gerd Peter Poppinga, 54: Executive Officer for Base Metals Operations and Information Technology of Vale since November 2011.

Other current director or officer positions: Member of the Board of Commissioners of PTVI since April 2009; President and Chief Executive Officer of Vale Canada since January 2012.

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Professional experience: Executive Vice President for Asia Pacific of Vale Canada from November 2009 to November 2011; Director for Strategy, Business Development, Human Resources and Sustainability of Vale Canada from May 2008 to October 2009; Director for Strategy and Information Technology of Vale Canada from November 2007 to April 2008. In connection with his roles at Vale, Mr. Poppinga was also member of the board of directors and the executive board of several companies from 2005 to 2009. From 1985 until 1999, Mr. Poppinga also held several positions at Mineração da Trinidade S.A. SAMITRI, a publicly held mining company that was acquired by Vale in 2001.

Academic Background: Degree in Geology from UFRJ and Universität Erlangen, Germany; Post-graduate degree in Geology and Mining Engineering from the Universität Clausthal Zellerfeld, Germany; Specialization in Geostatistics from the Universidade Federal de Ouro Preto (UFOP); Executive MBA from Fundação Dom Cabral; Industrial Marketing, Negotiation Dynamics Supply Chain Management at INSEAD; Senior Leadership Program at M.I.T.; Leadership Program at IMD Business School, Lausanne, Switzerland; and Strategic Megatrends with Asia Focus program at Kellogg Singapore.

Vânia Lucia Chaves Somavilla, 54: Executive Officer for Human Resources, Health and Safety, Sustainability and Energy of Vale since May 2011.

Other current director or officer positions: President of the Board of Directors (*Conselho de Curadores*) of Fundação Vale, since January 2013.

Professional experience: Director of the Department of the Environment and Sustainability at Vale from April 2010 until May 2011; Director for Energy Commercialization of Vale from March 2004 until March 2010; Member of the Board of Directors of Albras from 2009 to 2011; Chief Executive Officer of Vale Florestar S.A., from November 2010 to August 2011. In connection with her roles at Vale, Ms. Somavilla was also member of the board of directors and the executive board of several companies and consortia in the energy sector from 2004 until 2010. She was also head of New Business Development for Energy Generation and of Project Development and Implementation for large and small hydroelectric plant projects at Companhia Energética de Minas Gerais CEMIG, a publicly held company involved in the generation, transmission, distribution and sale of electricity, from 1995 until 2001.

Academic Background: Degree in Civil Engineering from UFMG; post-graduate degree in Dam Engineering from UFOP; specialization in Management of Hydro Power Utilities from SIDA, Stockholm, Sweden; MBA degree in Corporate Finance from IBMEC, Belo Horizonte; Transformational Leadership program from M.I.T. and Mastering Leadership program from IMD.

Roger Allan Downey, 46: Executive Officer for Fertilizer and Coal of Vale since May 2012.

Professional experience: Managing partner of CWH Consultoria Empresarial SC Ltda., a privately-held consulting company, from January 2012 to April 2012; Alternate Member of the Board of Directors of Valepar from February 2012 to April 2012; Chief Executive Officer and Executive Officer for Investor Relations of MMX Mineração e Metálicos S.A., a publicly-held mining company, from August 2009 to November 2011; Director of Equity Research for Banco de Investimentos Credit Suisse (Brasil) S.A., a privately-held brokerage and investment bank, from August 2005 to August 2009; Commercial and New Business Manager for Rio Tinto, a publicly-held mining company, from October 1996 to September 2002; Market Coordinator for CAEMI, from December 1991 to October 1996.

Academic background: Degree in Business Management from the University of Western Australia, degree in Business Administration from the Australian National Business School and an MBA degree from the University of Western Australia.

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Conflicts of interest

Under Brazilian corporate law, if a director or an executive officer has a conflict of interest with the Company in connection with any proposed transaction, the director or executive officer may not vote in any decision of the Board of Directors or of the Board of Executive Officers regarding such transaction and must disclose the nature and extent of the conflicting interest for transcription in the minutes of the meeting, and under our Policy on Related Party Transactions, the director or executive officer should not receive any relevant documentation or information and should not participate in any related discussions. In any case, a director or an executive officer may not transact any business with the Company, except on reasonable or fair terms and conditions that are identical to the terms and conditions prevailing in the market or offered by unrelated parties. For more details about our Policy on Related Party Transactions see *Related party transactions*.

Fiscal Council

We have a fiscal council established in accordance with Brazilian law. The primary responsibilities of the fiscal council under Brazilian corporate law are to monitor management's activities, review the Company's financial statements, and report its findings to the shareholders. Pursuant to a written policy, our Fiscal Council requires management to obtain the Fiscal Council's approval before engaging the independent auditors to provide any audit or permitted non-audit services to Vale or its consolidated subsidiaries. Under the policy, the Fiscal Council has pre-approved a detailed list of services based on detailed proposals from our auditors up to specified monetary limits. The list of pre-approved services is updated from time to time. Services that are not listed, that exceed the specified limits, or that relate to internal controls must be separately pre-approved by the Fiscal Council. The policy also sets forth a list of prohibited services. The Fiscal Council is provided with reports on the services provided under the policy on a periodic basis, review and monitor the Company's external auditor's independence and objectivity. The Fiscal Council has the power to review and evaluate the performance of the Company's external auditors on an annual basis and make a recommendation to the Board of Directors on whether the Company should remove and replace its existing external auditors. The Fiscal Council may also recommend withholding the payment of compensation to the independent auditors and has the power to mediate disagreements between management and the auditors regarding financial reporting.

Under our bylaws, our Fiscal Council is also responsible for establishing procedures for the receipt, retention and treatment of any complaints related to accounting, controls and audit issues, as well as procedures for the confidential, anonymous submission of concerns regarding such matters.

Brazilian law requires the members of a fiscal council to meet certain eligibility requirements. A member of our Fiscal Council cannot (i) hold office as a member of the board of directors, fiscal council or advisory committee of any company that competes with Vale or otherwise has a conflicting interest with Vale, unless compliance with this requirement is expressly waived by shareholder vote, (ii) be an employee or member of senior management or the Board of Directors of Vale or its subsidiaries or affiliates, or (iii) be a spouse or relative within the third degree by affinity or consanguinity of an officer or director of Vale.

We are subject to Exchange Act Rule 10A-3, which requires, absent an exemption, that a listed company maintains a standing audit committee composed of members of the Board of Directors that meet specified requirements. In lieu of establishing an independent audit committee, we have given our Fiscal Council the necessary powers to qualify for the exemption set forth in Exchange Act Rule 10A-3(c)(3). We believe our Fiscal Council satisfies the independence and other requirements of Exchange Act Rule 10A-3 that would apply in the absence of our reliance on the exemption. Pursuant to our undertakings to the HKEx, the Fiscal Council must be comprised of at least three members who satisfy specified independence requirements set out in the HKEx Listing Rules. We have received a written confirmation of independence pursuant to Rule 3.13 of the HKEx Listing Rules from each of the members of our Fiscal Council appointed by Valepar and consider them able to satisfy these independence requirements.

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Our Board of Directors has determined that one of the members of our Fiscal Council, Mr. Aníbal Moreira dos Santos, is an audit committee financial expert. In addition, Mr. Moreira dos Santos meets the applicable independence requirements for Fiscal Council membership under Brazilian law and the NYSE independence requirements that would apply to audit committee members in the absence of our reliance on the exemption set forth in Exchange Act Rule 10A-3(c)(3).

Members of the Fiscal Council are elected by our shareholders for one-year terms. The current members of the Fiscal Council and their respective alternates were elected on April 17, 2013. The terms of the members of the Fiscal Council expire at the next annual shareholders' meeting following election.

Two members of our Fiscal Council (and the respective alternates) may be elected by non-controlling shareholders: one member may be appointed by our preferred shareholders and one member may be appointed by minority holders of common shares pursuant to applicable CVM rules.

The following table lists the current and alternate members of the Fiscal Council.

Current member	First year of appointment	Alternate	First year of appointment
Vacant(1)		Paulo Fontoura Valle(2)	2012
Arnaldo José Vollet(3)	2011	Valeriano Durval Guimarães Gomes(3)	2013
Marcelo Amaral Moraes(3)	2004	Oswaldo Mário Pêgo de Amorim Azevedo(3)	2004
Aníbal Moreira dos Santos(3)	2005	Vacant	

(1) Vacant since the resignation of Mr. Antônio Henrique Pinheiro Silveira, with effect from October 2013. Mr. Paulo Fontoura Valle, as alternate member of the Fiscal Council, has been attending Fiscal Council meetings.

(2) Appointed by preferred shareholders.

(3) Appointed by Valepar.

Below is a summary of the business experience, activities and areas of expertise of the members of our Fiscal Council.

Paulo Fontoura Valle, 50: Alternate member of Vale's Fiscal Council since April 2012. Mr. Valle is the alternate member of Mr. Antônio Henrique Pinheiro Silveira, who resigned from his position on the fiscal council of Vale in October 2013.

Other director or officer positions: Member of Petrobrás Distribuidora S.A. BR Distribuídora's Fiscal Council since 2012 and Member of Banco Nacional de Desenvolvimento BNDES' Fiscal Council since 2011.

Professional experience: Member of the fiscal council of Petrobras Gás S.A. Gaspetro from 2010 to 2011, a Brazilian publicly-held oil and gas company; Member of the board of directors of Brasilprev Seguros e Previdência, from 2007 to 2009, a Brazilian privately-held insurance company.

Academic background: Degree in Physical Education from Faculdade Dom Bosco de Educação Física; MBA degree from Instituto Brasileiro de Mercado de Capitais IBMEC; specialization in Economics from the George Washington University, in the United States.

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Arnaldo José Vollet, 65: Member of Vale's Fiscal Council since April 2011.

Other director or officer positions: Member of Caixa Econômica Federal's Audit Committee since October 2013.

Professional experience: Executive Officer of BB DTVM, a subsidiary of Banco do Brasil, from 2002 to 2009; Financial and Investor Relations Officer of Companhia de Energia Elétrica da Bahia COELBA, a publicly held electricity company, from 2000 to 2002; Member of the Fiscal Council of Telesp Celular Participações, a publicly held telecommunications company, from 1999 to 2000; Member of the Fiscal Council of CELPE Companhia de Eletricidade de Pernambuco, a publicly held electricity company, from 2004 to 2009; Director of Guaraniana, now Neoenergia S.A., from 2002 to 2003; Alternate Member of the Board of Directors of CEMIG, a publicly held electricity company, from 2003 to 2005; Member of the Board of Directors of Pronor and Nitrocarbono, both chemical companies, from 1997 to 1998.

Academic background: Degree in Mathematics from USP and MBA degree in Finance from IBMEC/RJ.

Marcelo Amaral Moraes, 46: Member of Vale's Fiscal Council since April 2004.

Other director or officer positions: Managing Executive Officer at Capital Dynamics Investimentos Ltda. since January 2012.

Professional experience: Member of the Deliberative Council of ABVCAP from 2010 to 2012; Managing Executive Officer and partner responsible for specialized funds at Stratus Investimentos Ltda., a private equity and venture capital firm, from 2006 to 2010; Investment Manager at Bradespar from 2000 to 2006; worked in the mergers and acquisitions and capital markets departments of Banco Bozano, Simonsen from 1995 to 2000; Alternate Member of the Board of Directors of Net Serviços de Telecomunicação S.A. from 2004 to 2005; Alternate Member of the Board of Directors of Vale in 2003.

Academic background: Degree in Economics from UFRJ, an MBA with emphasis in Finance from UFRJ/COPPEAD, and a post-graduate degree in Business law and Arbitration from FGV in São Paulo.

Aníbal Moreira dos Santos, 75: Member of Vale's Fiscal Council since April 2005.

Other director or officer positions: Member of Fiscal Council of Log-In since 2009.

Professional experience: From 1998 until his retirement in 2003, Mr. Moreira dos Santos served as Executive Officer of several CAEMI subsidiaries, including Caemi Canada Inc., Caemi Canada Investments Inc., CMM Overseas, Ltd., Caemi International Holdings BV and Caemi International Investments NV, and as Chief Accounting Officer of CAEMI from 1983 to 2003. He also served as Member of the Fiscal Council of CADAM from 1999 to 2003 and as an Alternate Member of the Board of Directors of MBR and Empreedimentos Brasileiros de Mineração, an iron ore asset holding company, from 1998 to 2003.

Academic background: Degree in Accounting from FGV in Rio de Janeiro.

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MANAGEMENT COMPENSATION

Under our bylaws, our shareholders are responsible for establishing the aggregate compensation we pay to the members of our Board of Directors and our Board of Executive Officers, and the Board of Directors allocates the compensation among its members and the Board of Executive Officers.

Our shareholders determine this annual aggregate compensation at the general shareholders' meeting each year. In order to establish aggregate director and officer compensation, our shareholders usually take into account various factors, which range from attributes, experience and skills of our directors and executive officers to the recent performance of our operations. Once aggregate compensation is established, our Board of Directors is then responsible for distributing such aggregate compensation in compliance with our bylaws among the directors and executive officers. The Executive Development Committee makes recommendations to the Board concerning the annual aggregate compensation of the executive officers. In addition to fixed compensation, our executive officers are also eligible for bonuses and incentive payments.

For the year ended December 31, 2013, the amount paid to the executive officers is set forth in the table below.

	For the year ended December 31, 2013
	(US$ million)
Fixed compensation and in kind benefits	11.4
Variable compensation	9.7
Pension, retirement or similar benefits	2.1
Severance	0.5
Social security contributions(1)	3.9
Total paid to the executive officers	27.6

(1) Social security contributions to the Brazilian government with respect to the executive officers.

We paid US$2.2 million in aggregate to the members of our Board of Directors for services in all capacities, all of which was fixed compensation. There are no pension, retirement or similar benefits for the members of our Board of Directors. As of February 28, 2014, the total number of common shares owned by our directors and executive officers was 31,816, and the total number of preferred shares owned by our directors and executive officers was 821,271. None of our directors or executive officers beneficially owns 1% or more of any class of our shares.

Fiscal Council

We paid an aggregate of US$0.6 million to members of the Fiscal Council in 2013. In addition, the members of the Fiscal Council are reimbursed for travel expenses related to the performance of their functions.

Advisory committees

We paid an aggregate of US$0.12 million to members of our advisory committees in 2013. Under Article 15 of our bylaws, those members who are directors or officers of Vale are not entitled to additional compensation for participating on a committee. Members of our advisory committees are reimbursed for travel expenses related to the performance of their duties.

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EMPLOYEES

The following tables set forth the number of our employees by business and by location as of the dates indicated.

	At December 31,		
By business:	**2011(1)**	**2012**	**2013**
Bulk materials	51,059	55,074	54,898
Base metals operations	15,027	16,116	15,772
Fertilizer nutrients	7,283	7,476	6,772
Corporate activities	6,277	6,639	5,844
Total	79,646	85,305	83,286

	At December 31,		
By location:	**2011**	**2012**	**2013**
South America	64,766	69,625	67,392
North America	6,617	6,766	6,681
Europe	615	395	397
Asia	4,088	4,232	4,235
Oceania	2,186	2,265	2,279
Africa	1,374	2,022	2,302
Total	79,646	85,305	83,286

(1) For purposes of comparison, the information for 2011 about our employees by business was to reflect our new corporate structure implemented in 2012.

We negotiate wages and benefits with a large number of unions worldwide that represent our employees. We have collective agreements with unionized employees at our operations in Argentina, Australia, Brazil, Canada, France, Indonesia, Malawi, Mozambique, New Caledonia, Norway, Paraguay, Peru and the United Kingdom.

Wages and benefits

Wages and benefits for Vale and its subsidiaries are generally established on a company-by-company basis. Vale establishes its wage and benefits programs for Vale and its subsidiaries, other than Vale Canada, in periodic negotiations with unions. In November 2013, Vale reached a two-year agreement with the Brazilian unions. A salary increase of 6% was implemented in November 2013, and another salary increase of 5.4% will be implemented in November 2014 for our employees (except managers and above) in Brazil as part of that agreement. The provisions of Vale's collective bargaining agreements with its unions also apply to Vale's non-unionized employees. Vale Canada establishes wages and benefits for its unionized employees through collective bargaining agreements. For non-unionized employees, Vale Canada undertakes an annual review of salaries. Vale and its subsidiaries provide their employees and their dependents with other benefits, including supplementary medical assistance.

Pension plans

Brazilian employees of Vale and of most of its Brazilian subsidiaries are eligible to participate in pension plans managed by Valia. Sponsored by Vale and such subsidiaries, Valia is a nonprofit, complementary social security foundation with both financial and administrative autonomy.

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Most of the participants in plans held by Valia are participants in a plan named "Vale Mais", which Valia implemented in May 2000. This plan is primarily a defined contribution plan with a defined benefit feature relating to service prior to May 2000 and another defined benefit feature to cover temporary or permanent disability, pension and financial protection to dependents in case of death. Valia also operates a defined benefit plan, closed to new participants since May 2000, with benefits based on years of service, salary and social security benefits. This plan covers retired participants and their beneficiaries, as well as a relatively small number of employees that declined to transfer from the old plan to the "Vale Mais" plan when it was established in May 2000.

Employees within our Base Metals operations, principally in Canada, the United States, the United Kingdom and Indonesia, participate in defined benefit pension plans and defined contribution pension plans. All new employees within our Base Metals operations participate in defined contribution pension plans. We have also private pension plans with defined contribution in Switzerland, Malawi and Zambia. Since December 1, 2012, PTVI is no longer managing the defined benefit pension plans. As a result, all participants of the pension plans have transferred entirely to the defined contribution pension plans.

Performance-based compensation

All Vale parent-company employees receive incentive compensation each year in an amount based on the performance of Vale, the performance of the employee's department and the performance of the individual employee. Similar incentive compensation arrangements are in place at our subsidiaries.

Certain Vale employees are also eligible to receive deferred bonuses with vesting periods of three years based on Vale's performance as measured by total shareholder return relative to a group of peer companies over the vesting period.

Since 2008, qualifying management personnel have been eligible to participate at their option in a bonus program tied to preferred share ownership. Under the program, each qualified employee may elect to invest part of their bonus either in Vale preferred shares for eligible employees receiving an incentive payment in Brazil, or in ADRs representing Vale preferred shares for eligible employees receiving an incentive payment outside Brazil. If the employee continues to be employed by us and has held the preferred shares (or ADRs) for the entire duration of the relevant cycle of the matching program, at the expiration of the applicable three year term of the program, the employee will receive a cash payment to be applied to purchase in the open market a number of additional preferred shares (or ADRs) equal to the number of preferred shares (or ADRs) purchased by the employee pursuant to the program. During the three-year term of the incentive program, participating employees have the right to sell all or part of the preferred shares (or ADRs) purchased through the program, however such employees forfeit the right to the matching reward for all shares sold prior to the expiration of the term of the program. For the 2013 cycle, 1.912 employees participated in the program.

V. ADDITIONAL INFORMATION

LEGAL PROCEEDINGS

We and our subsidiaries are defendants in numerous legal actions in the ordinary course of business, including civil, administrative, tax, social security and labor proceedings. The most significant proceedings are discussed below. Except as otherwise noted below, the amounts claimed, and the amounts of our provisions for possible losses, are stated as of December 31, 2013. See Note 19 to our consolidated financial statements for further information.

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Itabira suits

We are a defendant in two separate actions brought by the municipality of Itabira, in the Brazilian state of Minas Gerais. In the first action, filed in August 1996, the municipality of Itabira alleges that our Itabira iron ore mining operations have caused environmental and social harm, and claims damages with respect to the alleged environmental degradation of the site of one of our mines, as well as the immediate restoration of the affected ecological complex and the performance of compensatory environmental programs in the region. The damages sought, as adjusted from the date of the claim, amount to approximately R$3.123 billion (US$1.333 billion). There have been hearings in this action, a report favorable to Vale was issued and a request for additional expert evidence presented by the municipality has been granted. A decision is pending.

In the second action, filed in September 1996, the municipality of Itabira claims the right to be reimbursed for expenses it has incurred in connection with public services rendered as a consequence of our mining activities. The damages sought, as adjusted from the date of the claim, amount to approximately R$3.616 billion (US$1.543 billion). This case had been suspended pending consideration of our request to include favorable evidence from our other Itabira action described above. In January 2012, that request was denied, and once the court is notified, the lawsuit will resume.

CFEM-related proceedings

We are engaged in numerous administrative and judicial proceedings related to the mining royalty known as the CFEM. For more information about CFEM, see *Regulatory matters Royalties and other taxes on mining activities*. These arise out of a large number of assessments by the DNPM, an agency of the Ministry of Mines and Energy of the Brazilian government. The proceedings concern different interpretations of DNPM's method of estimating sales, the statute of limitations, due process of law, payment of royalties on pellet sales and CFEM charges on the revenues generated by our subsidiaries abroad.

We are contesting DNPM's claims using the available avenues under Brazilian law, beginning with challenges in administrative tribunals and proceeding with challenges in the judicial courts. We have received some favorable and unfavorable decisions, and we cannot predict the amount of time required before final judicial resolutions.

We determined that we have a probable loss in connection with the dispute related to the deductibility of transportation expenditures in arriving at the amount upon which the CFEM is calculated. At December 31, 2013 we had a provision of approximately R$141 million (US$60 million) for this probable loss. The aggregate amount claimed in the pending assessments is approximately R$4.568 billion (US$1.950 billion) (including interest and penalties through December 31, 2013).

ICMS tax assessments

The tax authorities of the Brazilian state of Pará have issued tax assessments (*autos de infração*) against us for additional payments of the value-added tax on services and circulation of goods (ICMS) on the iron ore we transport from our mining sites in the state of Pará to our facilities in the state of Maranhão. The tax authorities assert that the calculation of ICMS should be based on the market value of the iron ore transported, as opposed to the cost of production of the ore, which we have used to calculate the ICMS owed in years past.

We are engaged in a legal proceeding challenging three tax assessments issued by the tax authorities of the state of Pará, covering the years 2007, 2008 and 2009, in an aggregate amount of R$679.7 million (as of December 2013).

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Litigation on Brazilian taxation of foreign subsidiaries

We are engaged in legal proceedings concerning the contention of the Brazilian federal tax authority (*Receita Federal*) that we should pay Brazilian corporate income tax and social security contributions on the net income of our non-Brazilian subsidiaries and affiliates. The position of the tax authority is based on Article 74 of Brazilian Provisional Measure 2,158-34/2001 ("Article 74"), a tax regulation issued in 2001 by Brazil's President, and on implementing regulations adopted by the tax authority under Article 74.

Participation in the REFIS

In November 2013, we elected to participate in the REFIS, a federal tax settlement program for payment of amounts relating to Brazilian corporate income tax and social contribution, in order to settle the claims related to the net income of our non-Brazilian subsidiaries and affiliates from 2003 to 2012. Before this settlement, the total amount of tax contingency for the period from 2003 to 2012, including the years for which tax assessments had not yet been issued, was estimated at US$19.4 billion (R$45.0 billion, including R$17.1 billion in principal, R$9.8 billion in penalties, R$12.0 billion in interest and interest on penalties and R$6.0 billion in statutory fees).

Under the REFIS statute, there is a full waiver of penalties, interest and statutory fees for payments upfront, and a reduction of 80% of penalties, 50% of interest and 100% of statutory fees for payments in installments. We decided to pay upfront the taxes for the years 2003, 2004 and 2006, and in installments the principal, penalties and interest for the years 2005 and 2007 to 2012, resulting in an obligation of US$9.6 billion, net of accumulated losses. We paid US$2.6 billion in 2013, including the upfront payment and an initial installment, and we agreed to pay the remaining US$7.0 billion in 178 further installments, bearing interest at the SELIC rate. See Note 19 to our consolidated financial statements for further information.

Our participation in the REFIS resulted in the termination of three of the tax assessments (*autos de infração*) against our parent company Vale S.A. and the tax assessment against our subsidiary MBR for payment of taxes in accordance with Article 74. As required by the REFIS statute, we waived our legal arguments with respect to the periods 2003 to 2012 in our direct challenge against the applicability of Article 74 (which is described below), but we will continue the dispute with respect to 1996 to 2002 and 2013. In the event that our direct challenge, or another party's claims with general applicability, is eventually successful with respect to matters that are also applicable to the periods that we have settled, we could be entitled to stop the payment of any further installment and to seek recovery of the amounts we have paid, in the form of tax credits.

Participating in the REFIS had an impact of US$6.7 billion (R$14.8 billion) on net income in 2013 as described in note 20 to our consolidated financial statements. In future years, financial expenses will include the interest component of the REFIS payments. Our future cash flows will be affected by the monthly installments.

Our direct judicial challenge

In 2003, prior to receiving any assessment of taxes under Article 74, we initiated a legal proceeding (*mandado de segurança*) challenging the applicability of the regulation based on the following arguments: (i) Article 74 disregards certain provisions on the taxation of profits in double taxation treaties between Brazil and the countries where some of our subsidiaries and affiliates are based; (ii) the Brazilian Tax Code prohibits the establishment of conditions and timing of any such tax by means of a provisional measure; (iii) even if Article 74 is valid, currency exchange gains and losses must be excluded from the net income of our foreign subsidiaries and affiliates in the calculation of taxes owed; and (iv) the application of the regulation to net income generated before December 2001 would violate the constitutional principle prohibiting retroactive application of tax laws.

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In 2005, the court of first instance ruled against us on the merits of the case, and we appealed. In 2011, our appeal was rejected by the Federal Court of Appeals (*Tribunal Regional Federal da 2? Região*). In December 2011, we filed new appeals before the Brazilian Superior Court of Justice, with respect to our arguments regarding the violations to federal law and international treaties, and the Brazilian Supreme Court (*Supremo Tribunal Federal*), with respect to our constitutional arguments. In May 2012, we obtained a new ruling from the Supreme Court suspending all collection efforts by the tax authorities in respect of Article 74 assessments, pending a final ruling on the merits of the case. In April 2013, the Supreme Court decided that Article 74 cannot be retroactively applied and therefore the tax authorities cannot collect taxes based on Article 74 for periods before 2001.

In December 2013, as required by the REFIS statute, we waived the legal arguments with respect to the periods 2003 to 2012 in our direct challenge against the applicability of Article 74. We will continue the dispute related to the periods 1996 to 2002, which were not included in the REFIS. A decision by the Superior Court of Justice on the three remaining issues is still pending. The total amount discussed for the period between 1996 and 2002 is R$1.832 billion.

PIS/COFINS fines

In November 2013, we received two assessments from the Brazilian federal tax authority imposing penalties related to PIS and COFINS. PIS and COFINS are taxes imposed by the Brazilian government on our gross revenues, which may be partially offset by credits resulting from PIS and COFINS payments made by our suppliers. The tax authority contends that we incorrectly claimed PIS and COFINS tax credits for 2008, 2009 and 2010 (an assessment of R$600 million) and that we failed to comply with certain information requirements in claiming those tax credits (an assessment of R$1.2 billion). The amounts of the assessments are related entirely to penalties, which we consider excessive. We have presented a written response to the tax authority, and a decision is pending. If the tax authorities do not agree to review the penalties, we intend to take the matter to the judicial courts.

Railway litigation

In 1994, prior to our privatization, we entered into a contract with Rede Ferroviária Federal S.A. ("RFFSA"), the Brazilian federal rail network, to build two railway networks in Belo Horizonte, Brazil, which were to be incorporated into an existing railway segment, in a project called "*Transposição de Belo Horizonte*." We subsequently entered into a related agreement with the Brazilian government to begin the construction of an alternative railway segment, because the initially agreed segments could not be built. In August 2006, RFFSA (now succeeded as defendant by the Brazilian government) filed a breach of contract claim against us stemming from the 1994 contract regarding the construction of two railway networks. As of December 31, 2013, the amount claimed, including adjustments for inflation and interest, was approximately R$3.855 billion (US$1.645 billion) in damages.

Before the RFFSA lawsuit was filed, we filed a claim against RFFSA challenging the inflation adjustment provisions in the contract with RFFSA. We contend that the method of calculation employed by the Brazilian government is not lawful under Brazilian law. Pursuant to a partial settlement of the original RFFSA lawsuit, if the claim is decided in the Brazilian government's favor, then the construction costs of the new railway segment assumed by Vale will offset the damages due from Vale under such claim, representing a significant reduction in the amount we would be required to pay.

In June 2012, the federal judge rejected both RFFSA's claims and our contractual claim for review of the inflation adjustment provisions. Both parties have appealed from these decisions.

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Transger suit

VLI's subsidiary FCA is a defendant in a suit by Transger S.A. ("Transger"), a minority shareholder in FCA. Transger seeks money damages and the annulment of certain general shareholders' meetings that occurred in early 2003, at which shareholders approved an increase in FCA's share capital, on the grounds of allegedly abusive actions by FCA's controlling group. The court of first instance initially ruled against the defendants, but subsequently rescinded the judgment to allow for the preparation of an additional expert report. A decision is pending.

Praia Mole suit

We are among the defendants in a public civil action filed by the Federal Public Prosecutor's Office (*Ministério Público Federal*) in November 1997 seeking to annul the concession agreements under which the defendants operate the Praia Mole maritime terminal in the Brazilian state of Espírito Santo. In July 2012, the Federal Court of Appeals (*Tribunal Regional Federal*) affirmed the November 2007 decision that rejected the prosecutor's claim and recognized the validity of those concession agreements. The prosecutor has appealed that ruling, and final disposition of the appeal is still pending.

Simandou project review in Guinea

We own a 51% interest in VBG, which holds iron ore concession rights and exploration permits in Simandou in Guinea. The Government of Guinea has launched a contract review process that may result in the cancellation of VBG's mining rights. See *Regulatory Matters*.

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MEMORANDUM AND ARTICLES OF ASSOCIATION

Company objectives and purposes

Our corporate purpose is defined by our bylaws to include:

- the exploration of mineral deposits in Brazil and abroad by means of research, extraction, processing, industrialization, transportation, shipment and commerce of mineral goods;
- the building and operation of railways and the provision of our own or unrelated-party rail traffic;
- the building and operation of our own or unrelated-party maritime terminals, and the provision of shipping activities and port services;
- the provision of logistics services integrated with cargo transport, including inflow management, storage, transshipment, distribution and delivery, all within a multimodal transport system;
- the production, processing, transport, industrialization and commercialization of any and all sources and forms of energy, including the production, generation, transmission, distribution and commercialization of our own products, derivatives and sub products;
- the engagement, in Brazil or abroad, of other activities that may be of direct or indirect consequence for the achievement of our corporate purposes, including research, industrialization, purchases and sales, importation and exportation, the development, industrialization and commercialization of forest resources and the provision of services of any kind whatsoever; and
- the establishment or participation, in any fashion, in other companies, consortia or associations directly or indirectly related to our business purpose.

Common shares and preferred shares

Set forth below is certain information concerning our authorized and issued share capital and a brief summary of certain significant provisions of our bylaws and Brazilian corporate law. This description does not purport to be complete and is qualified by reference to our bylaws (an English translation of which we have filed with the SEC) and to Brazilian corporate law.

Our bylaws authorize the issuance of up to 3.6 billion common shares and up to 7.2 billion preferred shares, in each case based solely on the approval of the Board of Directors without any additional shareholder approval.

Each common share entitles the holder thereof to one vote at meetings of our shareholders. Holders of common shares are not entitled to any preference relating to our dividends or other distributions.

Holders of preferred shares and the golden shares are generally entitled to the same voting rights as holders of common shares, except with respect to the election of members of the Board of Directors, and are entitled to a preferential dividend as described below. Non-controlling shareholders holding common shares representing at least 15% of our voting capital, and preferred shares representing at least 10% of our total share capital, have the right to appoint each one member and an alternate to our Board of Directors. If no group of common or preferred shareholders meets the thresholds described above, shareholders holding preferred or common shares representing at least 10% of our total share capital are entitled to combine their holdings to appoint one member and an alternate to our Board of Directors. Holders of preferred shares, including the golden shares, may elect one member of the permanent Fiscal Council and the respective alternate. Non-controlling holders of common shares may also elect one member of the Fiscal Council and an alternate, pursuant to applicable CVM rules.

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The Brazilian government holds 12 golden shares of Vale. The golden shares are preferred shares that entitle the holder to the same rights (including with respect to voting and dividend preference) as holders of preferred shares. In addition, the holder of the golden shares is entitled to veto any proposed action relating to the following matters:

a change in our name;

a change in the location of our head office;

a change in our corporate purpose as regards mining activities;

any liquidation of the Company;

any disposal or winding up of activities in any of the following parts of our iron ore mining integrated systems:

(a) mineral deposits, ore deposits, mines;

(b) railways; or

(c) ports and maritime terminals;

any change in the bylaws relating to the rights afforded to the classes of capital stock issued by us; and

any change in the bylaws relating to the rights afforded the golden shares.

Calculation of distributable amount

At each annual shareholders' meeting, the Board of Directors is required to recommend, based on the executive officers' proposal, how to allocate our earnings for the preceding fiscal year. For purposes of Brazilian corporate law, a company's net income after income taxes and social contribution taxes for such fiscal year, net of any accumulated losses from prior fiscal years and amounts allocated to employees' and management's participation in earnings represents its "net profits" for such fiscal year. In accordance with Brazilian corporate law, an amount equal to our net profits, as further reduced by amounts allocated to the legal reserve, to the fiscal incentive investment reserve, to the contingency reserve or to the unrealized income reserve established by us in compliance with applicable law (discussed below) and increased by reversals of reserves constituted in prior years, is available for distribution to shareholders in any given year. Such amount, the adjusted net profits, is referred to herein as the distributable amount. We may also establish discretionary reserves, such as reserves for investment projects.

The Brazilian corporate law provides that all discretionary allocations of net profits, including discretionary reserves, the contingency reserve, the unrealized income reserve and the reserve for investment projects, are subject to approval by the shareholders voting at the annual meeting and can be transferred to capital or used for the payment of dividends in subsequent years. The fiscal incentive investment reserve and legal reserve are also subject to approval by the shareholders voting at the annual meeting and may be transferred to capital but are not available for the payment of dividends in subsequent years.

The sum of certain discretionary reserves may not exceed the amount of our paid-in capital. When such limit is reached, our shareholders may vote to use the excess to pay in capital, increase capital or distribute dividends.

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Our calculation of net profits and allocations to reserves for any fiscal year are determined on the basis of the unconsolidated financial statements of our parent company, Vale S.A., in *reais*, prepared in accordance with Brazilian corporate law. Our consolidated financial statements have been prepared in accordance with IFRS using U.S. dollars as the reporting currency and, although our allocations to reserves and dividends will be reflected in these financial statements, investors will not be able to calculate such allocations or required dividend amounts from our consolidated financial statements in U.S. dollars.

Mandatory dividend

The Brazilian corporate law and our bylaws prescribe that we must distribute to our shareholders in the form of dividends or interest on shareholders' equity an annual amount equal to not less than 25% of the distributable amount, referred to as the mandatory dividend, unless the Board of Directors advises our shareholders at our general shareholders' meeting that payment of the mandatory dividend for the preceding year is inadvisable in light of our financial condition. To date, our Board of Directors has never determined that payment of the mandatory dividend was inadvisable. The Fiscal Council must review any such determination and report it to the shareholders. In addition to the mandatory dividend, our Board of Directors may recommend to the shareholders payment of dividends from other funds legally available therefore. Any payment of interim dividends will be netted against the amount of the mandatory dividend for that fiscal year. The shareholders must also approve the recommendation of the Board of Directors with respect to any required distribution. The amount of the mandatory dividend is subject to the size of the legal reserve, the contingency reserve, and the unrealized income reserve. The amount of the mandatory dividend is not subject to the size of the discretionary tax incentive reserve. See *Calculation of distributable amount*.

Dividend preference of preferred shares

Pursuant to our bylaws, holders of preferred shares and the golden shares are entitled to a minimum annual non-cumulative preferential dividend equal to (i) at least 3% of the book value per share, calculated in accordance with the financial statements which serve as reference for the payment of dividends, or (ii) 6% of their pro rata share of our paid-in capital, whichever is higher. To the extent that we declare dividends in any particular year in amounts which exceed the preferential dividends on preferred shares, and after holders of common shares have received distributions equivalent, on a per share basis, to the preferential dividends on preferred shares, holders of common shares and preferred shares shall receive the same additional dividend amount per share. We regularly have had sufficient distributable amounts to be able to distribute equal amounts to both common and preferred shareholders.

Other matters relating to our preferred shares

Our bylaws do not provide for the conversion of preferred shares into common shares. In addition, the preferred shares do not have any preference upon our liquidation and there are no redemption provisions associated with the preferred shares.

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Distributions classified as shareholders' equity

Brazilian companies are permitted to pay limited amounts to shareholders and treat such payments as an expense for Brazilian income tax purposes. Our bylaws provide for the distribution of interest on shareholders' equity as an alternative form of payment to shareholders. The interest rate applied is limited to the Brazilian long-term interest rate, or TJLP, for the applicable period. The deduction of the amount of interest paid cannot exceed the greater of (1) 50% of net income (after the deduction of the provision of social contribution on net profits and before the deduction of the provision of the corporate income tax) before taking into account any such distribution for the period in respect of which the payment is made or (2) 50% of the sum of retained earnings and profit reserves. Any payment of interest on shareholders' equity is subject to Brazilian withholding income tax. See *Additional information Taxation*. Under our bylaws, the amount paid to shareholders as interest on shareholders' equity (net of any withholding tax) may be included as part of any mandatory and minimum dividend. Under Brazilian corporate law, we are obligated to distribute to shareholders an amount sufficient to ensure that the net amount received, after payment by us of applicable Brazilian withholding taxes in respect of the distribution of interest on shareholders' equity, is at least equal to the mandatory dividend.

Voting rights

Each common share entitles the holder thereof to one vote at meetings of our shareholders. Holders of preferred shares are entitled to the same voting rights as holders of common shares except for the election of members of the Board of Directors, which will no longer apply in the event of any dividend arrearage, as described below. One of the members of the permanent Fiscal Council and his or her alternate are elected by majority vote of the holders of preferred shares. Holders of preferred shares and common shares may, in certain circumstances, combine their respective holdings to elect members of our Board of Directors, as described under *Common shares and preferred shares*.

The golden shares entitle the holder thereof to the same voting rights as holders of preferred shares. The golden shares also confer certain other significant veto rights in respect of particular actions, as described under *Common shares and preferred shares*.

The Brazilian corporate law provides that non-voting or restricted-voting shares, such as the preferred shares, acquire unrestricted voting rights beginning when a company has failed for three consecutive fiscal years (or for any shorter period set forth in a company's constituent documents) to pay any fixed or minimum dividend to which such shares are entitled and continuing until payment thereof is made. Our bylaws do not set forth any such shorter period.

Any change in the preferences or advantages of our preferred shares, or the creation of a class of shares having priority over the preferred shares, would require the approval of the holder of the golden shares, who can veto such matters, as well as the approval of the holders of a majority of the outstanding preferred shares, voting as a class at a special meeting.

Shareholders' meetings

Our Ordinary General Shareholders' Meeting is convened by April of each year for shareholders to resolve upon our financial statements, distribution of profits, election of Directors and Fiscal Council Members, if necessary, and compensation of senior management. Extraordinary General Shareholders' Meetings are convened by the Board of Directors as necessary in order to decide all other matters relating to our corporate purposes and to pass such other resolutions as may be necessary.

Pursuant to Brazilian corporate law, shareholders voting at a general shareholders' meeting have the power, among other powers, to:

amend the bylaws;

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elect or dismiss members of the Board of Directors and members of the Fiscal Council at any time;

establish the remuneration of senior management and members of the Fiscal Council;

receive annual reports by management and accept or reject management's financial statements and recommendations including the allocation of net profits and the distributable amount for payment of the mandatory dividend and allocation to the various reserve accounts;

authorize the issuance of convertible and secured debentures;

suspend the rights of a shareholder in default of obligations established by law or by the bylaws;

accept or reject the valuation of assets contributed by a shareholder in consideration for issuance of capital stock;

pass resolutions to reorganize our legal form, to merge, consolidate or split us, to dissolve and liquidate us, to elect and dismiss our liquidators and to examine their accounts; and

authorize management to file for bankruptcy or to request a judicial restructuring.

Pursuant to CVM recommendations and as stipulated in our undertakings to the HKEx, all general shareholders' meetings, including the annual shareholders' meeting, require no fewer than 30 days notice to shareholders prior to the scheduled meeting date. Where any general shareholders' meeting is adjourned, 15 days prior notice to shareholders of the reconvened meeting is required. Pursuant to Brazilian corporate law, this notice to shareholders is required to be published no fewer than three times, in the *Diário Oficial do Estado do Rio de Janeiro* and in a newspaper with general circulation in the city where we have our registered office, in Rio de Janeiro. Our shareholders have previously designated *Jornal do Commercio* for this purpose. Also, because our shares are traded on the BM&FBOVESPA, we must publish a notice in a São Paulo based newspaper. Such notice must contain the agenda for the meeting and, in the case of an amendment to our bylaws, an indication of the meeting's subject matter. In addition, under our bylaws, the holder of the golden shares is entitled to a minimum of 15 days prior formal notice to its legal representative of any general shareholders' meeting to consider any proposed action subject to the veto rights accorded to the golden shares. See *Common shares and preferred shares*.

A shareholders' meeting may be held if shareholders representing at least one-quarter of the voting capital are present, except as otherwise provided, including for meetings convened to amend our bylaws, which require a quorum of at least two-thirds of the voting capital. If no such quorum is present, notice must again be given in the same manner as described above, and a meeting may then be convened without any specific quorum requirement, subject to the minimum quorum and voting requirements for certain matters, as discussed below. A shareholder without a right to vote may attend a general shareholders' meeting and take part in the discussion of matters submitted for consideration.

Except as otherwise provided by law, resolutions of a shareholders' meeting are passed by a simple majority vote, abstentions not being taken into account. Under Brazilian corporate law, the approval of shareholders representing at least one-half of the issued and outstanding voting shares is required for the types of action described below, as well as, in the case of the first two items below, a majority of issued and outstanding shares of the affected class:

creating a new class of preferred shares or disproportionately increasing an existing class of preferred shares relative to the other classes of preferred shares, other than to the extent permitted by the bylaws;

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changing a priority, preference, right, privilege or condition of redemption or amortization of any class of preferred shares or creating a new class of shares with greater privileges than the existing classes of preferred shares;

reducing the mandatory dividend;

changing the corporate purposes;

merging us with another company or consolidating or splitting us;

participating in a centralized group of companies as defined under Brazilian corporate law;

dissolving or liquidating us; and

canceling any ongoing liquidation of us.

Whenever the shares of any class of capital stock are entitled to vote, each share is entitled to one vote. Annual shareholders' meetings must be held by April 30 of each year. Shareholders' meetings are called, convened and presided over by the chairman or, in case of his absence, by the vice-chairman of our Board of Directors. In the case of temporary impediment or absence of the chairman or vice-chairman of the Board of Directors, the shareholders' meetings may be chaired by their respective alternates, or in the absence or impediment of such alternates, by a director especially appointed by the chairman of the Board of Directors. A shareholder may be represented at a general shareholders' meeting by a proxy appointed in accordance with applicable Brazilian law not more than one year before the meeting, who must be a shareholder, a company officer, a lawyer or a financial institution.

Redemption rights

Our common shares and preferred shares are not redeemable, except that a dissenting shareholder is entitled under Brazilian corporate law to obtain redemption upon a decision made at a shareholders' meeting approving any of the items listed above, as well as:

any decision to transfer all of our shares to another company in order to make us a wholly-owned subsidiary of such company, a stock merger;

any decision to approve the acquisition of control of another company at a price which exceeds certain limits set forth in Brazilian corporate law; or

in the event that the entity resulting from (a) a merger, (b) a stock merger as described in clause (i) above or (c) a spin-off that we conduct fails to become a listed company within 120 days of the general shareholders' meeting at which such decision was taken.

Only holders of shares adversely affected by shareholder decisions altering the rights, privileges or priority of a class of shares or creating a new class of shares may require us to redeem their shares. The right of redemption triggered by shareholder decisions to merge, consolidate or to participate in a centralized group of companies may only be exercised if our shares do not satisfy certain tests of liquidity, among others, at the time of the shareholder resolution. The right of redemption lapses 30 days after publication of the minutes of the relevant general shareholders' meeting, unless, as in the case of resolutions relating to the rights of preferred shares or the creation of a new class of preferred shares, the resolution is subject to confirmation by the preferred shareholders (which must be made at a special meeting to be held within one year), in which case the 30-day term is counted from the publication of the minutes of the special meeting.

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We would be entitled to reconsider any action giving rise to redemption rights within 10 days following the expiration of such rights if the redemption of shares of dissenting shareholders would jeopardize our financial stability. Any redemption pursuant to Brazilian corporate law would be made at no less than the book value per share, determined on the basis of the last balance sheet approved by the shareholders; provided that if the general shareholders' meeting giving rise to redemption rights occurred more than 60 days after the date of the last approved balance sheet, a shareholder would be entitled to demand that his or her shares be valued on the basis of a new balance sheet dated within 60 days of such general shareholders' meeting.

Preemptive rights

Each of our shareholders has a general preemptive right to subscribe for shares in any capital increase, in proportion to his or her shareholding. A minimum period of 30 days following the publication of notice of a capital increase is assured for the exercise of the right, and the right is transferable. Under our bylaws and Brazilian corporate law, and subject to the requirement for shareholder approval of any necessary increase to our authorized share capital, our Board of Directors may decide not to extend preemptive rights to our shareholders, or to reduce the 30-day period for the exercise of preemptive rights, in each case with respect to any issuance of shares, debentures convertible into shares or warrants in the context of a public offering. In the event of a capital increase that would maintain or increase the proportion of capital represented by preferred shares, holders of preferred shares will have preemptive rights to subscribe only to newly issued preferred shares. In the event of a capital increase that would reduce the proportion of capital represented by preferred shares, shareholders will have preemptive rights to subscribe for preferred shares, in proportion to their shareholdings, and for common shares only to the extent necessary to prevent dilution of their overall interest in us. In the event of a capital increase that would maintain or increase the proportion of capital represented by common shares, shareholders will have preemptive rights to subscribe only to newly issued common shares. In the event of a capital increase that would reduce the proportion of capital represented by common shares, holders of common shares will have preemptive rights to subscribe for preferred shares only to the extent necessary to prevent dilution of their overall interest in us.

Tag-along rights

According to Brazilian corporate law, in the event of a sale of control of a company, the acquirer is obliged to offer to holders of voting shares the right to sell their shares for a price equal to at least 80% of the price paid for the voting shares representing control.

Form and transfer of shares

Our preferred shares and common shares are in book-entry form registered in the name of each shareholder. The transfer of such shares is made under Brazilian corporate law, which provides that a transfer of shares is effected by our transfer agent, Banco Bradesco S.A., upon presentation of valid share transfer instructions to us by a transferor or its representative. When preferred shares or common shares are acquired or sold on a Brazilian stock exchange, the transfer is effected on the records of our transfer agent by a representative of a brokerage firm or the stock exchange's clearing system. Transfers of shares by a foreign investor are made in the same way and are executed by the investor's local agent, who is also responsible for updating the information relating to the foreign investment furnished to the Central Bank of Brazil.

The BM&FBOVESPA operates a central clearing system through *Companhia Brasileira de Liquidação e Custódia*, or CBLC. A holder of our shares may participate in this system and all shares elected to be put into the system will be deposited in custody with CBLC (through a Brazilian institution that is duly authorized to operate by the Central Bank of Brazil and maintains a clearing account with CBLC). The fact that such shares are subject to custody with the relevant stock exchange will be reflected in our registry of shareholders. Each participating shareholder will, in turn, be registered in the register of our beneficial shareholders that is maintained by CBLC and will be treated in the same way as registered shareholders.

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SHAREHOLDER DEBENTURES

At the time of the first stage of our privatization in 1997, we issued shareholder revenue interests known in Brazil as "*debentures participativas*" to our then-existing shareholders. The terms of the debentures were established to ensure that our pre-privatization shareholders, including the Brazilian government, would participate alongside us in potential future financial benefits that we derive from exploiting certain mineral resources that were not taken into account in determining the minimum purchase price of our shares in the privatization. In accordance with the debentures deed, holders have the right to receive semi-annual payments equal to an agreed percentage of our net revenues (revenues less value-added tax, transport fee and insurance expenses related to the trading of the products) from certain identified mineral resources that we owned at the time of the privatization, to the extent that we exceed defined thresholds of sales volume relating to certain mineral resources, and from the sale of mineral rights that we owned at that time. Our obligation to make payments to the holders will cease when the relevant mineral resources are exhausted.

We have been making semi-annual payments to holders of shareholder debentures, which reached US$14 million in 2011, US$10 million in 2012 and US$11 million in 2013. In October 2013, the accumulated sales volume of iron ore from the Northern System reached the relevant threshold established in the debentures deed, which triggered our obligation to make additional semi-annual payments of the premium on iron ore products, starting in 2014. See Note 31 to our consolidated financial statements for a description of the terms of the debentures.

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EXCHANGE CONTROLS AND OTHER LIMITATIONS AFFECTING SECURITY HOLDERS

Under Brazilian corporate law, there are no restrictions on ownership of our capital stock by individuals or legal entities domiciled outside Brazil. However, the right to convert dividend payments and proceeds from the sale of preferred shares or common shares into foreign currency and to remit such amounts outside Brazil is subject to restrictions under foreign investment legislation, which generally requires, among other things, that the relevant investment be registered with the Central Bank of Brazil. These restrictions on the remittance of foreign capital abroad could hinder or prevent the depositary bank and its agents for the preferred shares or common shares represented by ADSs and HDSs from converting dividends, distributions or the proceeds from any sale of preferred shares, common shares or rights, as the case may be, into U.S. dollars or Hong Kong dollars and remitting such amounts abroad. Delays in, or refusal to grant any required government approval for conversions of Brazilian currency payments and remittances abroad of amounts owed to holders of ADSs and HDSs could adversely affect holders of ADRs and HDRs.

Under Resolution No. 2,689/2000 of the CMN, foreign investors may invest in almost all financial assets and engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are fulfilled. In accordance with Resolution No. 2,689/2000, the definition of foreign investor includes individuals, legal entities, mutual funds and other collective investment entities, domiciled or headquartered outside Brazil.

Under Resolution No. 2,689/2000, a foreign investor must:

(1) appoint at least one representative in Brazil, with powers to perform actions relating to its investment,

(2) complete the appropriate foreign investor registration form,

(3) register as a foreign investor with the CVM, and register its foreign investment with the Central Bank of Brazil, and

(4) appoint a custodian, duly licensed by the Central Bank of Brazil, if the Brazilian representative in item (1) is not a financial institution.

Resolution No. 2,689/2000 specifies the manner of custody and the permitted means for trading securities held by foreign investors under the resolution.

Moreover, the offshore transfer or assignment of securities or other financial assets held by foreign investors pursuant to Resolution No. 2,689/2000 is prohibited, except for transfers resulting from a corporate reorganization, or occurring upon the death of an investor by operation of law or will.

Resolution No. 1,927/1992 of the CMN provides for the issuance of depositary receipts in foreign markets in respect of shares of Brazilian issuers. It provides that the proceeds from the sale of ADSs by holders of ADRs outside Brazil are not subject to Brazilian foreign investment controls and holders of ADSs who are not residents of a low-tax jurisdiction (*país com tributação favorecida*), as defined by Brazilian law, will be entitled to favorable tax treatment.

An electronic registration has been issued to the custodian in the name of the depositary with respect to the ADSs and HDSs. Pursuant to this electronic registration, the custodian and the depositary are able to convert dividends and other distributions with respect to the underlying shares into foreign currency and to remit the proceeds outside Brazil. If a holder exchanges ADSs or HDSs for preferred shares or common shares, the holder must, within five business days, seek to obtain its own electronic registration with the Central Bank of Brazil under Law No. 4,131/1962 and Resolution No. 2,689/2000. Thereafter, unless the holder has registered its investment with the Central Bank of Brazil, such holder may not convert into foreign currency and remit outside Brazil the proceeds from the disposition of, or distributions with respect to, such preferred shares or common shares.

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Under Brazilian law, whenever there is a serious imbalance in Brazil's balance of payments or reasons to foresee a serious imbalance, the Brazilian government may impose temporary restrictions on the remittance to foreign investors of the proceeds of their investments in Brazil, and on the conversion of Brazilian currency into foreign currencies. Such restrictions may hinder or prevent the custodian or holders who have exchanged ADSs or HDSs for underlying preferred shares or common shares from converting distributions or the proceeds from any sale of such shares, as the case may be, into U.S. dollars or Hong Kong dollars and remitting such U.S. dollars or Hong Kong dollars abroad. In the event the custodian is prevented from converting and remitting amounts owed to foreign investors, the custodian will hold the *reais* it cannot convert for the account of the holders of ADRs or HDRs who have not been paid. The depositary will not invest the *reais* and will not be liable for interest on those amounts. Any *reais* so held will be subject to devaluation risk against the U.S. dollar or Hong Kong dollar.

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TAXATION

The following summary contains a description of the principal Brazilian and U.S. federal income tax consequences of the ownership and disposition of preferred shares, common shares, ADSs or HDSs. You should know that this summary does not purport to be a comprehensive description of all the tax considerations that may be relevant to a holder of preferred shares, common shares, ADSs or HDSs.

Holders of preferred shares, common shares, ADSs or HDSs should consult their own tax advisors to discuss the tax consequences of the purchase, ownership and disposition of preferred shares, common shares, ADSs or HDSs, including, in particular, the effect of any state, local or other national tax laws.

Although there is at present no treaty to avoid double taxation between Brazil and the United States, but only a common understanding between the two countries according to which income taxes paid in one may be offset against taxes to be paid in the other, both countries' tax authorities have been having discussions that may result in the execution of such a treaty. In this regard, the two countries signed a Tax Information Exchange Agreement on March 20, 2007, which the Brazilian government approved in May 2013. We cannot predict whether or when such a treaty will enter into force or how, if entered into, such a treaty will affect the U.S. holders, as defined below, of preferred shares, common shares or ADSs.

Brazilian tax considerations

The following discussion summarizes the principal Brazilian tax consequences of the acquisition, ownership and disposition of preferred shares, common shares, ADSs or HDSs by a holder not deemed to be domiciled in Brazil for purposes of Brazilian taxation ("Non-Brazilian Holder"). It is based on the tax laws of Brazil and regulations thereunder in effect on the date hereof, which are subject to change (possibly with retroactive effect). This discussion does not specifically address all of the Brazilian tax considerations applicable to any particular Non-Brazilian Holder. Therefore, Non-Brazilian Holders should consult their own tax advisors concerning the Brazilian tax consequences of an investment in preferred shares, common shares, ADSs or HDSs.

Shareholder distributions

For Brazilian corporations, such as the Company, distributions to shareholders are classified as either dividend or interest on shareholders' equity.

Dividends

Amounts distributed as dividends will generally not be subject to Brazilian withholding income tax if the distribution is paid only from profits for the corresponding year, as determined under Brazilian tax principles. Dividends paid from profits generated before January 1, 1996 may be subject to Brazilian withholding income tax at varying rates depending on the year the profits were generated. Dividends paid from sources other than profits as determined under Brazilian tax principles may be subject to withholding tax.

Interest on shareholders' equity

Amounts distributed as interest on shareholders' equity are generally subject to withholding income tax at the rate of 15%, except where:

(1) the beneficiary is exempt from tax in Brazil, in which case the distribution will not be subject to withholding income tax;

(2) the beneficiary is located in a jurisdiction that does not impose income tax or where the maximum income tax rate is lower than 20% (a "Low Tax Jurisdiction") or where internal legislation imposes restrictions on the disclosure of the shareholding structure or the ownership of the investment, in which case the applicable withholding income tax rate is 25%; or

(3) the effective beneficiary is resident in Japan, in which case the applicable withholding income tax rate is 12.5%.

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Interest on shareholders' equity is calculated as a percentage of shareholders' equity, as stated in the statutory accounting records. The interest rate applied may not exceed TJLP, the benchmark Brazilian long-term interest rate. In addition, the amount of distributions classified as interest on shareholders' equity may not be more than the greater of (1) 50% of net income (after the deduction of social contribution on net profits but before taking into account such payment of interest and the provision for corporate income tax) for the period in respect of which the payment is made and (2) 50% of the sum of retained earnings and profit reserves.

Payments of interest on shareholders' equity are deductible for the purposes of corporate income tax and social contribution on net profit, to the extent of the limits described above. The tax benefit to the Company in the case of a distribution by way of interest on shareholders' equity is a reduction in the Company's corporate tax charge by an amount equivalent to 34% of such distribution.

Taxation of capital gains

Taxation of Non-Brazilian Holders on capital gains depends on the status of the holder as either:

(i) not resident or domiciled in a Low Tax Jurisdiction or where internal legislation imposes restrictions on the disclosure of shareholding structure or the ownership of the investment and registered its investment in Brazil in accordance with Resolution No. 2,689 (a 2,689 Holder), or (ii) a holder of ADSs or HDSs; or

any other Non-Brazilian Holder.

Investors identified in items (i) or (ii) are subject to favorable tax treatment, as described below.

Capital gains realized by a Non-Brazilian Holder from the disposition of "assets located in Brazil" are subject to taxation in Brazil. Preferred shares and common shares qualify as assets located in Brazil, and the disposition of such assets by a Non-Brazilian Holder may be subject to income tax on the gains assessed, in accordance with the rules described below, regardless of whether the transaction is carried out with another Non-Brazilian resident or with a Brazilian resident.

There is some uncertainty as to whether ADSs or HDSs qualify as "assets located in Brazil" for this purpose. Arguably, neither ADSs nor HDSs constitute assets located in Brazil and therefore the gains realized by a Non-Brazilian Holder on the disposition of ADSs or HDSs to another Non-Brazilian resident should not be subject to income tax in Brazil. However, it is not certain that the Brazilian courts will uphold this interpretation of the definition of "assets located in Brazil" in connection with the taxation of gains realized by a Non-Brazilian Holder on the disposition of ADSs or HDSs. Consequently, gains on a disposition of ADSs or HDSs by a Non-Brazilian Holder (whether in a transaction carried out with another Non-Brazilian Holder or a person domiciled in Brazil) may be subject to income tax in Brazil in accordance with the rules applicable to a disposition of shares.

Although there are grounds to sustain otherwise, the deposit of preferred shares or common shares in exchange for ADSs or HDSs may be subject to Brazilian income tax if the acquisition cost of the shares being deposited is lower than the average price, determined as either:

the average price per preferred share or common share on the Brazilian stock exchange in which the greatest number of such shares were sold on the day of deposit; or

if no preferred shares or common shares were sold on that day, the average price on the Brazilian stock exchange in which the greatest number of preferred shares or common shares were sold in the 15 trading sessions immediately preceding such deposit.

The positive difference between the average price of the preferred shares or common shares calculated as described above and their acquisition cost will be considered to be a capital gain subject to income tax in Brazil. In some circumstances, there are grounds to sustain that such taxation is not applicable with respect to any 2,689 Holder, provided he is not located in a Low Tax Jurisdiction.

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The withdrawal of ADSs or HDSs in exchange for preferred shares or common shares is not subject to Brazilian income tax, subject to compliance with applicable regulations regarding the registration of the investment with the Central Bank of Brazil.

For the purpose of Brazilian taxation, the income tax rules on gains related to disposition of preferred shares or common shares vary depending on:

- the domicile of the Non-Brazilian Holder;
- the method by which such Non-Brazilian Holder has registered his investment with the Central Bank of Brazil; and
- how the disposition is carried out, as described below.

The gain realized as a result of a transaction on a Brazilian stock exchange is the difference between: (i) the amount in Brazilian currency realized on the sale or disposition and (ii) the acquisition cost, without any adjustment for inflation, of the securities that are the subject of the transaction.

Any gain realized by a Non-Brazilian Holder on a sale or disposition of preferred shares or common shares carried out on the Brazilian stock exchange is:

- exempt from income tax where the Non-Brazilian Holder (i) is a 2,689 Holder; and (ii) is not located in a Low Tax Jurisdiction;
- subject to income tax at a rate of 15% where the Non-Brazilian Holder either (A) (i) is not a 2,689 Holder and (ii) is not resident or domiciled in a Low Tax Jurisdiction or (B) (i) is a 2,689 Holder and (ii) is resident or domiciled in a Low Tax Jurisdiction; or
- subject to income tax at a rate of 25% where the Non-Brazilian Holder (i) is not a 2,689 Holder and (ii) is resident or domiciled in a Low Tax Jurisdiction.

The sale or disposition of common shares carried out on the Brazilian stock exchange is subject to withholding tax at the rate of 0.005% on the sale value. This withholding tax can be offset against the eventual income tax due on the capital gain. A 2,689 Holder that is not resident or domiciled in a Low Tax Jurisdiction is not required to withhold income tax.

Any gain realized by a Non-Brazilian Holder on a sale or disposition of preferred shares or common shares that is not carried out on the Brazilian stock exchange is subject to income tax at a 15% rate, except for gain realized by a resident in a Low Tax Jurisdiction, which is subject to income tax at the rate of 25%.

With respect to transactions arranged by a broker that are conducted on the Brazilian non-organized over-the-counter market, a withholding income tax at a rate of 0.005% on the sale value is also levied on the transaction and can be offset against the eventual income tax due on the capital gain. There can be no assurance that the current favorable treatment of 2,689 Holders will continue in the future.

In the case of a redemption of preferred shares, common shares, ADSs or HDSs or a capital reduction by a Brazilian corporation, the positive difference between the amount received by any Non-Brazilian Holder and the acquisition cost of the preferred shares, common shares, ADSs or HDSs being redeemed is treated as capital gain and is therefore generally subject to income tax at the rate of 15%, while the 25% rate applies to residents in a Low Tax Jurisdiction.

Any exercise of pre-emptive rights relating to our preferred shares or common shares will not be subject to Brazilian taxation. Any gain realized by a Non-Brazilian Holder on the disposition of pre-emptive rights relating to preferred shares or common shares in Brazil will be subject to Brazilian income taxation in accordance with the same rules applicable to the sale or disposition of preferred shares or common shares.

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Tax on foreign exchange and financial transactions

Foreign exchange transactions

Brazilian law imposes a tax on foreign exchange transactions, or an IOF/Exchange Tax, due on the conversion of *reais* into foreign currency and on the conversion of foreign currency into *reais*. Currently, for most foreign currency exchange transactions, the rate of IOF/Exchange is 0.38%.

The outflow of resources from Brazil related to investments held by a Non-Brazilian Holder in the Brazilian financial and capital markets is currently subject to IOF/Exchange at a zero percent rate. In any case, the Brazilian government may increase such rates at any time, up to 25%, with no retroactive effect.

Transactions involving securities

Brazilian law imposes a tax on transactions involving securities, or an IOF/Securities Tax, including those carried out on the Brazilian stock exchange. The rate of IOF/Securities Tax applicable to transactions involving publicly traded securities in Brazil is currently zero. The rate of IOF/Securities Tax applicable to a transfer of shares traded on the Brazilian stock exchange to back the issuance of depositary receipts has also been zero since December 24, 2013. However, the Brazilian Government may increase such rates at any time up to 1.5% of the transaction amount per day, but the tax cannot be applied retroactively.

Other Brazilian taxes

There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of preferred shares, common shares, ADSs or HDSs by a Non-Brazilian Holder, except for gift and inheritance taxes which are levied by some states of Brazil on gifts made or inheritances bestowed by a Non-Brazilian Holder to individuals or entities resident or domiciled within such states in Brazil. There are no Brazilian stamp, issue, registration, or similar taxes or duties payable by holders of preferred shares or common shares or ADSs or HDSs.

U.S. federal income tax considerations

This summary does not purport to be a comprehensive description of all the U.S. federal income tax consequences of the acquisition, holding or disposition of the preferred shares, common shares or ADSs. This summary applies to U.S. holders, as defined below, who hold their preferred shares, common shares or ADSs as capital assets and does not apply to special classes of holders, such as:

certain financial institutions,

insurance companies,

dealers in securities or foreign currencies,

tax-exempt organizations,

securities traders who elect to account for their investment in preferred shares, common shares or ADSs on a mark-to-market basis,

persons holding preferred shares, common shares or ADSs as part of hedge, straddle, conversion or other integrated financial transactions for tax purposes,

holders whose functional currency for U.S. federal income tax purposes is not the U.S. dollar,

partnerships or other holders treated as "pass-through entities" for U.S. federal income tax purposes,

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persons subject to the alternative minimum tax, or

persons owning, actually or constructively, 10% or more of our voting shares.

This discussion is based on the Internal Revenue Code of 1986, as amended to the date hereof, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury Regulations, all as in effect on the date hereof. These authorities are subject to differing interpretations and may be changed, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. There can be no assurance that the U.S. Internal Revenue Service (the "IRS") will not challenge one or more of the tax consequences discussed herein or that a court will not sustain such a challenge in the event of litigation. This summary does not address any aspect of state, local or non-U.S. tax law.

YOU SHOULD CONSULT YOUR TAX ADVISORS WITH REGARD TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO YOUR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION.

This discussion is also based, in part, on representations of the depositary and the assumption that each obligation in the deposit agreement and any related agreement will be performed in accordance with its terms.

For purposes of this discussion, you are a "U.S. holder" if you are a beneficial owner of preferred shares, common shares or ADSs that is, for U.S. federal income tax purposes:

a citizen or resident alien individual of the United States,

a corporation created or organized in or under the laws of the United States or of any political subdivision thereof, or

otherwise subject to U.S. federal income taxation on a net income basis with respect to the preferred shares, common shares or ADSs.

The term U.S. holder also includes certain former citizens of the United States.

In general, if you are the beneficial owner of American depositary receipts evidencing ADSs, you will be treated as the beneficial owner of the preferred shares or common shares represented by those ADSs for U.S. federal income tax purposes. Deposits and withdrawals of preferred shares or common shares by you in exchange for ADSs will not result in the realization of gain or loss for U.S. federal income tax purposes. Your tax basis in such preferred shares or common shares will be the same as your tax basis in such ADSs, and the holding period in which preferred shares or common shares will include the holding period in such ADSs.

Taxation of dividends

The gross amount of a distribution paid on ADSs, preferred shares or common shares, including distributions paid in the form of payments of interest on capital for Brazilian tax purposes, out of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes) will be taxable to you as foreign source dividend income and will not be eligible for the dividends-received deduction allowed to corporate shareholders under U.S. federal income tax law. The amount of any such distribution will include the amount of Brazilian withholding taxes, if any, withheld on the amount distributed. To the extent that a distribution exceeds our current and accumulated earnings and profits, such distribution will be treated as a nontaxable return of capital to the extent of your basis in the ADSs, preferred shares or common shares, as the case may be, with respect to which such distribution is made, and thereafter as a capital gain.

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You will be required to include dividends paid in *reais* in income in an amount equal to their U.S. dollar value calculated by reference to an exchange rate in effect on the date such distribution is received by the depositary, in the case of ADSs, or by you, in the case of common shares or preferred shares. If the depositary or you do not convert such *reais* into U.S. dollars on the date they are received, it is possible that you will recognize foreign currency loss or gain, which would be ordinary loss or gain, when the *reais* are converted into U.S. dollars. If you hold ADSs, you will be considered to receive a dividend when the dividend is received by the depositary.

Subject to certain exceptions for short-term and hedged positions, the U.S. dollar amount of dividends received by certain noncorporate taxpayers, including individuals, will be subject to taxation at the preferential rates applicable to long-term capital gains if the dividends are "qualified dividends." Dividends paid on the ADSs will be treated as qualified dividends if (i) the ADSs are readily tradable on an established securities market in the United States and (ii) the Company was not, in the year prior to the year in which the dividend was paid, and is not, in the year in which the dividend is paid, a passive foreign investment company ("PFIC"). The ADSs are listed on the New York Stock Exchange and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on Vale's audited financial statements and relevant market and shareholder data, Vale believes that it was not treated as a PFIC for U.S. federal income tax purposes with respect to its 2012 taxable year. In addition, based on Vale's audited financial statements and its current expectations regarding the value and nature of its assets, the sources and nature of its income, and relevant market and shareholder data, Vale does not anticipate becoming a PFIC for its 2013 taxable year.

Based on existing guidance, it is not entirely clear whether dividends received with respect to the preferred shares and common shares will be treated as qualified dividends (and therefore whether such dividends will qualify for the preferential rates of taxation applicable to long-term capital gains), because the preferred shares and common shares are not themselves listed on a U.S. exchange. In addition, the U.S. Treasury has announced its intention to promulgate rules pursuant to which holders of ADSs, preferred shares or common stock and intermediaries through whom such securities are held will be permitted to rely on certifications from issuers to establish that dividends are treated as qualified dividends. Because such procedures have not yet been issued, it is unclear whether we will be able to comply with them. You should consult your own tax advisors regarding the availability of the reduced dividend tax rate in light of your own particular circumstances.

Subject to generally applicable limitations and restrictions, you will be entitled to a credit against your U.S. federal income tax liability, or a deduction in computing your U.S. federal taxable income, for Brazilian income taxes withheld by us. You must satisfy minimum holding period requirements to be eligible to claim a foreign tax credit for Brazilian taxes withheld on dividends. The limitation on foreign taxes eligible for credit is calculated separately for specific classes of income. For this purpose dividends paid by us on our shares will generally constitute "passive income". Foreign tax credits may not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions in securities or in respect of arrangements in which a U.S. holder's expected economic profit is insubstantial. You should consult your own tax advisors concerning the implications of these rules in light of your particular circumstances.

Taxation of capital gains

Upon a sale or exchange of preferred shares, common shares or ADSs, you will recognize a capital gain or loss for U.S. federal income tax purposes equal to the difference, if any, between the amount realized on the sale or exchange and your adjusted tax basis in the preferred shares, common shares or ADSs. This gain or loss will be long-term capital gain or loss if your holding period in the preferred shares, common shares or ADSs exceeds one year. The net amount of long-term capital gain recognized by individual U.S. holders generally is subject to taxation at preferential rates. Your ability to use capital losses to offset income is subject to limitations.

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Any gain or loss will be U.S. source gain or loss for U.S. foreign tax credit purposes. Consequently, if a Brazilian withholding tax is imposed on the sale or disposition of ADSs, preferred shares or common shares, and you do not receive significant foreign source income from other sources you may not be able to derive effective U.S. foreign tax credit benefits in respect of such Brazilian withholding tax. You should consult your own tax advisor regarding the application of the foreign tax credit rules to your investment in, and disposition of, ADSs, preferred shares or common shares.

If a Brazilian tax is withheld on the sale or disposition of shares, the amount realized by a U.S. holder will include the gross amount of the proceeds of such sale or disposition before deduction of the Brazilian tax. See *Brazilian tax considerations* above.

Information reporting and backup withholding

Information returns may be filed with the IRS in connection with distributions on the preferred shares, common shares or ADSs and the proceeds from their sale or other disposition. You may be subject to United States backup withholding tax on these payments if you fail to provide your taxpayer identification number or comply with certain certification procedures or otherwise establish an exemption from backup withholding. If you are required to make such a certification or to establish such an exemption, you generally must do so on IRS Form W-9.

The amount of any backup withholding from a payment to you will be allowed as a credit against your U.S. federal income tax liability and may entitle you to a refund, provided that the required information is timely furnished to the IRS.

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EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Our management, with the participation of our chief executive officer and chief financial officer, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2013. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

Our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the effectiveness to future periods are subject to the risk that controls may become inadequate and that the degree of compliance with the policies or procedures may deteriorate.

Our management has assessed the effectiveness of Vale's internal control over financial reporting as of December 31, 2013 based on the criteria established in "Internal Control Integrated Framework (1992)" issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on such assessment and criteria, our management has concluded that our internal control over financial reporting was effective as of December 31, 2013. The effectiveness of our internal control over financial reporting as of December 31, 2013 has been audited by PricewaterhouseCoopers Auditores Independentes, an independent registered public accounting firm, as stated in their report which appears herein.

Our management identified no change in our internal control over financial reporting during our fiscal year ended December 31, 2013 that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

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CORPORATE GOVERNANCE

Under NYSE rules, foreign private issuers are subject to more limited corporate governance requirements than U.S. domestic issuers. As a foreign private issuer, we must comply with four principal NYSE corporate governance rules: (1) we must satisfy the requirements of Exchange Act Rule 10A-3 relating to audit committees; (2) our chief executive officer must promptly notify the NYSE in writing after any executive officer becomes aware of any non-compliance with the applicable NYSE corporate governance rules; (3) we must provide the NYSE with annual and interim written affirmations as required under the NYSE corporate governance rules; and (4) we must provide a brief description of any significant differences between our corporate governance practices and those followed by U.S. companies under NYSE listing standards. The table below briefly describes the significant differences between our practices and the practices of U.S. domestic issuers under NYSE corporate governance rules.

Section	NYSE corporate governance rule for U.S. domestic issuers	Our approach
303A.01	A listed company must have a majority of independent directors. "Controlled companies" are not required to comply with this requirement.	We are a controlled company because more than a majority of our voting power for the appointment of directors is controlled by Valepar. As a controlled company, we would not be required to comply with the majority of independent director requirements if we were a U.S. domestic issuer. There is no legal provision or policy that requires us to have independent directors.
303A.03	The non-management directors of a listed company must meet at regularly scheduled executive sessions without management.	We do not have any management directors.
303A.04	A listed company must have a nominating/corporate governance committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties. "Controlled companies" are not required to comply with this requirement.	We do not have a nominating committee. As a controlled company, we would not be required to comply with the nominating/corporate governance committee requirements if we were a U.S. domestic issuer. However, we do have a Governance and Sustainability Committee, which is an advisory committee to the Board of Directors and may include members who are not directors. According to its charter, this committee is responsible for: evaluating and recommending improvements to the effectiveness of our corporate governance practices and the functioning of the Board of Directors; recommending improvements to our code of ethical conduct and management system in order to avoid conflicts of interest between us and our shareholders or management; issuing reports on potential conflicts of interest between us and our shareholders or management; and reporting on policies relating to corporate responsibility, such as environmental and social responsibility. The committee's charter requires at least one of its members to be independent. For this purpose, an independent member is a person who: does not have any current relationship with us other than being part of a committee, or being a shareholder of the Company; does not participate, directly or indirectly, in the sales efforts or provision of services by Vale; is not a representative of the controlling shareholders; has not been an employee of the controlling shareholder or of entities affiliated with a controlling shareholder; and has not been an executive officer of the controlling shareholder.

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Section	NYSE corporate governance rule for U.S. domestic issuers	Our approach
303A.05	A listed company must have a compensation committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties. "Controlled companies" are not required to comply with this requirement.	As a controlled company, we would not be required to comply with the compensation committee requirements if we were a U.S. domestic issuer. However, we have an Executive Development Committee, which is an advisory committee to the Board of Directors and may include members who are not directors. This committee is responsible for: reporting on general human resources policies; analyzing and reporting on the adequacy of compensation levels for our executive officers; proposing and updating guidelines for evaluating the performance of our executive officers; and reporting on policies relating to health and safety.
303A.06 303A.07	A listed company must have an audit committee with a minimum of three independent directors who satisfy the independence requirements of Rule 10A-3 under the Exchange Act, with a written charter that covers certain minimum specified duties.	In lieu of appointing an audit committee composed of independent members of the Board of Directors, we have established a permanent *conselho fiscal*, or fiscal council, in accordance with the applicable provisions of Brazilian corporate law, and provided the fiscal council with additional powers to permit it to meet the requirements of Exchange Act Rule 10A-3(c)(3). Under our bylaws, the Fiscal Council shall have between three and five members. Under Brazilian corporate law, which provides standards for the independence of the Fiscal Council from us and our management, none of the members of the Fiscal Council may be a member of the Board of Directors or an executive officer. Management does not elect any Fiscal Council member. Our Board of Directors has determined that one of the members of our Fiscal Council meets the New York Stock Exchange independence requirements that would apply to audit committee members in the absence of our reliance on Exchange Act Rule 10A-3(c)(3). The responsibilities of the Fiscal Council are set forth in its charter. Under our bylaws, the charter must give the Fiscal Council responsibility for the matters required under Brazilian corporate law, as well as responsibility for: establishing procedures for the receipt, retention and treatment of complaints related to accounting, controls and audit issues, as well as procedures for the confidential, anonymous submission of concerns regarding such matters; recommending and assisting the Board of Directors in the appointment, establishment of compensation and dismissal of independent auditors; pre-approving services to be rendered by the independent auditors; overseeing the work performed by the independent auditors, with powers to recommend withholding the payment of compensation to the independent auditors; and mediating disagreements between management and the independent auditors regarding financial reporting.
303A.08	Shareholders must be given the opportunity to vote on all equity-compensation plans and material revisions thereto, with limited exemptions set forth in the NYSE rules.	Under Brazilian corporate law, shareholder pre-approval is required for the adoption of any equity compensation plans.
303A.09	A listed company must adopt and disclose corporate governance guidelines that cover certain minimum specified subjects.	We have not published formal corporate governance guidelines.

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Section	NYSE corporate governance rule for U.S. domestic issuers	Our approach
303A.10	A listed company must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.	We have adopted a formal code of ethical conduct, which applies to our directors, officers and employees. We report each year in our annual report on Form 20-F any waivers of the code of ethical conduct granted for directors or executive officers. Our code of ethical conduct has a scope that is similar, but not identical, to that required for a U.S. domestic company under the NYSE rules.
303A.12	a) Each listed company CEO must certify to the NYSE each year that he or she is not aware of any violation by the company of NYSE corporate governance listing standards. b) Each listed company CEO must promptly notify the NYSE in writing after any executive officer of the listed company becomes aware of any non-compliance with any applicable provisions of this Section 303A. c) Each listed company must submit an executed Written Affirmation annually to the NYSE. In addition, each listed company must submit an interim Written Affirmation as and when required by the interim Written Affirmation form specified by the NYSE.	We are subject to (b) and (c) of these requirements, but not (a).

CODE OF ETHICS AND CONDUCT

In January 2013 we adopted a new code of ethics and conduct that applies to our employees and to the members of our Board of Directors and our Board of Executive Officers, including the chief executive officer, the chief financial officer and the principal accounting officer. We have posted this code of ethics and conduct on our website, at: http://www.vale.com (under English Version/Investors/Corporate Governance/Code of Ethics). Copies of our code of ethics and conduct may be obtained without charge by writing to us at the address set forth on the front cover of this Form 20-F. We have not granted any implicit or explicit waivers from any provision of our new code of ethics and conduct since its adoption, and we did not grant any implicit or explicit waivers from any provision of the previous version of our code of ethics.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

PricewaterhouseCoopers Auditores Independentes billed us for the following fees for professional services in 2012 and 2013.

	Year ended December 31,	
	2012	2013
	(US$ thousand)	
Audit fees	9,114	10,438
Audit-related fees	936	295
Other fees		137
Total fees	10,050	10,870

"Audit fees" are the aggregate fees billed by PricewaterhouseCoopers for the audit of our annual financial statements, the audit of the statutory financial statements of our subsidiaries, and reviews of interim financial statements and attestation services that are provided in connection with statutory and regulatory filings or engagements. They also include fees for services that only the independent auditor reasonably can provide, including the provision of comfort letters and consents in connection with statutory and regulatory filings and the review of documents filed with the SEC and other capital markets or local financial reporting regulatory bodies. "Audit-related fees" are fees charged by PricewaterhouseCoopers for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not reported under "Audit fees".

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CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

We expect that KPMG Auditores Independentes ("KPMG") will replace PricewaterhouseCoopers Auditores Independentes as our independent public accountants and will audit our financial statements for the fiscal years starting January 1, 2014. The change in auditors is being made pursuant to a regulation of the CVM that limits the consecutive terms that certain service providers may serve. Because of the limitations set forth in this law, we did not seek to renew PricewaterhouseCoopers' contract when it expired and PricewaterhouseCoopers did not attempt to stand for reelection. The replacement of PricewaterhouseCoopers by KPMG was approved by our Board of Directors and Fiscal Council on November 8, 2013. PricewaterhouseCoopers is engaged as our auditor for the fiscal years ended December 31, 2013 and 2012 until the filing of this Form 20-F with the Securities and Exchange Commission and will perform a limited review of our interim financial statements for the three-month period ended March 31, 2014.

PricewaterhouseCoopers audited our financial statements for the fiscal years ended December 31, 2013 and December 31, 2012. None of the reports of PricewaterhouseCoopers on our financial statements for either of such fiscal years contained an adverse opinion or disclaimer of opinion, or was qualified or modified as to uncertainty, audit scope or accounting principles. During the two most recent fiscal years and through the date hereof, there have been no disagreements with PricewaterhouseCoopers, whether or not resolved, on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which, if not resolved to PricewaterhouseCoopers' satisfaction, would have caused it to make reference to the subject matter of the disagreement in connection with any reports it would have issued, and there were no "reportable events" as that term is defined in Item 16F(a)(1)(v) of Form 20-F. PricewaterhouseCoopers did not audit any of our financial statements for any period subsequent to December 31, 2013.

We have provided PricewaterhouseCoopers with a copy of the foregoing disclosure, and have requested that it furnish us with a letter addressed to the Securities and Exchange Commission stating whether or not it agrees with such disclosure. We are including as Exhibit 15.2 to this Form 20-F a copy of the letter from PricewaterhouseCoopers as required by Item 16F(a)(3) of Form 20-F.

During the fiscal years ended December 31, 2013 and December 31, 2012, we did not consult with KPMG regarding the application of accounting principles to a specific completed or contemplated transaction or regarding the type of audit opinion that might be rendered by KPMG on our financial statements. Further, KPMG did not provide any written or oral advice that was an important factor considered by us in reaching a decision as to any such accounting, auditing or financial reporting or any matter being the subject of disagreement or "reportable event" or any other matter as defined in Item 16F(a)(v) of Form 20-F.

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INFORMATION FILED WITH SECURITIES REGULATORS

We are subject to various information and disclosure requirements in those countries in which our securities are traded, and we file financial statements and other periodic reports with the CVM, BM&FBOVESPA, the SEC, the French securities regulator Autorité des Marchés Financiers, and the HKEx.

Brazil. Vale's Common Shares and Class A Preferred Shares are listed on BM&FBOVESPA in São Paulo, Brazil. As a result, we are subject to the information and disclosure requirements of Brazilian Corporate Law, as amended. We are also subject to the periodic disclosure requirements of CVM rules applicable to listed companies and to BM&FBOVESPA's "Level 1" Corporate Governance Requirements. Our CVM filings are available from the CVM at http://www.cvm.gov.br or from BM&FBOVESPA at http://www.bmfbovespa.com.br. In addition, as with all of our security filings, they may be accessed at our website, http://www.vale.com.

United States. As a result of our ADSs being listed on the New York Stock Exchange, we are subject to the information requirements of the Securities Exchange Act of 1934, as amended, and accordingly file reports and other information with the SEC. Reports and other information filed by us with the SEC may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C., 20549. You can obtain further information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. You may also inspect Vale's reports and other information at the offices of the New York Stock Exchange, 11 Wall Street, New York, New York 10005, on which Vale's ADSs are listed. Our SEC filings are also available to the public from the SEC at http://www.sec.gov. For further information on obtaining copies of Vale's public filings at the New York Stock Exchange, you should call (212) 656-5060.

France. As a result of the admission of the ADSs to listing and trading on NYSE Euronext Paris, we must comply with certain French periodic and ongoing disclosure rules (for example, annual report with audited financial statements and interim financial statements). In general, the Company is deemed to comply with the French periodic and ongoing disclosure rules through its compliance with U.S. disclosure rules.

Hong Kong. As a result of the listing and trading of our HDSs on the HKEx, we must comply with the HKEx Listing Rules, subject to certain waivers granted by the HKEx, including certain periodic and ongoing disclosure rules, such as annual reports with audited financial statements and interim financial statements. In accordance with the HKEx Listing Rules, we upload reports and other information to the website of the HKEx, which are available to the public from the HKEx at http://www.hkexnews.hk.

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EXHIBITS

Exhibit Number	
1	Bylaws of Vale S.A., as amended on May 7, 2013, incorporated by reference to the current report on Form 6-K furnished to the Securities and Exchange Commission on May 8, 2013 (File No. 001-15030)
8	List of subsidiaries
12.1	Certification of Chief Executive Officer of Vale pursuant to Rules 13a-14 and 15d-14 under the Securities Exchange Act of 1934
12.2	Certification of Chief Financial Officer of Vale pursuant to Rules 13a-14 and 15d-14 under the Securities Exchange Act of 1934
13.1	Certification of Chief Executive Officer and Chief Financial Officer of Vale, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1	Consent of PricewaterhouseCoopers
15.2	Letter from PricewaterhouseCoopers required by Item 16F(a)(3)

The amount of long-term debt securities of Vale or its subsidiaries authorized under any individual outstanding agreement does not exceed 10% of Vale's total assets on a consolidated basis. Vale hereby agrees to furnish the SEC, upon its request, a copy of any instruments defining the rights of holders of its long-term debt or of its subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.

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GLOSSARY

Alumina	Aluminum oxide. It is the main component of bauxite, and extracted from bauxite ore in a chemical refining process. It is the principal raw material in the electro-chemical process from which aluminum is produced.
Aluminum	A white metal that is obtained in the electro-chemical process of reducing aluminum oxide.
Anthracite	The hardest coal type, which contains a high percentage of fixed carbon and a low percentage of volatile matter. Anthracite is the highest ranked coal and it contains 90% fixed carbon, more than any other form of coal. Anthracite has a semi-metallic luster and is capable of burning with little smoke. Mainly used for metallurgical purposes.
Austenitic stainless steel	Steel that contains a significant amount of chromium and sufficient nickel to stabilize the austenite microstructure, giving to the steel good formability and ductility and improving its high temperature resistance. They are used in a wide variety of applications, ranging from consumer products to industrial process equipment, as well as for power generation and transportation equipment, kitchen appliances and many other applications where strength, corrosion and high temperature resistance are required.
A$	The Australian dollar.
Bauxite	A rock composed primarily of hydrated aluminum oxides. It is the principal ore of alumina, the raw material from which aluminum is made.
Beneficiation	A variety of processes whereby extracted ore from mining is reduced to particles that can be separated into ore-mineral and waste, the former suitable for further processing or direct use.
CAD	The Canadian dollar.
CFR	Cost and freight. Indicates that all costs related to the transportation of goods up to a named port of destination will be paid by the seller of the goods.
Coal	Coal is a black or brownish-black solid combustible substance formed by the decomposition of vegetable matter without access to air. The rank of coal, which includes anthracite, bituminous coal (both are called hard coal), sub-bituminous coal, and lignite, is based on fixed carbon, volatile matter, and heating value.
Cobalt	Cobalt is a hard, lustrous, silver-gray metal found in ores, and used in the preparation of magnetic, wear-resistant, and high-strength alloys (particularly for jet engines and turbines). Its compounds are also used in the production of inks, paints, catalysts and battery materials.
Coke	Coal that has been processed in a coke oven, for use as a reduction agent in blast furnaces and in foundries for the purposes of transforming iron ore into pig iron.
Coking Coal	See metallurgical coal.
Concentration	Physical, chemical or biological process to increase the grade of the metal or mineral of interest.

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Copper	A reddish brown metallic element. Copper is highly conductive, both thermally and electrically. It is highly malleable and ductile and is easily rolled into sheet and drawn into wire.
Copper anode	Copper anode is a metallic product of the converting stage of smelting process that is cast into blocks and generally contains 99% copper grade, which requires further processing to produce refined copper cathodes.
Copper cathode	Copper plate with purity higher than or equal to 99.9% that is produced by an electrolytic process.
Copper concentrate	Material produced by concentration of copper minerals contained in the copper ore. It is the raw material used in smelters to produce copper metal.
CVM	The *Comissão de Valores Mobiliários (*Brazilian Securities and Exchange Commission).
DRI	Direct reduced iron. Iron ore lumps or pellets converted by the direct reduction process, used mainly as a scrap substitute in electric arc furnace steelmaking.
DWT	Deadweight ton. The measurement unit of a vessel's capacity for cargo, fuel oil, stores and crew, measured in metric tons of 1,000 kg. A vessel's total deadweight is the total weight the vessel can carry when loaded to a particular load line.
Electrowon copper cathode	Refined copper cathode is a metallic product produced by an electrochemical process in which copper is recovered from an electrolyte and plated onto an electrode. Electrowon copper cathodes generally contain 99.99% copper grade.
Embedded derivatives	A financial instrument within a contractual arrangement such as leases, purchase agreements and guarantees. Its function is to modify some or all of the cash flow that would otherwise be required by the contract, such as caps, floors or collars.
Emissions trading	Emissions trading is a market-based scheme for environmental improvement that allows parties to buy and sell permits for emissions or credits for reductions in emissions of certain pollutants.
Fe unit	A measure of the iron grade in the iron ore that is equivalent to 1% iron grade in one metric ton of iron ore.
Ferroalloys	Ferroalloys are alloys of iron that contain one or more other chemical elements. These alloys are used to add these other elements into molten metal, usually in steelmaking. The principal ferroalloys are those of manganese, silicon and chromium.
FOB	Free on board. It indicates that the purchaser pays for shipping, insurance and all the other costs associated with transportation of the goods to their destination.
Gold	A precious metal sometimes found free in nature, but usually found in conjunction with silver, quartz, calcite, lead, tellurium, zinc or copper. It is the most malleable and ductile metal, a good conductor of heat and electricity and unaffected by air and most reagents.
Grade	The proportion of metal or mineral present in ore or any other host material.

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Hard metallurgical coal	Metallurgical coking coal with the required properties to produce a stronger/harder metallurgical coke.
Hematite Ore	Hematite is an iron oxide mineral, but also denotes the high-grade iron ore type within the iron deposits.
Iridium	A dense, hard, brittle, silvery-white transition metal of the platinum family that occurs in natural alloys with platinum or osmium. Iridium is used in high-strength alloys that can withstand high temperatures, primarily in high-temperature apparatus, electrical contacts, and as a hardening agent for platinum.
Iron ore pellets	Agglomerated ultra-fine iron ore particles of a size and quality suitable for particular iron making processes. Our iron ore pellets range in size from 8 mm to 18 mm.
Itabirite ore	Itabirite is a banded iron formation and denotes the low-grade iron ore type within the iron deposits.
Lump ore	Iron ore or manganese ore with the coarsest particle size in the range of 6.35 mm to 50 mm in diameter, but varying slightly between different mines and ores.
Manganese	A hard brittle metallic element found primarily in the minerals pyrolusite, hausmannite and manganite. Manganese is essential to the production of virtually all steels and is important in the production of cast iron.
Metallurgical coal	A bituminous hard coal with a quality that allows the production of coke. Normally used in coke ovens for metallurgical purposes.
Methanol	An alcohol fuel largely used in the production of chemical and plastic compounds.
Mineral deposit(s)	A mineralized body that has been intersected by a sufficient number of closely spaced drill holes and/or underground/surface samples to support sufficient tonnage and grade of metal(s) or mineral(s) of interest to warrant further exploration-development work.
Mineral resource	A concentration or occurrence of minerals of economic interest in such form and quantity that could justify an eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence through drill holes, trenches and/or outcrops. Mineral resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured Resources.
Mtpy	Million metric tons per year.
Nickel	A silvery white metal that takes on a high polish. It is hard, malleable, ductile, somewhat ferromagnetic, and a fair conductor of heat and electricity. It belongs to the iron-cobalt group of metals and is chiefly valuable for the alloys it forms, such as stainless steel and other corrosion-resistant alloys.
Nickel laterite	Deposits are formed by intensive weathering of olivine-rich ultramafic rocks such as dunite, peridotite and komatite.
Nickel limonitic laterite	Type of nickel laterite located at the top of the laterite profile. It consists largely of goethite and contains 1-2% nickel. Also contains concentrations on cobalt.

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Nickel matte	An intermediate smelter product that must be further refined to obtain pure metal.
Nickel pig iron	A low-grade nickel product, made from lateritic ores, suitable primarily for use in stainless steel production. Nickel pig iron typically has a nickel grade of 1.5-6% produced from blast furnaces. Nickel pig iron can also contain chrome, manganese, and impurities such as phosphorus, sulfur and carbon. Low grade ferro-nickel (FeNi) produced in China through electric furnaces is often also referred to as nickel pig iron.
Nickel saprolitic laterite	Type of nickel laterite located at the bottom of the laterite profile and contains on average 1.5-2.5% nickel.
Nickel sulfide	Formed through magmatic processes where nickel combines with sulfur to form a sulfide phase. Pentlandite is the most common nickel sulfide ore mineral mined and often occurs with chalcopyrite, a common copper sulfide mineral.
Ntk	Net ton (the weight of the goods being transported excluding the weight of the wagon) kilometer.
Open-pit mining	Method of extracting rock or minerals from the earth by their removal from an open pit. Open-pit mines for extraction of ore are used when deposits of commercially useful minerals or rock are found near the surface; that is, where the overburden (surface material covering the valuable deposit) is relatively thin or the material of interest is structurally unsuitable for underground mining.
Oxides	Compounds of oxygen with another element. For example, magnetite is an oxide mineral formed by the chemical union of iron with oxygen.
Ozpy	Troy ounces per year.
Palladium	A silver-white metal that is ductile and malleable, used primarily in automobile-emissions control devices, and electrical applications.
PCI	Pulverized coal injection. Type of coal with specific properties ideal for direct injection via the tuyeres of blast furnaces. This type of coal does not require any processing or coke making, and can be directly injected into the blast furnaces, replacing lump cokes to be charged from the top of the blast furnaces.
Pellet feed fines	Ultra-fine iron ore (less than 0.15 mm) generated by mining and grinding. This material is aggregated into iron ore pellets through an agglomeration process.
Pelletizing	Iron ore pelletizing is a process of agglomeration of ultra-fines produced in iron ore exploitation and concentration steps. The three basic stages of the process are: (i) ore preparation (to get the correct fineness); (ii) mixing and balling (additive mixing and ball formation); and (iii) firing (to get ceramic bonding and strength).
PGMs	Platinum group metals. Consist of platinum, palladium, rhodium, ruthenium, osmium and iridium.
Phosphate	A phosphorous compound, which occurs in natural ores and is used as a raw material for primary production of fertilizer nutrients, animal feeds and detergents.
Pig iron	Product of smelting iron ore usually with coke and limestone in a blast furnace.

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Platinum	A dense, precious, grey-white transition metal that is ductile and malleable and occurs in some nickel and copper ores. Platinum is resistant to corrosion and is used primarily in jewelry, and automobile-emissions control devices.
Potash	A potassium chloride compound, chiefly KCl, used as simple fertilizer and in the production of mixture fertilizer.
Precious metals	Metals valued for their color, malleability, and rarity, with a high economic value driven not only by their practical industrial use, but also by their role as investments. The widely-traded precious metals are gold, silver, platinum and palladium.
Primary nickel	Nickel produced directly from mineral ores.
Probable (indicated) reserves	Reserves for which quantity and grade and/or quality are computed from information similar to that used for proven (measured) reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven (measured) reserves, is high enough to assume continuity between points of observation.
Proven (measured) reserves	Reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, working or drill holes; grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established.
Real, *reais* or R$	The official currency of Brazil is the *real* (singular) (plural**:** *reais*).
Reserves	The part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination.
Rhodium	A hard, silvery-white, durable metal that has a high reflectance and is primarily used in combination with platinum for automobile-emission control devices and as an alloying agent for hardening platinum.
ROM	Run-of-mine. Ore in its natural (unprocessed) state, as mined, without having been crushed.
Ruthenium	A hard, white metal that can harden platinum and palladium used to make severe wear-resistant electrical contacts and in other applications in the electronics industry.
Secondary or scrap nickel	Stainless steel or other nickel-containing scrap.
Seaborne market	Comprises the total ore trade between countries using ocean bulk vessels.
Silver	A ductile and malleable metal used in photography, coins and medal fabrication, and in industrial applications.
Sinter feed (also known as fines)	Iron ore fines with particles in the range of 0.15 mm to 6.35 mm in diameter. Suitable for sintering.
Sintering	The agglomeration of sinter feed, binder and other materials, into a coherent mass by heating without melting, to be used as metallic charge into a blast furnace.

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Slabs	The most common type of semi-finished steel. Traditional slabs measure 10 inches thick and 30-85 inches wide (and average 20 feet long), while the output of the recently developed "thin slab" casters is two inches thick. Subsequent to casting, slabs are sent to the hot-strip mill to be rolled into coiled sheet and plate products.
Stainless steel	Alloy steel containing at least 10% chromium and with superior corrosion resistance. It may also contain other elements such as nickel, manganese, niobium, titanium, molybdenum, copper, in order to improve mechanical, thermal properties and service life. It is primarily classified as austenitic (200 and 300 series), ferritic (400 series), martensitic, duplex or precipitation hardening grades.
Stainless steel scrap ratio	The ratio of secondary nickel units (either in the form of nickel-bearing, stainless steel scrap, or in alloy steel, foundry and nickel-based alloy scrap) relative to all nickel units consumed in the manufacture of new stainless steel.
Thermal coal	A type of coal that is suitable for energy generation in thermal power stations.
Tpy	Metric tons per year.
Troy ounce	One troy ounce equals 31.103 grams.
Underground mining	Mineral exploitation in which extraction is carried out beneath the earth's surface.
U.S. dollars or US$	The United States dollar.

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SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

VALE S.A.

By: /s/ MURILO PINTO DE OLIVEIRA FERREIRA

Name: Murilo Pinto de Oliveira Ferreira
Title: Chief Executive Officer

By: /s/ LUCIANO SIANI PIRES

Name: Luciano Siani Pires
Title: Chief Financial Officer

Date: March 27, 2014

Vale S.A.

Index to the Financial Statements

Report of independent registered public accounting firm

To the Board of Directors and Stockholders
Vale S.A.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows present fairly, in all material respects, the financial position of Vale S.A. and its subsidiaries (the "Company") at December 31, 2013, December 31, 2012 and January 1, 2012, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2013 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on criteria established in Internal Control Integrated Framework, 1992 issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 6 to the consolidated financial statements, the Company changed the manner in which it accounts for employee benefits in 2013.

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

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

Rio de Janeiro, February 26, 2014

/s/ PricewaterhouseCoopers Auditores Independentes

CRC 2SP000160/O-5 "F" RJ

/s/ Ivan Michael Clark

Contador CRC 1MG061100/O-3 "S" RJ

Management's Report on Internal Control over Financial Reporting

The management of Vale S.A (Vale) is responsible for establishing and maintaining adequate internal control over financial reporting.

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

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

Vale's management has assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2013 based on the criteria established in Internal Control Integrated Framework 1992 issued by the Committee of Sponsoring Organizations of the Treadway Commission COSO. Based on such assessment and criteria, Vale's management has concluded that the company's internal control over financial reporting was effective as of December 31, 2013.

The effectiveness of the company's internal control over financial reporting as of December 31, 2013 has been audited by PricewaterhouseCoopers Auditores Independentes, an independent registered public accounting firm, as stated in their report which appears herein.

February 26th, 2014

/s/ Murilo Ferreira

Chief Executive Officer

/s/ Luciano Siani

Chief Financial Officer and Investors Relations

Consolidated Balance Sheet
In millions of United States Dollars

	Notes	December 31, 2013	December 31, 2012 (i)	January 1, 2012 (i)
Assets				
Current assets				
Cash and cash equivalents	9	5,321	5,832	3,531
Short-term investments		3	246	
Derivative financial instruments	25	201	281	595
Accounts receivable	10	5,703	6,795	8,505
Related parties	32	261	384	82
Inventories	11	4,125	5,052	5,251
Prepaid income taxes		2,375	720	464
Recoverable taxes	12	1,579	1,540	1,771
Advances to suppliers		125	256	393
Others		918	963	946
		20,611	**22,069**	**21,538**
Non-current assets held for sale and discontinued operation	7	3,766	457	
		24,377	**22,526**	**21,538**
Non-current assets				
Related parties	32	108	408	509
Loans and financing agreements receivable		241	246	210
Judicial deposits	19	1,490	1,515	1,464
Recoverable income taxes		384	440	336
Deferred income taxes	21	4,523	4,053	1,909
Recoverable taxes	12	285	218	258
Derivative financial instruments	25	140	45	60
Deposit on incentive and reinvestment		191	160	229
Others		738	489	527
		8,100	**7,574**	**5,502**
Investments	13	3,584	6,384	8,013
Intangible assets, net	14	6,871	9,211	9,521
Property, plant and equipment, net	15	81,665	84,882	82,342
		100,220	**108,051**	**105,378**
Total		**124,597**	**130,577**	**126,916**

(i) Recast according to Note 6.

Consolidated Balance Sheet (Continued)
In millions of United States Dollars

	Notes	December 31, 2013	December 31, 2012 (i)	January 1, 2012 (i)
Liabilities				
Current liabilities				
Suppliers and contractors		3,772	4,529	4,814
Payroll and related charges		1,386	1,481	1,307
Derivative financial instruments	25	238	347	73
Loans and financing	17	1,775	3,471	1,517
Related parties	32	205	207	24
Income Taxes Settlement Program	19 and 20	470		
Taxes and royalties payable		327	324	524
Provision for income taxes		378	641	507
Employee postretirement obligations	22	97	205	169
Asset retirement obligations	18	96	70	73
Dividends and interest on capital				1,181
Others		420	1,127	904
		9,164	**12,402**	**11,093**
Liabilities directly associated with non-current assets held for sale and discontinued operation	7	448	169	
		9,612	**12,571**	**11,093**
Non-current liabilities				
Derivative financial instruments	25	1,492	783	663
Loans and financing	17	27,670	26,799	21,538
Related parties	32	5	72	91
Employee postretirement obligations	22	2,198	3,310	2,477
Provisions for litigation	19	1,276	2,065	1,686
Income Taxes Settlement Program	19 and 20	6,507		
Deferred income taxes	21	3,228	3,427	5,465
Asset retirement obligations	18	2,548	2,678	1,849
Stockholders' Debentures	31(d)	1,775	1,653	1,336
Redeemable noncontrolling interest		276	487	505
Goldstream transaction	30	1,497		
Others		1,577	1,905	2,398
		50,049	**43,179**	**38,008**
Total liabilities		**59,661**	**55,750**	**49,101**
Stockholders' equity	26			
Preferred class A stock 7,200,000,000 no-par-value shares authorized and 2,108,579,618 (2,108,579,618 in 2012 and		22,907	22,907	22,907

2,108,579,618 in 2011) issued			
Common stock 3,600,000,000 no-par-value shares authorized and 3,256,724,482 (3,256,724,482 in 2012 and 3,256,724,482 in 2011) issued	37,671	37,671	37,671
Mandatorily convertible notes common shares			191
Mandatorily convertible notes preferred shares			422
Treasury stock 140,857,692 (140,857,692 in 2012 and 181,099,814 in 2011) preferred and 71,071,482 (71,071,482 in 2012 and 86,911,207 in 2011) common shares	(4,477)	(4,477)	(5,662)
Results from operations with noncontrolling stockholders	(400)	(400)	7
Results on conversion of shares	(152)	(152)	
Unrealized fair value gain (losses)	(1,202)	(2,044)	(753)
Cumulative translation adjustments	(20,588)	(18,663)	(20,411)
Retained earnings and revenue reserves	29,566	38,397	41,728
Total company stockholders' equity	**63,325**	**73,239**	**76,100**
Noncontrolling interests	1,611	1,588	1,715
Total stockholders' equity	**64,936**	**74,827**	**77,815**
Total liabilities and stockholders' equity	**124,597**	**130,577**	**126,916**

(i) Recast according to Note 6.

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Income
In millions of United States Dollars, except as otherwise stated

	Notes	Year ended as at December 31, 2013	2012 (i)	2011 (i)
Continued operations				
Net operating revenue	27	46,767	46,553	60,075
Cost of goods sold and services rendered	28	(24,245)	(25,390)	(24,528)
Gross profit		**22,522**	**21,163**	**35,547**
Operating (expenses) income				
Selling and administrative expenses	28	(1,302)	(2,172)	(2,271)
Research and evaluation expenses		(801)	(1,465)	(1,671)
Pre operating and stoppage operation		(1,859)	(1,592)	(1,293)
Other operating expenses, net	28	(984)	(1,996)	(1,482)
		(4,946)	**(7,225)**	**(6,717)**
Impairment of non-current assets	16	(2,298)	(4,023)	
Gain (loss) on measurement or sales of non-current assets	8	(215)	(506)	1,494
Operating income		**15,063**	**9,409**	**30,324**
Financial income	29	2,699	1,595	1,890
Financial expenses	29	(11,031)	(5,617)	(5,439)
Equity results from associates and joint controlled entities	13	469	645	1,138
Results on sale investments from associates and joint controlled entities	8	41		
Impairment of investment	16		(1,941)	
Net income before income taxes		**7,241**	**4,091**	**27,913**
Income taxes	21			
Current tax		(7,786)	(2,503)	(5,539)
Deferred tax		953	3,677	274
		(6,833)	**1,174**	**(5,265)**
Income from continuing operations		**408**	**5,265**	**22,648**
Loss attributable to noncontrolling interests		(178)	(257)	(233)
Net income attributable to the Company's stockholders		**586**	**5,522**	**22,881**

Discontinued Operations	7			
Loss from discontinued operations		(2)	(68)	(86)
Loss attributable to the Company's stockholders		**(2)**	**(68)**	**(86)**
Net income		**406**	**5,197**	**22,562**
Loss attributable to noncontrolling interests		(178)	(257)	(233)
Net income attributable to the Company's stockholders		**584**	**5,454**	**22,795**
Earnings per share attributable to the Company's stockholders:	26e)			
Basic and diluted earnings per share:				
Common share		0.11	1.06	4.34
Preferred share		0.11	1.06	4.34

(i) Recast according to Note 6.

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Other Comprehensive Income
In millions of United States Dollars

	Year ended as at December 31,		
	2013	2012	2011
		(i)	(i)
Net income	**406**	**5,197**	**22,562**
Other comprehensive income			
Item that will not be reclassified subsequently to income			
Cumulative translation adjustments	**(9,830)**	**(7,695)**	**(9,849)**
Retirement benefit obligations			
Gross balance as of the year	914	(929)	(472)
Effect of tax	(284)	274	139
	630	**(655)**	**(333)**
Total items that will not be reclassified subsequently to income	**(9,200)**	**(8,350)**	**(10,182)**
Item that will be reclassified subsequently to income			
Cumulative translation adjustments			
Gross balance as of the year	2,822	5,290	5,322
Transfer results realized to the net income	435	117	
	3,257	**5,407**	**5,322**
Unrealized results on available-for-sale investments			
Gross balance as of the year	193	(1)	3
Transfer results realized to the net income	(194)		
	(1)	**(1)**	**3**
Cash flow hedge			
Gross balance as of the year	(103)	34	216
Effect of tax	12	(8)	11
Transfer results realized to the net income, net of taxes	40	(147)	(98)
	(51)	**(121)**	**129**
Total of items that will be reclassified subsequently to income	**3,205**	**5,285**	**5,454**
Total other comprehensive income	**(5,589)**	**2,132**	**17,834**

Other comprehensive income attributable to noncontrolling interests	(175)	(223)	(308)
Other comprehensive income attributable to the Company's stockholders	(5,414)	2,355	18,142
	(5,589)	**2,132**	**17,834**

(i) Recast according to Note 6.

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Changes in Stockholder's Equity

In millions of United States Dollars

	Capital	Results on conversion of shares	Mandatorily convertible notes	Results from operation with noncontrolling stockholders	Revenue reserves	Treasury stock	Unrealized fair value gain (losses)	Cumulative translation adjustments	Retained earnings	Total Company stockholder's equity	Noncontrolling stockholders' interests	Total stockholder equity
cember 31, 2010	**45,266**	**1,002**	**764**	**411**	**43,504**	**(2,660)**	**(15)**	**(20,963)**		**67,309**	**2,515**	**69,824**
anges in accounting icies (Note 6)							(642)	263	(93)	(472)		(472)
nuary 1, 2011(i)	**45,266**	**1,002**	**764**	**411**	**43,504**	**(2,660)**	**(657)**	**(20,700)**	**(93)**	**66,837**	**2,515**	**69,352**
t income									**22,795**	**22,795**	**(233)**	**22,562**
her comprehensive ome:												
irement benefit igations							(333)			(333)		(333)
sh flow hedge							128			128	1	129
realized fair value ults							3			3		3
nslation adjustments					(2,778)		106	289	(2,068)	(4,451)	(76)	(4,527)
ntribution and tribution stockholders:												
quisitions and disposal noncontrolling ckholders				(404)						(404)	(625)	(1,029)
ditional remuneration mandatorily convertible es			(151)							(151)		(151)
pitalization of ncontrolling ckholders advances											31	31
pitalization of reserves	15,312	(1,002)			(14,310)							
purchases of stock						(3,002)				(3,002)		(3,002)
deemable noncontrolling ckholders' interest											207	207
vidends to ncontrolling ckholders											(105)	(105)
vidends and interest on ital to Company's ckholders									(5,322)	(5,322)		(5,322)
propriation to distributed retained nings					15,389				(15,389)			
cember 31, 2011(i)	**60,578**		**613**	**7**	**41,805**	**(5,662)**	**(753)**	**(20,411)**	**(77)**	**76,100**	**1,715**	**77,815**
t income									**5,454**	**5,454**	**(257)**	**5,197**

her comprehensive ome:							
irement benefit igations		(655)			(655)		(655)
sh flow hedge		(121)			(121)		(121)
realized fair value ults		(1)			(1)		(1)
nslation adjustments	(3,585)	(26)	1,748	(459)	(2,322)	34	(2,288)

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Changes in Stockholder's Equity (Continued)

In millions of United States Dollars

	Capital	Results on conversion of shares	Mandatorily convertible notes	Results from operation with noncontrolling stockholders	Revenue reserves	Treasury stock	Unrealized fair value gain (losses)	Cumulative translation adjustments	Retained earnings	Total Company stockholder's equity	Noncontrolling stockholders's interests	Total stockholder equity
ontribution and stribution stockholders:												
equisitions and disposal noncontrolling ockholders				(407)						(407)	(54)	(461)
dditional remuneration r mandatorily convertible tes			(68)							(68)		(68)
apitalization of ncontrolling ockholders advances											43	43
ealization of reserves					(362)				362			
esults on conversion of ares		(152)	(545)			1,185	(488)					
edeemable noncontrolling ockholders' erest											181	181
vidends to ncontrolling ockholders											(74)	(74)
vidends and interest on pital to Company's ockholders									(4,741)	(4,741)		(4,741)
ppropriation to distributed retained rnings					531				(531)			
ecember 31, 2012(i)	**60,578**	**(152)**		**(400)**	**38,389**	**(4,477)**	**(2,044)**	**(18,663)**	**8**	**73,239**	**1,588**	**74,827**
et income									**584**	**584**	**(178)**	**406**
ther comprehensive come:												
etirement benefit ligations							630			630		630
sh flow hedge							(51)			(51)		(51)
nrealized fair value sults							(1)			(1)		(1)
anslation adjustments					(4,901)		264	(1,925)	(14)	(6,576)	3	(6,573)
ontribution and stribution stockholders:												
apitalization of ncontrolling ockholders advances											78	78
ealization of reserves					(3,936)				3,936			
edeemable noncontrolling ockholders' erest											211	211
vidends to ncontrolling ockholders											(91)	(91)

vidends and interest on pital to Company's ockholders								(4,500)	(4,500)		(4,500)
ppropriation to distributed retained rnings				14				(14)			
ecember 31, 2013	**60,578**	**(152)**	**(400)**	**29,566**	**(4,477)**	**(1,202)**	**(20,588)**		**63,325**	**1,611**	**64,936**

(i) Recast according to Note 6.

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Cash Flows
In millions of United States Dollars

	Year ended as at December 31,		
	2013	**2012**	**2011**
		(i)	**(i)**
Cash flow from operating activities:			
Net income from continuing operations	408	5,265	22,648
Adjustments to reconcile net income with cash from continuing operations			
Equity results from associates and joint venture	(469)	(645)	(1,138)
Loss (gain) on measurement or sales of non-current assets	215	506	(1,494)
Results on sale investments from associates and joint controlled entities	(41)		
Loss on disposal of property, plant and equipment	508	197	189
Impairment on non-current assets	2,298	5,964	
Depreciation, amortization and depletion	4,150	4,155	3,836
Deferred income taxes	(953)	(3,677)	(274)
Foreign exchange and indexation, net	724	1,314	3,178
Unrealized derivative losses, net	791	613	490
Stockholders' Debentures	368	109	210
Other	74	(452)	(122)
Decrease (increase) in assets:			
Accounts receivable	608	1,951	(768)
Inventories	346	(675)	(1,562)
Recoverable taxes	(2,405)	229	(560)
Other	(132)	537	(288)
Increase (decrease) in liabilities:			
Suppliers and contractors	(124)	(229)	1,068
Payroll and related charges	59	170	263
Taxes and contributions	843	(163)	(2,490)
Gold stream transaction	1,319		
Income taxes settlement program	7,030		
Other	(1,075)	552	20
Net cash provided by operating activities from continuing operations	**14,542**	**15,721**	**23,206**
Net cash provided by operating activities from discontinued operations	250	414	252
Net cash provided by operating activities	**14,792**	**16,135**	**23,458**
Cash flow from continuing investing activities:			
Short-term investments	357	(246)	1,793
Loans and advances	(14)	293	(178)
Guarantees and deposits	(147)	(135)	(169)
Additions to investments	(378)	(474)	(504)
Additions to property, plant and equipment and intangible	(13,105)	(15,322)	(15,862)
Dividends and interest on capital received from associates and joint venture	834	460	1,038
Proceeds from disposal of assets\ Investments	2,030	974	1,081
Proceeds from Gold stream transaction	581		
Net cash used in investing activities from continuing operations	**(9,842)**	**(14,450)**	**(12,801)**
Net cash used in investing activities from discontinued operations	(766)	(437)	(230)
Net cash used in investing activities	**(10,608)**	**(14,887)**	**(13,031)**

Consolidated Statement of Cash Flows (Continued)
In millions of United States Dollars

	Year ended as at December 31,		
	2013	**2012**	**2011**
		(i)	**(i)**
Cash flow from continuing financing activities:			
Financial institutions Loans and financing			
Additions	3,310	9,333	2,442
Repayments	(3,347)	(1,712)	(3,577)
Repayments to stockholders:			
Dividends and interest on capital paid to stockholders	(4,500)	(6,000)	(9,000)
Dividends and interest on capital attributed to noncontrolling interest	(20)	(45)	(100)
Transactions with noncontrolling stockholders		(411)	(1,134)
Treasury stock			(3,002)
Net cash provided by (used in) financing activities from continuing operations	**(4,557)**	**1,165**	**(14,371)**
Net cash used in financing activities from discontinued operations	87		
Net cash provided by (used in) used in financing activities	**(4,470)**	**1,165**	**(14,371)**
Increase in cash and cash equivalents	(286)	2,413	(3,944)
Cash and cash equivalents of cash, beginning of the year	5,832	3,531	7,584
Effect of exchange rate changes on cash and cash equivalents	(225)	(112)	(109)
Cash and cash equivalents, end of the year	**5,321**	**5,832**	**3,531**
Cash paid during the year for (ii):			
Interest on Loans and financing	(1,535)	(1,316)	(1,146)
Income taxes	(2,405)	(1,238)	(7,293)
Income taxes settlement program	(2,594)		
Non-cash transactions:			
Additions to property, plant and equipment interest capitalization	235	335	234
Additions to property, plant and equipment Costs of assets retirement obligations	190	299	197
Additions to investments			3,817

(i) Recast according to Note 6.

(ii) Amounts paid are classified as cash flows from operating activities.

The accompanying notes are an integral part of these financial statements.

Notes to Consolidated Financial Statements

Expressed in millions of United States Dollars, unless otherwise stated

1. Operational Context

Vale S.A. (the "Parent Company") is a public limited liability company headquartered at 26, Av. Graça Aranha, Rio de Janeiro, Brazil with securities traded on the Brazilian ("BM&F BOVESPA"), New York ("NYSE"), Paris ("NYSE Euronext") and Hong Kong ("HKEx") stock exchanges.

Vale S.A. and its direct and indirect subsidiaries ("Vale", "Group", "Company" or "we") are principally engaged in the research, production and sale of iron ore and pellets, nickel, fertilizer, copper, coal, manganese, ferroalloys, cobalt, platinum group metals and precious metals. The Company also operates in the segments of energy and steel. The information by segment is presented in Note 27.

Our principal consolidated operating subsidiaries at December 31, 2013 were as follow:

Entities	% ownership	% voting capital	Location	Principal activity
Compañia Minera Miski Mayo S.A.C	40.00	51.00	Peru	Fertilizers
Mineração Corumbaense Reunida S.A.	100.00	100.00	Brazil	Iron ore and Manganese
PT Vale Indonesia Tbk	59.20	59.20	Indonesia	Nickel
Salobo Metais S.A.	100.00	100.00	Brazil	Copper
Vale Australia Pty Ltd.	100.00	100.00	Australia	Coal
Vale Canada Limited	100.00	100.00	Canada	Nickel
Vale Fertilizantes S.A.	100.00	100.00	Brazil	Fertilizers
Vale International Holdings GmbH	100.00	100.00	Austria	Holding and Research
Vale International S.A.	100.00	100.00	Switzerland	Trading
Vale Manganês S.A.	100.00	100.00	Brazil	Manganese and Ferroalloys
Vale Mina do Azul S.A.	100.00	100.00	Brazil	Manganese
Vale Moçambique S.A.	95.00	95.00	Mozambique	Coal
Vale Nouvelle-Calédonie SAS	80.50	80.50	New Caledonia	Nickel
Vale Oman Pelletizing Company LLC	70.00	70.00	Oman	Pellet
Vale Shipping Holding PTE Ltd.	100.00	100.00	Singapore	Logistics of iron ore

As explained in Note 7, the Company is discontinuing its General Cargo Logistic segment, which includes the following entities:

Entities	% ownership	% voting capital	Location
Ferrovia Centro-Atlântica S. A.	100.00	100.00	Brazil
Ferrovia Norte Sul S.A.	100.00	100.00	Brazil
VLI Multimodal S.A.	100.00	100.00	Brazil
VLI Operações de Terminais S.A.	100.00	100.00	Brazil
VLI Operações Portuárias S.A.	100.00	100.00	Brazil
VLI Participações S.A.	100.00	100.00	Brazil
VLI S.A.	100.00	100.00	Brazil
Ultrafértil S.A	100.00	100.00	Brazil
TUF Empreendimentos e Participações S.A.	100.00	100.00	Brazil
SL Serviços Logísticos S.A.	100.00	100.00	Brazil

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates

a) Basis of preparation

Consolidated financial statements of the Company ("Financial Statements") have been prepared in accordance with the International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

Financial statements have been prepared under the historical cost convention as adjusted to reflect: (i) the fair value of held for trade financial instruments measured at fair value through Statement of Income and available for sale financial instruments measured at fair value through Statement of Comprehensive Income; and (ii) the impairment loss.

We evaluated subsequent events through February 26, 2014, which was the date of the Financial statement were approved by the Board of Directors.

b) Functional currency and presentation currency

Financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ("functional currency"), which in the case of the Parent Company is the Brazilian Real ("BRL" or "R$"). For presentation purposes, these financial statements are presented in United States Dollars ("USD" or "US$") as we understand this is how our international investors are used to analyze our financial statements in order to take their decisions.

Operations in other currencies are translated into the functional currency of each entity using the actual exchange rates in force on the respective transactions dates. The foreign exchange gains and losses resulting from the translation at the exchange rates in force at the end of the year are recognized in the Statement of Income as financial expense or income. The exceptions are transactions for which gains and losses are recognized in the Statement of Comprehensive Income.

Statement of Income and Balance Sheet of all Group entities whose functional currency is different from the presentation currency are translated into the presentation currency as follows: (i) Assets, liabilities and Stockholders' equity (except components described in item (iii)) for each Balance Sheet presented are translated at the closing rate at the Balance Sheet date; (ii) income and expenses for each Statement of Income are translated at the average exchange rates, except for specific transactions that, considering their significance, are translated at the rate at the dates of the transactions and; (iii) capital, capital reserves and treasury stock are translated at the rate at the dates of each transaction. All resulting exchange differences are recognized in a separate component of the Statement of Comprehensive Income, the "Cumulative Translation Adjustment" account, and subsequently transferred to the Statement of Income when the assets are realized.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

The exchange rates of the major currencies that impact our operations against the functional currency were:

	Exchange rates used for conversions in Brazilian Reais		
	Year ended as at December 31,		
	2013	2012	2011
US Dollar US$	2.3426	2.0435	1.8683
Canadian Dollar CAD	2.2031	2.0546	1.8313
Australian Dollar AUD	2.0941	2.1197	1.9092
Euro EUR or €	3.2265	2.6954	2.4165

c) Consolidation and investments

Financial statements reflect balances of assets and liabilities and the transactions of the Parent Company and its direct and indirect controlled entities ("Subsidiaries"), eliminating intercompany transactions. Subsidiaries over which control is achieved through other means, such as stockholders agreement, are also consolidated even if the Company does not own a majority of the voting capital.

For entities over which the Company has joint control ("Joint Ventures") or significant influence, but not control ("Associates"), the investments are measured using the equity method.

The accounting practices of subsidiaries, joint ventures and associated companies are set to ensure consistency with the policies adopted by the Parent Company. Transactions between consolidated companies, as well as balances, unrealized profits and losses on these transactions are eliminated. Unrealized gains on downstream or upstream transactions between the Company and its associates and joint ventures are eliminated fully or proportionately to the extent of the Company.

We evaluate the carrying values of our equity investments with reference to the publicly quoted market prices when available. If the quoted market price is lower than book value and this decline is considered other than temporary, we will write-down our equity investments to the level of the quoted market value.

For interests in joint arrangements operations ("joint operations"), Vale recognizes its share of assets, liabilities and transactions.

d) Business combinations

When Vale acquires control over an entity, the identifiable assets acquired the liabilities and contingent liabilities assumed and the noncontrolling stockholders' interests recognized are measured initially at their fair values as at the acquisition date.

The excess of the consideration transferred plus the fair value of assets acquired the liabilities and contingent liabilities assumed and the noncontrolling stockholders' interests recognized is recorded as goodwill, which is allocated to each cash-generating unit acquired.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

e) Noncontrolling stockholders' interests

Investments held by investors in entities controlled by Vale are classified as noncontrolling stockholders' interests. The Company treats transactions with noncontrolling stockholders' interests as transactions with equity owners of the Group.

For purchases of noncontrolling stockholders' interests, the difference between any consideration paid and the portion acquired of the carrying value of net assets of the subsidiary is recorded in stockholders' equity. Gains or losses, on disposals of noncontrolling stockholders' interest, are also recorded in stockholders' equity.

When the Company ceases to hold control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in the carrying amount recognized in the Statement of Income. Any amounts previously recognized in Gain/ (loss) from operations with noncontrolling stockholders' interests relating to that entity are accounted for as if the Group had directly sold the related assets or liabilities. This means that the amounts previously recognized in Gain/ (loss) from operations with noncontrolling stockholders' interests are reclassified to the Statement of Income.

f) Segment information and revenues by geographic area

The Company discloses information by business segment and revenue by geographic unit, in accordance with the principles and concepts used by the chief operating decision makers in evaluating performance and allocating resources. The information is analyzed by operating segment as follows:

Bulk Material Includes the extraction of iron ore and pellet production and logistic (including railroads, ports and terminals) linked to bulk material mining operations. The manganese ore, ferroalloys and coal are also included in this segment.

Base metals Includes the production of non-ferrous minerals, including nickel operations (co-products and by-products) and copper.

Fertilizers Includes three major groups of nutrients: potash, phosphate and nitrogen.

General Cargo Logistics comprises the logistics services provided to third parties (including rail, port and shipping service) not linked to the other Vale Operating Segments. Assets and liabilities related to this segment are classified as assets and liabilities held for sale and discontinued operations (Note 7).

Other comprises sales and expenses of other products and investments in joint ventures and associate in other businesses.

g) Current and non-current assets or liabilities

We classify assets and liabilities as current when it expects to realize the assets or to settle the liabilities, within twelve months from the end of the reporting period. Others assets and liabilities are classified as non-current.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

h) Cash equivalents and short-term investments

The amounts recorded as cash and cash equivalents correspond to the amount available in cash, bank deposits and short-term investments that have immediate liquidity and original maturities within three months. Other investments with maturities after three months are recognized at fair value through income and presented in short-term investments.

i) Accounts receivables

Account receivables are financial instruments classified in the category Loan and Receivables and represent the total amount due from sale of products and services rendered by the Company. The receivables are initially recognized at fair value and subsequently measured at amortized cost, net of impairment losses, when applicable.

j) Inventories

Inventory of products is stated at the lower of the average cost of acquisition or production and the net realizable value. The inventory production cost is determined on the basis of variable and fixed costs, direct and indirect costs of production, using the average cost method. An allowance for losses on obsolete or slow-moving inventory is recognized.

Ore Piles are counted as processed when the ore is extracted from the mine. The cost of the finished product is composed of depreciation and any direct cost required converting ore heaps finished products.

Inventory of maintenance supplies are measured at the lower of cost and net realizable value and, where applicable, an estimate of losses on obsolete or slow-moving inventory is recognized.

k) Non-current assets and liabilities held for sale

When the Company is committed to a sale plan of a set of assets and liabilities available for immediate disposal, these assets and liabilities are classified as Non-current Assets and Liabilities held for sale. If this group of assets and liabilities represent a major line of business are classified as discontinued operations.

The non-current assets and liabilities held for sale and discontinued operations are recognized in current, separate from the other assets and liabilities being measured at the lower of carrying amount and fair value less costs to sell.

Discontinued operations transactions are presented separately from the balances of Company's continuing operations in Statement of Income, Statement of Comprehensive Income and Statement of Cash Flows.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

l) Stripping Costs

The cost associated with the removal of overburden and other waste materials ("stripping costs") incurred during the development of mines, before production takes place, are capitalized as part of the depreciable cost of developing the mining property. These costs are subsequently amortized over the useful life of the mine.

Post-production stripping costs are included in the cost of inventory, except when a new project is developed to permit access to a significant body of ore. In such cases, the cost is capitalized as a non-current asset and is amortized during the extraction of the body of ore, and amortized during the useful life of the body of ore.

Stripping costs are measured at fixed and variable costs directly and indirectly attributable to its removal and, when applicable, net of any impairment losses measured in same basis adopted for the cash generating unit which he is part.

m) Intangible assets

Intangible assets are evaluated at the acquisition cost, less accumulated amortization and impairment losses, when applicable.

Intangible assets with finite useful lives are amortized over their effective use and are tested for impairment whenever there is an indication that the asset may be devalued. Assets with indefinite useful lives are not amortized and are tested for impairment at least annually.

Company holds concessions to exploit railway assets over a certain period of time. Railways are classified as intangible assets and amortized over the shorter of their useful lives and the concession term at the end of which they will be returned to the government.

Intangible assets acquired in a business combination are recognized separately from goodwill.

n) Property, plant and equipment

Property, plant and equipment are evaluated at cost of acquisition or construction, less accumulated amortization and impairment losses, when applicable.

The cost of mining assets developed internally are determined by direct and indirect costs attributed to building the mining plant, financial charges incurred during the construction period, depreciation of other fixed assets used into building, estimated decommissioning and site restoration expenses and other capitalized expenditures occurred during the development phase (phase when the project proves generator of economic benefit and the Company have ability and intention to complete the project).

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

The depletion of mineral assets is determined based on the ratio between production and total proven and probable mineral reserves. Property, plant and equipment are depreciated using the straight-line method based on the estimated useful lives, from the date on which the assets become available for their intended use, except for land which is not depreciated. Following estimated useful lives:

Property, plant and equipment	Useful lives
Buildings	between 15 and 50 years
Installations	between 8 and 50 years
Equipment	between 3 and 33 years
Computer Equipment	5 years
Mineral rights	production
Locomotives	between 12.5 and 25 years
Wagon	between 33 and 44 years
Railway equipment	between 5 and 50 years
Ships	between 5 and 20 years
Other	between 2 and 50 years

The residual values and useful lives of assets are reviewed and adjusted, if necessary, at the end of each fiscal year.

Significant industrial maintenance costs, including spare parts, assembly services, and others, are recorded in property, plant and equipment and depreciated through the next programmed maintenance overhaul.

o) Research and evaluation

i. Expenditures on mining research

Expenditure on mining research is considered operating expenses until the effective proof of the economic feasibility of commercial exploration of a given field. From then on, the expenditures incurred are capitalized as mine development costs.

ii. Expenditures on feasibility studies and new technologies and others research

Vale also conducts feasibility study for many whose business which we operates and researching new technologies to optimize the mining process. After proven to generate future benefits to the Company, the expenditures incurred are capitalized.

p) Impairment of assets

The Company assesses, at each reporting date whether there is evidence that the carrying amount of financial assets measured through amortized cost and long-live non-financial asset, should be impaired.

For financial assets measured through amortized cost, Vale compares the carrying amount with the expected cash flows of the asset, and when appropriate, the carrying value is adjusted to reflect the present value of future cash flows.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

For long-live non-financial assets (such as intangible or property plant and equipment), when impairment indication are identified, the test is conducted by comparing the recoverable value of these assets grouped at the lowest levels for which there are separately identifiable cash flows of the cash-generating unit to which the asset belongs to their carrying amount. If we identify the need for adjustment, it is consistently appropriate to each asset's cash-generating unit. The recoverable amount is the higher of value in use and fair value less costs to sell.

The Company determines its cash flows based on approved budgets, considering mineral reserves and mineral resources calculated by internal experts, costs and investments based on the best estimate of past performance, sale prices consistent with the projections used in reports published by industry considering the market price when available and appropriate. Cash flows used are designed based on the life of each cash-generating unit (consumption of reserve units in the case of minerals) and considering discount rates that reflect specific risks relating to the relevant assets in each cash-generating unit, depending on their composition and location.

For investments in affiliated companies with publicly traded stock, Vale assesses recoverability of assets when there is prolonged or significant decline in market value. The balance of their investments is compared in relation to the market value of the shares, when available. If the market value is less than the carrying value of investments, and the decrease is considered prolonged and significant, the Company performs the adjustment of the investment to the realizable value quoted in the market.

Regardless the indication of impairment of its carrying value, goodwill balances arising from business combinations, intangible assets with indefinite useful lives and lands are tested for impairment at least once a year.

q) Accounts payable to suppliers and contractors

Accounts payable to suppliers and contractors are obligations to pay for goods and services that were acquired in the ordinary course of business. They are initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method.

r) Loans and financing

Loans and Financing are initially measured at fair value, net of transaction costs incurred and are subsequently carried at amortized cost and updated using the effective interest rate method. Any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the Statement of Income over the period of the loan, using the effective interest rate method. The fees paid in obtaining the loan are recognized as transaction costs.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

Note mandatory convertible into preferred of common stock are compound financial instruments issued by the Company which include financial liability (debt) components and Stockholders' equity. The liability component of a compound financial instrument is initially recognized at fair value that is determined using discounted cash flow, considering the interest rate market for a non-convertible debt instrument with similar characteristics (period, value, credit risk). After initial recognition, the liability component of a compound financial instrument is measured at amortized cost using the effective interest rate method. The Stockholders' equity component is recognized as the difference between the total values received by the Company from the issue of the securities, and the initially recognized amount of the liability component. Following initial recognition, the equity component of a compound financial instrument is not remeasured until its conversion.

s) Leases

The Company classifies its contracts as finance leases or operating leases based on the substance of the contract as to whether it is linked to the transfer of substantially all risks and benefits of the assets ownership to the Company during their useful life.

For finance leases, the lower of the fair value of the leased asset and the present value of minimum lease payments is recorded in tangible fixed assets and the corresponding obligation recorded in liabilities. For operating leases, payments are recognized on a straight line basis during the term of the contract as a cost or expense in the Statement of Income.

t) Provisions

Provisions are recognized only when there is a present obligation (legal or constructive) resulting from a past event, and it is probable that the settlement of this obligation will result in an outflow of resources, and the amount of the obligation cam be reasonably estimated. Provisions are reviewed and adjusted to reflect the current best estimate at the end of each reporting period. Provisions are measured at the present value of the expenditure expected to be required to settle an obligation using a pre-tax rate, which reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the obligation due to the passage of time is recognized as interest expense.

i. Provision for asset retirement obligations

The provision made by the Company refers basically to costs in order to mine closure, with the completion of mining activities and decommissioning of assets related to mine. The provision is set initially recording a liability for long-term return on fixed asset item. The long-term liability is subsequently measured using a long-term discount rate recorded at Statement of income, as financial expenses until start payment or contraction of obligation related to mine closure and decommissioning of assets mining. Assets retirement obligation are depreciated in same basis over assets mining and recorded at Statement of income.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

ii. Provision for litigation

The provision refers to litigation and fines incurred by the Company. The obligation is recognized when it is considered probable and can be measured with reasonable certainty. The accounting counterpart for the obligation is an expense in Statement of Income. This obligation is updated according to the evolution of the judicial process or interest incurred and can be reversed if the estimate of loss is not probable or settled when the obligation is paid.

u) Employee benefits

i. Current benefits wages, vacations and related taxes

Payments of benefits such as wages, vacation past due or accrued vacation, as well the related social security taxes over those benefits, are recognized monthly in income, on an accruals basis.

ii. Current benefits profit sharing

The Company has an overall corporate performance-based profit sharing policy, based on the achievement of the Company is whole, specific areas as well as employees individual performance goals. The Company recognizes provision based on the recurring measurement of the compliance with goals, using the accrual basis and recognition of present obligation arising from past events in the estimated outflow of resources in the future. The counter entry of the provision is recorded as cost of sales or service rendered or operating expenses in accordance with the activity of each employee.

iii. Non-current benefits non-current incentive

The Company has established a procedure for awarding certain eligible executives (Matching Plan and Long-Term Incentive Plan ILP) with the goal of encouraging employee retention and optimum performance. The Matching Plan establishes that these executives eligible for the plan are entitled to a specific number of preferred class A stocks of the Company, and shall be entitled at the end of three years to a cash sum corresponding to the market value of the shares lot initially linked by the executives, provided that they are under the ownership of executives throughout the entirety of the period. As well as matching, the ILP provides at the end of three years the payment in the amount equivalent to a certain number of shares based on the assessment of the executives' performance and the Company's results in relation to a group of companies of similar size (per group). Plan liabilities are measured at each reporting date, at their fair values, based on market prices. Obligations are measured at each reporting date, at fair values based on market prices. The compensation costs incurred are recognized in income during the three-year vesting period as defined.

iv. Non-current benefits pension costs and other post-retirement benefits

The Company operates several retirement plans for its employees.

For defined contribution plans, the Company's obligations are limited to a monthly contribution linked to a pre-defined percentage of the remuneration of employees enrolled in to these plans.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

For defined benefit plans, actuarial calculations are periodically obtained for liabilities determined in accordance with the Projected Unit Credit Method in order to estimate the Company's obligation. The liability recognized in the Balance Sheet represents the present value of the defined benefit obligation as at that date, less the fair value of plan assets. The remeasurement gains and losses, and return on plan assets (excluding the amount of interest on return of assets recognized in income) and changes in the effect of the ceiling of the active and onerous liabilities are recognized in comprehensive income and consequently in equity.

For plans presenting a surplus, the Company does not recognize any assets or benefits in the Balance Sheet or Statement of Income until such time as the use of this surplus is clearly defined. For plans presenting a deficit, the Company recognizes actuarial liabilities and results arising from the actuarial valuation.

v) Derivative financial instruments and hedge operations

The Company uses derivative instruments to manage its financial risks as a way of hedging against these risks. The Company does not use derivative instruments for speculative purposes. Derivative financial instruments are recognized as assets or liabilities in the Balance Sheet and are measured at their fair values. Changes in the fair values of derivatives are recorded in each year as gains or losses in the statements of income or in unrealized fair value gain or losses in stockholders' equity when the transaction is eligible to be characterized as an effective cash flow hedge.

The Company documents the relationship between hedging instruments and hedged items with the objective of risk management and strategy for carrying out hedging operations. The Company also documents, both initially and on a continuously basis, that its assessment of whether the derivatives used in hedging transactions are highly effective.

The effective components of changes in the fair values of derivative financial instruments designated as cash flow hedges are recorded as unrealized fair value gain/(losses) and recognized in stockholders' equity; and their non-effective components recorded in income. The amounts recorded in Statement of Comprehensive Income, will only be transferred to Statement of Income (costs, operating expenses or financial expenses) when the hedged item is actually realized.

w) Financial Assets

The Company classifies its financial assets in accordance with the purpose for which they were purchased, and determines the classification and initial recognition according to the following categories:

Financial assets measured at fair value through the Statement of Income Financial assets held for trading acquired for the purpose of selling in the short-term. These instruments are measured at fair value, except for derivative financial instruments not classified as hedge accounting; the fair value is measured considering the inclusion of the credit risk of counterparties the calculation of the instruments.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

Loans and receivables Non-derivative financial instruments, with fixed or determinable payments, that are not quoted in an active market. They are initially measured at fair value and subsequently at amortized cost using the effective interest method.

Held to maturity Are non-derivative financial assets with fixed or determinable payments and fixed maturities for which the Company has the intent and ability to hold them to maturity. They are initially measured at fair value and subsequently at amortized cost.

Available for sale Non-derivative financial assets not classified in other category of financial instrument. Financial instruments in this category are measured at fair value, with changes in fair value until the moment of realization then recorded in Statement of Comprehensive Income. On disposal of financial asset, fair value is reclassified to Statement of Income.

x) Capital

The Company periodically repurchases shares to hold in treasury for future sale or cancellation. These shares are recorded in a specific account as a reduction of stockholders? equity at their acquisition value and carried at cost. These programs are approved by the Board of Directors with a determined terms and numbers of type of shares.

Incremental costs directly attributable to the issue of new shares or options are recognized in Stockholders' equity as a deduction from the amount raised, net of taxes.

y) Government grants and support

Government grants and support are accounted for when Company has reasonably complied with conditions set by the government in relation to the grants. Company recognizes the grants in Statement of Income, as reductions in taxes expenses, according to the nature of the item, and classified through retained earnings in stockholders' equity during allocation of net income.

z) Revenue recognition

Revenue is recognized when Vale transfers to its customers all of the significant risks and rewards of ownership of the product sold or when services are rendered. Net revenue excludes any applicable sales taxes and is recognized at the fair value of the consideration received or receivable to the extent that it is probable that economic benefits will flow to Vale and the revenues and costs can be reliably measured.

In most instances sales revenue is recognized when the product is delivered to the destination specified by the customer, which is typically the vessel on which it is shipped, the destination port or the customer's premises. Revenue from services is recognized in the amount by which the services are rendered and accepted by the customer's.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

In some cases, the sale price is determined on a provisional basis at the date of sale as the final selling price is subject to escalation clauses through date of final pricing. Revenue from the sale of provisionally priced products is recognized when the risks and rewards of ownership are transferred to the customer and the revenue can be measured reliably. At this date, the amount of revenue to be recognized are estimated based on the forward price of the product sold.

Amounts billed to customers for shipping corresponds to products sold by the Company are recognized as revenue when that is responsible for shipping. Shipping costs are recognized as operating costs.

aa) Current and deferred income taxes

The amount of income taxes are recognized in the Statement of Income, except for items recognized directly in stockholders' equity, in which cases the tax is also recognized in stockholder's equity.

The provision for income taxes are calculated individually for each entity in the Group based on tax rates and tax rules in force in the location of the entity. The recognition of deferred taxes are based on temporary differences between carrying value and the tax basis of assets and liabilities as well as taxes losses carry forwards. Deferred tax liabilities are fully recognized. The deferred income taxes assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against fiscal current liabilities and when the deferred income taxes assets and liabilities are related to income taxes recorded by the same taxation authority on the same taxable entity.

bb) Basic and diluted earnings per share

Basic earnings per share are calculated by dividing the income attributable to the stockholders of the Company, after accounting for the remuneration to the holders of equity securities, by the weighted average number of shares outstanding (total shares less treasury shares).

Diluted earnings per share are calculated by adjusting the weighted average number of shares outstanding for the conversion of all dilutive potential shares. Vale does not have mandatory convertible securities that could result in the dilution of the earning per share.

cc) Stockholder's remuneration

The stockholder's remuneration is paid on dividends and interest on capital. This remuneration is recognized as a liability in the financial statements of the Company, based on bylaws. Any amount above the minimum compulsory remuneration approved the bylaws shall only be recognized in current liabilities on the date it is approved by stockholder.

Vale is permitted to distribute interest attributable to stockholders' equity. The calculation is based on the stockholders' equity amounts as stated in the statutory accounting records and the interest rate applied may not exceed the Brazilian Government Long-term Interest Rate ("TJLP") determined by the Central Bank of Brazil. Also, such interest may not exceed 50% of net income for the year or 50% of retained earnings plus revenue reserves as determined by Brazilian corporate law.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

2. Summary of the Main Accounting Practices and Accounting Estimates (Continued)

The benefit to Vale, as opposed to making a dividend payment, is a reduction in our income tax burden because this interest charge is tax deductible in Brazil. Income tax of 15% is withheld on behalf of the stockholders relative to the interest distribution. Under Brazilian law, interest attributed to stockholders' equity is considered as part of the annual minimum mandatory dividend (Note 26-f). This notional interest distribution is treated for accounting purposes as a deduction from stockholders' equity in a manner similar to a dividend and the tax credit recorded in income.

3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the use of certain critical accounting estimates and also the exercise of judgment by the management of the Company.

These estimates are based on the best knowledge and information existing in the Balance Sheet date. Changes in facts and circumstances may lead to the revision of these estimates. Actual future results may differ from the estimates.

The significant estimates and assumptions used by Company in these financial statements are as follow:

a) Mineral reserves and mine useful life

The estimates of proven reserves and probable reserves are regularly evaluated and updated. The proven and probable reserves are determined using generally accepted geological estimates. The calculation of reserves requires the Company to take positions on expected future conditions that are highly uncertain, including future ore prices, exchange rates, inflation rates, mining technology, availability of permits and production costs. Changes in some of these assumptions could have a significant impact on the proven and probable reserves recorded.

The estimated volume of mineral reserves is used as basis for the calculation of depletion of the mines, and also for the estimated useful life which is a major factor to quantify the provision for asset retirement obligation and environmental recovery of mines. Any changes to the estimates of the volume of mine reserves and the useful lives of assets may have a significant impact on the depreciation, depletion and amortization charges included in cost of goods sold. Changes in the estimated useful life of the mine have a significant impact on the estimates of environmental provision and impairment analysis.

b) Asset Retirement

The Company recognizes an obligation under the fair value for asset retirement obligations in the period in which they occur, as Note 2t-i. The Company considers the accounting estimates related to closure costs of a mine as a critical accounting policy because they involve significant values for the provision and are estimated using several assumptions, such as interest rate, inflation, useful life of the asset considering the current state of closure and the projected date of depletion of each mine. The estimates are reviewed annually.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

3. Critical Accounting Estimates and Assumptions (Continued)

c) Impairment

The Company annually tests impairment of tangible and intangible assets segregated by cash-generating units, usually using discounted cash flow that depends on several estimates, which are influenced by market conditions prevailing at the time the impairment test, is performed.

d) Litigation losses

Provisions are recorded when the possibility of loss relating to legal proceedings or contingent liabilities is considered probable by the Company's legal department and legal advisors.

The provisions are recorded when the amount of loss can be reasonably estimated. By their nature, litigations will be resolved when one or more future event occurs or fails to occur. Typically, the occurrence or not of such events is outside the Company's control. Because of the legal uncertainties inherent in the environments, involves the exercise of significant estimates and judgments of management regarding the results of future events.

e) Post-retirement benefits for employees

The amount recognized and disclosed depend on a number of factors that are determined based on actuarial calculations using various assumptions in order to determine costs and, liabilities. One of these assumptions is selection and use of the discount rate. Any changes to these assumptions will affect the amount recognized.

At the end of each year the Company and external actuaries reviews the assumptions that should be used for the following year. These assumptions are used in determining the fair values of assets and liabilities, costs and expenses and to the future values of estimated cash outflows, which are recorded in the plan obligations.

f) Fair values of derivatives and others financial instruments

The fair values of financial instruments not traded in active markets are determined using valuation techniques. Vale uses its own judgment to choose between the various methods and assumptions are based on the market conditions, at the end of the year.

A sensitivity analysis present potential impact on results from different from management's estimates. (Note 25)

g) Deferred income taxes

The Company recognizes the effects of deferred taxes arising from tax losses and temporary differences. It recognizes impairment where it believes that tax credits recoverable are not probable.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

3. Critical Accounting Estimates and Assumptions (Continued)

The determination of the provision for income tax or deferred income tax, assets and liabilities, and any impairment of tax credits amount require the use of estimates. For each tax asset, the Company assesses the probability that some or all of the tax assets may not be recoverable. The impairment recorded in relation to the accumulated tax losses depends on the assessment of the probability of the generation of future taxable profits based on production and sales planning, commodity prices, operational costs, restructuring plans, reclamation costs and planned capital costs.

4. Accounting Standards

Company prepared its financial statements under IFRS. Pronouncements issued by the IASB, with adoption required for years ending after December 31, 2013.

Standards, interpretations or amendments issued by the IASB and effective in 2013

There are new standards, interpretations and amendments to the IFRS effective in 2013. The impacts retrospective of the new standards are limited to the effects of the revised IAS 19 employee benefits IAS 19, described in Note 6.

Standards, interpretations or amendments issued by the IASB for adoption after December 31, 2013

Annual Improvements to IFRSs: 2010-2012 Cycle In December 2013 the IASB issued a series of non-urgent updates to some statements, with application prospective or for periods after July 1, 2014. Vale is reviewing possible impacts related to this update on its financial statements.

Defined Benefit Plans: Employee Contributions In November 2013 the IASB issued an update statement to IAS 19 Employee Benefit which aims to simplify the accounting treatment of contributions made by employees and third parties, in defined benefit plans. The adoption of the updates will be applied from July 1, 2014 and we are analyzing potential impacts regarding this update on our financial statements.

Hedge Accounting and amendments to IFRS 9, IFRS 7 and IAS 39 In June 2013 o IASB issued an amendment to IAS 39 *Financial Instruments: Recognition and Measurement*, IFRS 7 *Financial Instruments: Disclosures* and IFRS 9 *Financial Instruments* that brings a comprehensive review of hedge accounting, aligning the accounting aspects to the management of risk, to bring more useful information to the financial statements. These updates cancel IFRIC 9 Reassessment of Embedded Derivative. The adoption of the updates will be applied immediately to those who have already adopted IFRS 9. Whose adoption is mandatory from January 1, 2015. We are analyzing potential impacts regarding IFRS 9 and this update on our financial statements.

Novation of Derivatives and Continuation of Hedge Accounting In June 2013 IASB issued an amendment to IAS 39 Financial Instruments: Recognition and Measurement, that document conclude that hedge accounting do not terminate or expire when as consequence of law or regulation, a derivative financial instrument replace their original counterparty to become the new counterparty to each of the parties. The adoption of the amendment will be required from January 1, 2014 and we are analyzing potential impacts regarding this update on our financial statements.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

4. Accounting Standards (Continued)

IFRIC 21 Levies In May 2013 IASB issued an interpretation about the recognition of a government imposition (levies). The adoption of the interpretation will be required from January 1, 2014 and we are analyzing potential impacts regarding this update on our financial statements.

Recoverable Amount Disclosures for Non-Financial Assets In May 2013 IASB issued an amendment to IAS 36 Impairment of Asset that clarifies the IASB intention about the disclosure of non- financial assets impairment. The adoption of the amendment will be required from January 1, 2014 and we are analyzing potential impacts regarding this update on our financial statements.

5. Risk Management

Vale considers that effective risk management is key to its growth, strategic planning and financial flexibility. Therefore, Vale has developed its risk management strategy in order to provide an integrated approach of the risks to which the Company is exposed. In order to do this, Vale evaluates not only the impact in the results of the business caused by variables traded in financial markets (market risk) and those arising from liquidity risk, but also the risk from counterparties obligations (credit risk), those relating to inadequate or failed internal processes, people, systems or external events (operational risk), among others.

a) Risk management policy

The Board of Directors has established a risk management policy in order to support the company's growth plan, strategic planning and Company's business continuity, besides to improve its capital structure and management of Vale Group, ensure adequate degree of flexibility in financial management while maintaining the level of robustness required for investment grade and to strengthen its corporate governance practices.

The corporate risk management policy requires that Vale should regularly measure and monitor its corporate risk on a consolidated basis in order to ensure that the overall risk level of the Company remains aligned with the guidelines defined by the Board of Directors and the Executive Board.

The Executive Risk Management Committee, created by the Board of Directors, is responsible for supporting the Executive Board in the risk assessments and for issuing an opinion regarding the Company's risk management profile. It's also responsible for the supervision and revision of the principles and instruments of corporate risks management.

The Executive Board is responsible for the approval of the adoption of norms, rules and responsibilities and for reporting to the Board of Directors.

The risk management norms and instructions complement the corporate risk management policy and define the Company practices, processes, controls, roles and responsibilities in relation to risk management.

The Company may, where necessary, allocate specific risks limits to management activities, including but not limited to, market risk limit, corporate and sovereign credit limits, in accordance with the acceptable corporate risk limit.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

5. Risk Management (Continued)

b) Liquidity risk management

Liquidity risk arises from the possibility that Vale might not perform its obligations by the due dates, as well as face difficulties to meet its cash requirements due to market liquidity constraints.

To mitigate this risk, Vale has a revolving credit facility in order to assist the short term liquidity management and to enable more efficient cash management, this is consistent with the strategic focus on cost of capital. The revolving current credit facilities were obtained from a syndicate of several global commercial banks.

c) Credit risk management

Vale's credit risk arises from potential negative impacts on its cash flow due to uncertainty regarding the ability of counterparties to meet their contractual obligations. Vale has various procedures and processes to manage this risk, such as the control of credit limits, the obligation to diversity exposure diversification across several counterparties and the monitoring of the portfolio's credit risk.

Vale's counterparties can be divided into three main categories: customers (responsible by obligations regarding receivables from payment term sales); financial institutions (with whom Vale keeps its cash investments or negotiates derivatives transactions); and suppliers of equipment, products and services (in the case of payments in advance).

Commercial Credit Risk Management

For commercial credit exposure, which arises from sales to final customers, the risk management department approves or requests the approval of credit risk limits for each counterpart. Further, the Executive Board sets annually global commercial credit risk limits for the customer's portfolio.

Vale attributes an internal credit risk rating for each counterparty using its own quantitative methodology for credit risk analysis, based on three main sources of information: (i) Expected Default Frequency ("EDF") provided by KMV (Moody's); (ii) credit ratings from the main international rating agencies; and (iii) customer financial statements from which financial ratios are determined.

As at 31 December 2013, 65% of accounts receivable due to Vale commercial sales had low or insignificant risk, 31% had moderate risk and only 4% high risk.

Whenever considered necessary, the quantitative credit risk analysis is complemented by a qualitative analysis which takes into consideration the payment history of that counterparty, its commercial relationship with Vale and the customer's strategic position in its economic sector, among others variables.

Based on the counterparty's credit risk or based on Vale's consolidated credit risk profile, risk mitigation strategies are used to minimize the Company`s credit risk in order to meet the acceptable level of risk approved by the Executive Board. The main credit risk mitigation strategies used by the Company are credit insurance, mortgage, letter of credit and corporate guarantees, among others.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

5. Risk Management (Continued)

Vale has abroad and diversified accounts receivable portfolio from a geographical standpoint, with China, Europe, Brazil and Japan being the regions of most significant exposures. According to the region, different types of guarantees can be used to enhance the credit quality of the receivables.

Vale controls its account receivables portfolio through the Credit and Cash Collection committees, though which representatives from the risk management, cash collection and commercial departments monitor each counterparty`s position. Finally, Vale has an automatic control that blocks additional sales to customers who are in default.

Treasury Credit Risk Management

The management of exposure arising from cash investments and derivatives instruments is realized through the following procedures: annual approval by the Executive Board of the credit limits per counterparty, controls of portfolio diversification, counterparties` credit spread variations and the treasury portfolio overall credit risk. There's also a monitoring of all positions, exposure versus limit control and periodic report to the Executive Risk Management Committee.

The calculation of the exposure to a counterparty that has several derivative transactions with Vale, the sum of exposure of each derivative contracted with this counterparty is considered. The exposure for each derivative is defined as the future value calculated within the life of the derivative, considering the variation of the market risk factors that affect the value of the derivative instrument.

Vale also assess the creditworthiness of its counterparties in treasury operations following an internal methodology similar to commercial credit risk management that aims to define a default probability for each counterparty.

Depending on the counterparty's nature (banks, insurance companies, countries or corporations), different inputs will be considered: (i) expected default probability given by KMV; (ii) Credit Default Swaps ("CDS") and bond market spreads; (iii) credit ratings defined by the main international rating agencies; and (iv) financial statements data and indicators analysis.

d) Market risk management

Vale is exposed to various market risk factors that could impact its cash flows. The assessment of this potential impact arising from the volatility of risk factors and their correlations is performed periodically to support the decision making process and the growth strategy of the Company, ensure its financial flexibility and monitor the volatility of future cash flows.

When necessary, market risk mitigation strategies are evaluated and implemented in line with these objectives. Some strategies may incorporate financial instruments, including derivatives. The portfolios of the financial instruments are monitored on a monthly basis, enabling the monitoring of financial results and their impact on cash flow.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

5. Risk Management (Continued)

Considering the nature of Vale's business and operations, the main market risk factors which the Company is exposed to are:

Foreign exchange and Interest rates;

Product prices and input costs.

e) Foreign exchange and interest rate risk

The company's cash flow is subjected to volatility of several currencies, once its product prices are predominantly indexed to US Dollar, while most of the costs, disbursements and investments are indexed to other currencies, mainly Brazilian Real and Canadian Dollar.

In order to reduce the potential impact that arises from this currency mismatch, derivatives instruments can be used as a risk mitigation strategy.

In the case of cash flow foreign exchange protection regarding revenues, costs, disbursements and investments, the main risk mitigation strategies used are forwards and swaps.

Vale implemented hedge transactions to protect its cash flow against the market risks arising from its debt obligations mainly currency volatility. We use swap transactions to convert debt linked to Brazilian Real and Euros into US Dollar that have similar or sometimes shorter settlement periods than the final maturities of the debt instruments. Their notional amounts are similar to the principal and interest payments, subjected to liquidity market conditions.

Swaps with shorter settlement dates are renegotiated over time so that their final maturity matches or becomes closer to the debts` final maturity. At each settlement date, the results of the swap transactions partially offset the impact of the foreign exchange rate in Vale's obligations, to mitigate the effects of the cash disbursements in US Dollar.

In the case of debt instruments denominated in Brazilian Real, in the event of an appreciation (or depreciation) of the Brazilian Real against the US Dollar, the negative (or positive) impact on Vale`s debt service (interest and/or principal payment) measured in US Dollars will be partially offset by the positive (or negative) effect from the swaps, regardless of the US$/R$ exchange rate on the payment date. The same rationale is applicable to debts denominated in other currencies and their respective swaps.

Vale has also exposure to interest rates risks over loans and financings. The US Dollar floating rate debt in the portfolio consists mainly of loans including export pre-payments, commercial banks and multilateral organizations loans. In general, such debt instruments are indexed to the London Interbank Offer Rate in US dollar ("LIBOR"). Considering the impact of interest rate volatility on the cash flow, Vale observes the potential natural hedges effects between US Dollar floating rates and commodities prices in the decision process of acquiring financial instruments. Sensitivity analysis is disclosed in Note 25.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

5. Risk Management (Continued)

f) Risk of product and Input prices

Vale is also exposed to market risks regarding commodity price and input volatilities. In accordance with risk management policy, risk mitigation strategies involving commodities can be used to adjust the cash flow risk profile and reduce Vale's cash flow volatility. For this kind of risk mitigation strategy, Vale uses predominantly forwards, futures or zero-cost collars.

g) Operational risk management

Operational risk management is the structured approach that Vale uses to manage uncertainty related to possibly inadequate or failure in internal processes, people and systems and to external events, in accordance with the principles and guidelines of ISO31000.

Operational risks are periodically monitored, ensuring the effectiveness of prevention / mitigation key controls in operation and execution of the risk treatment strategy (creation of new controls, changes in the risk environment, transfer part of the risk by contracting insurance, provisioning of resources, etc.).

Therefore, the Company seeks to have a clear view of its major risks, of the best cost-benefit mitigation plans and of the controls in place, monitoring the potential impact of operational risk and allocating capital efficiently.

h) Capital Management

The Company's aim, its capital, to seek a structure that will ensure the continuity of your business in the long term, as well as, delivering value to stockholders through dividend payments and capital gain, and at the same time maintain a debt profile suitable to its activities, with amortization well distributed over years, on average 10 years, thus avoiding a concentration in one specific period.

i) Insurance

Vale has taken out several types of insurance, such as operating risk insurance, civil responsibility, engineering risks insurance (projects) and life insurance policies for employees, among others. The coverage of these policies is similar those commonly used by the mining industry and was contract in line with the objectives defined by the Company, with the corporate risk management policy and the limitation imposed by the insurance and reinsurance global market.

Insurance management is carried out with the support of the existing insurance committees in the various operational areas of the Company. Among its management instruments, Vale uses captive reinsurance companies that allow it to contract insurances on a competitive basis as well as giving it direct access to key international insurance and reinsurance markets.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

6. Changes in accounting policies

From 2013 Vale adopted the revised IAS 19 Employee benefits IAS 19 to account employment benefits. The Company has applied the standard retrospectively in accordance with the transition provisions of the standard which eliminated the method of the "corridor"; simplified the changes between the assets and liabilities of plans, recognizing in the statement of income, service cost, interest expense on benefit obligation and interest income on plan assets; and recognizing in comprehensive income, the remeasurements of actuarial gains and losses, return on plan assets (net of interest income on assets) and changes in the effect of the asset ceiling and onerous liabilities.

The impact on the Company has been as follow:

	December 31, 2012			January 1, 2012		
Balance Sheet	**Original balance(i)**	**Effect of changes**	**Adjusted balance**	**Original balance(i)**	**Effect of changes**	**Adjusted balance**
Assets						
Current assets						
Cash and cash equivalents	5,832		5,832	3,531		3,531
Others	16,694		16,694	18,007		18,007
	22,526		**22,526**	**21,538**		**21,538**
Non-current						
Deferred income tax and social contribution	3,981	72	4,053	1,893	16	1,909
Others	104,113	(115)	103,998	103,469		103,469
	108,094	**(43)**	**108,051**	**105,362**	**16**	**105,378**
Total assets	**130,620**	**(43)**	**130,577**	**126,900**	**16**	**126,916**
Liabilities and stockholders' equity						
Current						
Employee post-retirement benefits obligations	205		205	169		169
Liabilities directly associated with non-current assets held for sale	160	9	169			
Others	12,197		12,197	10,924		10,924
	12,562	**9**	**12,571**	**11,093**		**11,093**
Non-current						
Employee post-retirement benefits obligations	1,660	1,650	3,310	1,550	927	2,477
Deferred income tax and social contribution	3,795	(368)	3,427	5,681	(216)	5,465
Others	36,442		36,442	30,066		30,066
	41,897	**1,282**	**43,179**	**37,297**	**711**	**38,008**

Stockholders' equity						
Capital	60,578		60,578	60,578		60,578
Unrealized fair value gain (losses)	(696)	(1,348)	(2,044)	(40)	(713)	(753)
Cumulative translation adjustments	(18,683)	20	(18,663)	(20,520)	109	(20,411)
Retained earnings	38,403	(6)	38,397	41,819	(91)	41,728
Others	(5,029)		(5,029)	(5,042)		(5,042)
Total Company stockholders' equity	**74,573**	**(1,334)**	**73,239**	**76,795**	**(695)**	**76,100**
Noncontrolling interests	1,588		1,588	1,715		1,715
Total of stockholders' equity	**76,161**	**(1,334)**	**74,827**	**78,510**	**(695)**	**77,815**
Total liabilities and stockholders' equity	**130,620**	**(43)**	**130,577**	**126,900**	**16**	**126,916**

(i) Recast according to note 7.

Notes to Consolidated Financial Statements (Continued)

Expressed in millions of United States Dollars, unless otherwise stated

6. Changes in accounting policies (Continued)

	Year ended as at December 31, 2012		
Statement of income	**Original balance(i)**	**Effect of changes**	**Adjusted balance**
Net operating revenue	46,553		46,553
Cost of goods sold and services rendered	(25,424)	34	(25,390)
Gross operating profit	**21,129**	**34**	**21,163**
Operational expenses	(13,695)		(13,695)
Financial expenses, net	(4,106)	84	(4,022)
Equity results	645		645
Earnings before income taxes	**3,973**	**118**	**4,091**
Current and deferred Income taxes, net	1,211	(37)	1,174
Net income from continued operations	**5,184**	**81**	**5,265**
Loss attributable to noncontrolling interests	(257)		(257)
Net income attributable to stockholders	**5,441**	**81**	**5,522**