

Vale S.A.  
Form 20-F  
April 29, 2010

**Table of Contents**

**As filed with the Securities and Exchange Commission on April 29, 2010**

**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, 2009  
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)*

Fabio de Oliveira Barbosa, Chief Financial Officer  
fax: +55 21 3814 8820

**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:

<b>Title of Each Class</b>	<b>Name of Each Exchange on Which Registered</b>
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
5.50% Guaranteed Notes due 2010, Series RIO, issued by Vale Capital	New York Stock Exchange
5.50% Guaranteed Notes due 2010, Series RIO P, issued by Vale Capital	New York Stock Exchange
6.75% Guaranteed Notes due 2012, Series VALE, issued by Vale Capital II	New York Stock Exchange
6.75% Guaranteed Notes due 2012, Series VALE.P, issued by Vale Capital II	New York Stock Exchange
9.0% Guaranteed Notes due 2013, issued by Vale Overseas	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
55/8% Guaranteed Notes due 2019, 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

\* 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, 2009 was:**

3,181,726,583 common shares, no par value per share  
2,030,997,714 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  No

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  No

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:  
U.S. GAAP  International Financial Reporting Standards as issued by the International Accounting Standards Board  Other

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  Item 18

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  No

**TABLE OF CONTENTS**

	Page
<u>Form 20-F cross reference guide</u>	ii
<u>Forward-looking statements</u>	4
<u>Risk factors</u>	5
<u>Presentation of financial information</u>	12
<u>Selected financial data</u>	13
<b><u>I. Information on the company</u></b>	
<u>Business overview</u>	15
<u>Lines of business</u>	22
<u>1. Ferrous minerals</u>	24
<u>2. Non-ferrous minerals</u>	32
<u>3. Coal</u>	45
<u>4. Infrastructure</u>	48
<u>5. Other investments</u>	53
<u>Reserves</u>	53
<u>Capital expenditures and projects</u>	65
<u>Regulatory matters</u>	69
<b><u>II. Operating and financial review and prospects</u></b>	
<u>Results of operations 2009 compared to 2008</u>	79
<u>Results of operations 2008 compared to 2007</u>	85
<u>Liquidity and capital resources</u>	92
<u>Shareholder debentures</u>	94
<u>Contractual obligations</u>	95
<u>Off-balance sheet arrangements</u>	95
<u>Critical accounting policies and estimates</u>	95
<u>Risk management</u>	99
	Page
<b><u>III. Share ownership and trading</u></b>	
<u>Major shareholders</u>	108
<u>Related party transactions</u>	111
<u>Distributions</u>	111
<u>Trading markets</u>	112
<u>Share price history</u>	113
<u>American Depositary Shares</u>	113
<u>Purchases of equity securities by the issuer and affiliated purchasers</u>	114
<b><u>IV. Management and employees</u></b>	
<u>Management</u>	115

<u>Management compensation</u>	123
<u>Employees</u>	124
<b><u>V. Additional information</u></b>	
<u>Legal proceedings</u>	125
<u>Memorandum and articles of association</u>	127
<u>Exchange controls and other limitations affecting security holders</u>	134
<u>Taxation</u>	135
<u>Evaluation of disclosure controls and procedures</u>	142
<u>Management's report on internal control over financial reporting</u>	142
<u>Corporate governance</u>	143
<u>Code of ethics</u>	145
<u>Principal accountant fees and services</u>	145
<u>Information filed with the U.S. Securities and Exchange Commission</u>	146
<u>Exhibits</u>	146
<u>Glossary</u>	147
<u>Signatures</u>	153
<u>Index to consolidated financial statements</u>	F-1
<u>EX-1</u>	
<u>EX-8</u>	
<u>EX-12.1</u>	
<u>EX-12.2</u>	
<u>EX-13.1</u>	
<u>EX-15.1</u>	
<u>EX-15.2</u>	
<u>EX-15.3</u>	
<u>EX-15.4</u>	
<u>EX-15.5</u>	
<u>EX-15.6</u>	
<u>EX-101 INSTANCE DOCUMENT</u>	
<u>EX-101 SCHEMA DOCUMENT</u>	
<u>EX-101 CALCULATION LINKBASE DOCUMENT</u>	
<u>EX-101 LABELS LINKBASE DOCUMENT</u>	
<u>EX-101 PRESENTATION LINKBASE DOCUMENT</u>	
<u>EX-101 DEFINITION LINKBASE DOCUMENT</u>	

Table of Contents**FORM 20-F CROSS REFERENCE GUIDE**

<b>Item</b>	<b>Form 20-F caption</b>	<b>Location in this report</b>	<b>Page</b>
<b>1</b>	<b>Identity of directors, senior management and advisers</b>	Not applicable	-
<b>2</b>	<b>Offer statistics and expected timetable</b>	Not applicable	-
<b>3</b>	<b>Key information</b>		
	3A Selected financial data	Selected financial data	13
	3B Capitalization and indebtedness	Not applicable	-
	3C Reasons for the offer and use of proceeds	Not applicable	-
	3D Risk factors	Risk factors	5
<b>4</b>	<b>Information on the Company</b>		
	4A History and development of the company	Business Overview, Capital expenditures and projects	15, 65
	4B Business overview	Business overview, Lines of business, Reserves, Regulatory matters	15, 22, 53, 69
	4C Organizational structure	Exhibit 8	-
	4D Property, plant and equipment	Lines of business, Capital expenditures and projects, Regulatory matters	22, 65, 69
<b>4A</b>	<b>Unresolved staff comments</b>	None	-
<b>5</b>	<b>Operating and financial review and prospects</b>		
	5A Operating results	Results of operations (2009 compared to 2008, and 2008 compared to 2007)	79, 85
	5B Liquidity and capital resources	Liquidity and capital resources	92
	5C Research and development, patents and licences, etc.	Capital expenditures and projects	65
	5D Trend information	Results of operations (2009 compared to 2008, and 2008 compared to 2007)	79, 85
	5E Off-balance sheet arrangements	Off-balance sheet arrangements	95
	5F Tabular disclosure of contractual obligations	Contractual obligations	95
	5G Safe harbor	Forward-looking statements	4
<b>6</b>	<b>Directors, senior management and employees</b>		
	6A Directors and senior management	Management	115
	6B Compensation	Management compensation	123
	6C Board practices	Management Board of directors	115
	6D Employees	Employees	124
	6E Share ownership	Major shareholders; Employees Performance-based compensation	108, 125
<b>7</b>	<b>Major shareholders and related party transactions</b>		
	7A Major shareholders	Major shareholders	108
	7B Related party transactions	Related party transactions	111

	7C Interests of experts and counsel	Not applicable	-
<b>8</b>	<b>Financial information</b>		
	8A Consolidated statements and other financial information	Financial statements	F-1
	8B Significant changes	Not applicable	-
<b>9</b>	<b>The offer and listing</b>		
	9A Offer and listing details	Share price history	113
	9B Plan of distribution	Not applicable	-
	9C Markets	Trading markets	112
	9D Selling shareholders	Not applicable	-
	9E Dilution	Not applicable	-
	9F Expenses of the issue	Not applicable	-

**Table of Contents**

<b>Item</b>	<b>Form 20-F caption</b>	<b>Location in this report</b>	<b>Page</b>
<b>10</b>	<b>Additional information</b>		
	10A Share capital	Memorandum and articles of association Common shares and preferred shares	127
	10B Memorandum and articles of association	Memorandum and articles of association	127
	10C Material contracts	Lines of business; Results of operations; Related party transactions	22, 79, 111
	10D Exchange controls	Exchange controls and other limitations affecting security holders	134
	10E Taxation	Taxation	135
	10F Dividends and paying agents	Not applicable	-
	10G Statement by experts	Reserves	53
	10H Documents on display	Information filed with the U.S. Securities and Exchange Commission	146
	10I Subsidiary information	Not applicable	-
<b>11</b>	<b>Quantitative and qualitative disclosures about market risk</b>	Risk management	99
<b>12</b>	<b>Description of securities other than equity securities</b>		
	12A Debt securities	Not applicable	-
	12B Warrants and rights	Not applicable	-
	12C Other securities	Not applicable	-
	12D American Depositary Shares	American Depositary Shares	113
<b>13</b>	<b>Defaults, dividend arrearages and delinquencies</b>	Not applicable	-
<b>14</b>	<b>Material modifications to the rights of security holders and use of proceeds</b>	Not applicable	-
<b>15</b>	<b>Controls and procedures</b>	Evaluation of disclosure controls and procedures	142
<b>16</b>	16A Audit Committee financial expert	Management Fiscal Council	121
	16B Code of ethics	Code of ethics	145
	16C Principal accountant fees and services	Principal accountant fees and services	145
	16D Exemptions from the listing standards for audit committees	Management Fiscal Council; Corporate governance	121, 143
	16E Purchase of equity securities by the issuer and affiliated purchasers	Purchases of equity securities by the issuer and affiliated purchasers	114
	16F Change in registrant s certifying accountant	Not applicable	-
	16G Corporate governance	Corporate governance	143
<b>17</b>	<b>Financial statements</b>	Not applicable	-
<b>18</b>	<b>Financial statements</b>	Financial statements	F-1
<b>19</b>	<b>Exhibits</b>	Exhibits	146



**Table of Contents**

**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;
- 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, mainly Brazil and Canada, (b) the global economy, (c) capital markets, (d) the mining and metals businesses and their dependence upon global industrial production, which is cyclical by nature, 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.

Edgar Filing: Vale S.A. - Form 20-F

*Vale S.A. is a stock corporation, or sociedade por ações, organized on January 11, 1943 and existing under the laws of the Federative Republic of Brazil for an unlimited period of time. Its head offices are 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 us or we 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 American Depositary Shares (our preferred ADSs), each of which represents one*

## **Table of Contents**

*preferred share of Vale. American Depositary Shares are represented by American Depositary Receipts ( ADRs ) 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.*

## **RISK FACTORS**

### **Risks relating to our business**

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

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

*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 2009, Chinese demand represented 68% of global demand for seaborne iron ore, 44% of global demand for nickel, 39% of global demand for aluminum and 40% of global demand for copper. The percentage of our operating revenues attributable to sales to consumers in China was 38% in 2009. Although China largely withstood the recent global recession, a contraction of China's economic growth could result in lower demand for our products, leading to lower revenues, cash flow and profitability. Poor performance in the Chinese real estate sector, one of the largest consumers of carbon steel in China, could also negatively impact our results.

*A decline in demand for steel would adversely affect our business.*

Demand for our most important products depends on global demand for steel. Iron ore and iron ore pellets, which together accounted for 59% of our 2009 operating revenues, are used to produce carbon steel. Nickel, which accounted for 14% of our 2009 operating revenues, is used mainly to produce stainless and alloy steels. Demand for steel depends heavily on global economic conditions, but it also depends on a variety of regional and sectoral factors. The prices of different steels and the performance of the global steel industry are highly cyclical and volatile, and these business cycles in the steel industry affect demand and prices for our products. In addition, vertical backward integration of the steel industry could reduce the global seaborne trade of iron ore.

The global seaborne trade of iron ore could also suffer from competition from metallics, such as semi-finished steel and scrap. In certain cases, it may be more economical for steelmakers to charge more scrap in basic oxygen furnaces ( BOF ) and electric arc furnaces ( EAF ), instead of producing pig iron. Semi-finished products, such as billets and slabs, may also be available from fully-integrated steel mills at low cost, reducing overall demand for seaborne iron ore.

*The prices of nickel, aluminum and copper, which are actively traded on world commodity exchanges, are subject to significant volatility.*

Nickel, aluminum and copper are sold in an active global market and traded on commodity exchanges, such as the London Metal Exchange and the New York Mercantile Exchange. Prices for these metals are subject to significant fluctuations and are affected by many factors, including actual and expected global

## **Table of Contents**

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.

*Increased availability of alternative nickel sources or substitution of nickel from end use applications could adversely affect our nickel business.*

Scrap nickel competes directly with primary nickel as a source of nickel for use in the production of stainless steel, and the choice between them is largely driven by their relative prices and availability. In 2009, the stainless steel scrap ratio fell from 49% to 43%. Nickel pig iron, a product developed by Chinese steel and alloy makers that utilizes lateritic nickel ores, competes with other nickel sources in the production of stainless steel. In 2009, estimated nickel pig iron production increased 17%, representing 7% of global nickel output. Demand for primary nickel may be negatively affected by the direct substitution of primary nickel with other materials in current applications. In response to high nickel prices or other factors, producers and consumers of stainless steel may partially shift from stainless steel with high nickel content (series 300) to stainless steels with either lower nickel content (series 200) or no nickel content (series 400), which would adversely affect demand for 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 render us unable to satisfy 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. 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 prices 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, particularly Argentina, Australia, Brazil, Canada, Colombia, Indonesia, Mozambique, New Caledonia and Peru.

Our operations depend on authorizations and concessions from governmental regulatory agencies of the countries in which we operate. For details about the authorizations and concessions upon which our operations depend, see *Information on the company Regulatory matters*. 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.

Actual or potential political changes and changes in economic policy may undermine investor confidence, result in economic slowdowns and otherwise adversely affect the economic and other conditions under which we operate in ways that could have a material adverse effect on our business.

Protestors have taken actions to disrupt our operations and projects, and they may continue to do so in the future. Although we vigorously defend ourselves against illegal acts, while supporting the communities living near our operations, future attempts by protestors to harm our operations could adversely affect our business.

**Table of Contents**

*We could be adversely affected by changes in government policies, 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 an important financial impact on our operations. In the countries where we operate, governments may impose new taxes, raise existing taxes and royalties, or change the basis on which they are calculated in a manner that is unfavorable to us.

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

We are investing to further increase our production capacity, logistics capabilities and to expand the scope of minerals we produce. Our projects are 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 to build and operate a project.

Our efforts to develop projects according to schedule may be hampered by a lack of infrastructure, including a reliable power supply.

We may fail to obtain, or experience delays or higher than expected costs in obtaining, the required permits to build a project.

Changes in market conditions or regulations may make a project less profitable than expected at the time we initiated work on it.

Adverse mining conditions may delay and hamper our ability to produce the expected quantities of minerals.

Some of our development projects are located in regions where tropical diseases, AIDS, malaria, yellow fever and other contagious diseases are a major public health issue and pose health and safety risks to our employees. If we are unable to ensure the health and safety of our employees, our business may be adversely affected.

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

As of March 31, 2010, Valepar S.A. 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 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 law, accounting or governance standards. We may be subject to breaches of our Code of Ethical



## **Table of Contents**

Conduct, business conduct protocols and instances of fraudulent behavior 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.

*Some of our operations depend on joint ventures or consortia, and our business could be adversely affected if our partners fail to observe their commitments.*

We currently operate important parts of our pelletizing, bauxite, coal and steel businesses through joint ventures with other companies. Important parts of our electricity investments and all of our oil and gas 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. For example, the joint venture company that owns our Goro project in New Caledonia has a minority shareholder, Sumic Nickel Netherlands B.V., with a put option to sell us 25%, 50%, or 100% of its shares. Sumic may exercise the put option if the cost of the project exceeds a certain value agreed between the shareholders and certain other conditions are met. For more information about our joint ventures, see *Information on the company Lines of business*.

*Environmental, health and safety regulation may adversely affect our business.*

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

Environmental regulation in many countries in which we operate has become stricter in recent years, and it is possible that more regulation or more aggressive enforcement of existing regulations will adversely affect us by imposing restrictions on our activities and products, creating new requirements for the issuance or renewal of environmental licenses, raising our costs or requiring us to engage in expensive reclamation efforts. Concern over climate change, and efforts to comply with international undertakings under the Kyoto Protocol, could lead governments to impose limits on carbon emissions applicable to our operations, which could adversely affect our operating costs or our capital expenditure requirements. For example, the Brazilian government passed a carbon emissions law (*Política Nacional de Mudanças Climáticas*) in December 2009, although it has not yet promulgated rules establishing specific limits on carbon emissions from mining activities.

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

Our reported ore reserves are estimated quantities of ore and minerals that we have determined can be economically mined and processed under present and anticipated conditions to extract their mineral content.

## **Table of Contents**

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 engineering involves estimating deposits of minerals that cannot be measured in an exact manner, and the accuracy of any reserve estimate is a function of the quality of available data and engineering and geological interpretation and judgment. As a result, no assurance can be given that the indicated amount of ore will be recovered or that it will be recovered at the rates we anticipate. Estimates may vary, and results of our mining and production subsequent to the date of an estimate may lead to revisions of estimates. 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 or other factors may render proven and probable reserves uneconomic to exploit and may ultimately result in a restatement of reserves.

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

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

*Drilling and production risks could adversely affect the mining process.*

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

establish mineral reserves through drilling;

determine appropriate mining and metallurgical processes for optimizing the recovery of metal contained in ore;

obtain environmental and other licenses;

construct mining, processing facilities and infrastructure required for greenfield properties; and

obtain the ore or extract the minerals from the ore.

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

*We face rising extraction costs over time as reserves deplete.*

Reserves are gradually depleted in the ordinary course of a given mining operation. As mining progresses, distances to the primary crusher and to waste deposits become longer, pits become steeper and underground operations become deeper. As a result, over time, we usually experience rising unit extraction costs with respect to each mine. 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

## **Table of Contents**

subject to periodic negotiation. Negotiation may become more difficult in times of higher prices and consequently higher profits in the mining and metals industries, as labor unions may seek wage increases.

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. A large number of our unionized employees at our Canadian nickel operations in Sudbury, Port Colborne and Voisey Bay have been on strike since mid-2009, which has resulted in significantly reduced production from these operations. 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 companies for highly skilled executives and staff with relevant industry and technical experience, and we may not be able to attract and retain such people. Shortages during peak periods could negatively impact our operations, resulting in higher production or capital expenditure costs, production interruptions, higher inventory costs, project delays and potentially lower production and revenues.

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

Energy costs are a significant component of our cost of production, representing 15.6% of our total cost of goods sold in 2009. To fulfill our energy needs, we depend on the following, all measured in tons of oil equivalent (TOE): oil by-products, which represented 39% of total energy needs in 2009, electricity (38%), coal (15%) and natural gas (6%).

Fuel costs represented 9.4% of our cost of goods sold in 2009. Increases in oil and gas prices adversely affect margins in our logistics services, mining, iron ore pellets, nickel and alumina businesses.

Electricity costs represented 6.2% of our total cost of goods sold in 2009. 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.

Electricity shortages have occurred in Brazil in the past and could reoccur in the future, and there can be no assurance that the Brazilian government's policies will succeed in encouraging enough growth in power generation capacity 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 Brazilian aluminum and ferroalloy operations, which are electricity-intensive. Changes in the laws, regulations or governmental policies regarding the power sector or concession requirements could reduce our expected returns from our investments in power generation.

Through our subsidiary PT International Nickel Indonesia Tbk ( PTI ), we process lateritic nickel ores using a pyrometallurgical process, which is energy-intensive. Although PTI currently generates a majority of the electricity for its operations from its own hydroelectric power plants, low rainfall or other hydrological factors could adversely affect electricity production at PTI's plants in the future, which could significantly increase the risk of higher costs or lower production volume.

*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 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 payable and (ii) fair value losses or gains on our currency derivatives used to stabilize our cash flow in U.S. dollars. In

## **Table of Contents**

2009 and 2007, we had currency gains of US\$665 million and US\$1.639 billion, respectively; in 2008, we had currency losses of US\$1.011 billion. In addition, the price volatility of the Brazilian *real*, the Canadian 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* (64% in 2009) and the Canadian dollar (16% in 2009), 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 and may 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.

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

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

## **Risks relating to our American Depositary Shares**

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

The custodian for the shares underlying our ADSs 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 or upon the disposition of the underlying shares. If an ADR holder exchanges its ADSs 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 may not be able to obtain and remit U.S. dollars 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, 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 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.

We cannot assure ADR holders that the custodian's registration or any registration obtained will not be affected by future legislative changes, or that additional restrictions applicable to ADR holders, the disposition of the underlying shares or the repatriation of the proceeds from disposition will not be imposed in the future.

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

ADR holders may not be able to exercise preemptive rights, or exercise other types of rights, with respect to the underlying shares. The ability of ADR 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) requires that either a registration statement be effective or an exemption from registration be available with respect to those rights. We are not obligated 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 ADR holders that we will file any registration statement or take such steps. For a more complete description of preemptive rights



**Table of Contents**

with respect to the underlying shares, see *Additional information Memorandum and articles of association Preemptive rights*.

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

ADR 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 are not permitted to attend shareholders' meetings, and they may only vote by providing instructions to the depositary. In the event that we fail to provide the depositary with voting materials on a timely basis, or the depositary does not provide sufficient time for ADR holders to submit voting instructions, ADR holders will not be able to vote. 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 respects, and investors in our securities should recognize that the protections and remedies available to them may be different from those to which they are accustomed in their home markets. We are subject to securities legislation in several countries, which have different rules, supervision and enforcement practices. The only corporate law applicable to us is the law of Brazil, with its specific substantive rules and judicial procedures. We are subject to corporate governance rules in several jurisdictions where our securities are listed, but as a foreign private issuer, we are not required to follow many of the corporate governance rules that apply to U.S. domestic issuers with securities listed on the New York Stock Exchange, and we are not subject to the U.S. proxy rules.

**PRESENTATION OF FINANCIAL INFORMATION**

We have prepared our financial statements in this annual report in accordance with generally accepted accounting principles in the United States ( U.S. GAAP ), which differ in certain respects from accounting practices adopted in Brazil ( Brazilian GAAP ). Brazilian GAAP is determined by the requirements of Brazilian corporate law and the rules and regulations of the Brazilian Securities Commission (Comissão de Valores Mobiliários), or CVM. We also publish Brazilian GAAP financial statements and use them for reports to Brazilian shareholders, CVM filings, determining the legal minimum dividend under Brazilian law and determining our Brazilian tax liability.

Beginning in 2008, significant changes are being made to Brazilian corporate law to permit Brazilian GAAP to converge with International Financial Reporting Standards ( IFRS ). Pursuant to CVM regulations, we are required to report our financial statements in IFRS beginning with the year ending December 31, 2010. We do not currently expect to discontinue U.S. GAAP reporting for the year ended December 31, 2010.

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

**Table of Contents****SELECTED FINANCIAL DATA**

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

**Statement of income data**

	<b>2005</b>	<b>For the year ended December 31,</b>			<b>2009</b>
		<b>2006</b>	<b>2007</b>	<b>2008</b>	
		(US\$ million)			
Net operating revenues	12,792	19,651	32,242	37,426	23,311
Cost of products and services	(6,229)	(10,147)	(16,463)	(17,641)	(13,621)
Selling, general and administrative expenses	(583)	(816)	(1,245)	(1,748)	(1,130)
Research and development	(277)	(481)	(733)	(1,085)	(981)
Impairment of goodwill				(950)	
Other expenses	(271)	(570)	(607)	(1,254)	(1,522)
Operating income	5,432	7,637	13,194	14,748	6,057
Non-operating income (expenses):					
Financial income (expenses)	(437)	(1,011)	(1,291)	(1,975)	351
Exchange and monetary gains, net	299	529	2,553	364	675
Gain on sale of investments	126	674	777	80	40
Subtotal	(12)	192	2,039	(1,531)	1,066
Income before income taxes and equity results	5,420	7,829	15,233	13,217	7,123
Income taxes charge	(880)	(1,432)	(3,201)	(535)	(2,100)
Equity in results of affiliates and joint ventures and change in provision for gains on equity investments	760	710	595	794	433
Net income	5,300	7,107	12,627	13,476	5,456
Net income attributable to non-controlling interests	(459)	(579)	(802)	(258)	(107)
Net income attributable to Company's stockholders	4,841	6,528	11,825	13,218	5,349
Total cash paid to shareholders(1)	1,300	1,300	1,875	2,850	2,724

(1)

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

**Table of Contents****Basic and diluted earnings per share**

	2005	For the year ended December 31,(1)			2009
		2006	2007	2008(5)	
		(US\$, except as noted)			
Earnings per share(2):					
Basic					
Per common share	1.05	1.35	2.41	2.58	0.97
Per preferred share	1.05	1.35	2.41	2.58	0.97
Diluted					
Per common share			2.42	2.61	1.00
Per preferred share			2.42	2.61	1.00
Weighted average number of shares outstanding (in thousands)(3):					
Common shares	2,943,216	2,943,216	2,943,216	3,028,817	3,181,706
Preferred shares	1,662,864	1,908,852	1,889,171	1,946,454	2,030,700
Treasury common shares underlying convertible notes			34,510	56,582	74,998
Treasury preferred shares underlying convertible notes			18,478	30,295	77,580
Total	4,606,080	4,852,068	4,885,375	5,062,148	5,364,984
Distributions to shareholders per share(4):					
In US\$	0.28	0.27	0.39	0.56	0.53
In R\$	0.67	0.58	0.74	1.09	1.01

(1) Share and per-share amounts for all periods give retroactive effect to all forward stock splits. We carried out two-for-one forward stock splits in September 2007 and in May 2006.

(2) Diluted earnings per share for 2007, 2008 and 2009 include preferred shares and common shares underlying the mandatorily convertible notes issued in June 2007. Diluted earnings per share for 2009 also include preferred shares and common shares underlying the mandatorily convertible notes issued in July 2009.

(3) Each common ADS represents one common share and each preferred ADS represents one preferred share.

(4) Our distributions to shareholders may be classified as either dividends or interest on shareholders' equity. Since 2005, part of each distribution has been classified as interest on shareholders' equity and part as dividends. For information about distributions paid to shareholders, see *Share ownership and trading Distributions*.

(5) In July 2008, we issued 80,079,223 common ADSs, 176,847,543 common shares, 63,506,751 preferred ADSs and 100,896,048 preferred shares in a global equity offering. In August 2008, we issued an additional 24,660,419 preferred shares. In October 2008, our Board of Directors approved a share buy-back program, which was terminated on May 27, 2009. While the program was in effect, Vale acquired 18,415,859 common shares and 47,284,800 preferred class A shares, corresponding respectively to 1.5% and 2.4% of the outstanding shares of each class on the date the program was launched. For more information see *Share ownership and trading Purchases of equity securities by the issuer and affiliated purchasers*.

**Balance sheet data**

	2005	At December 31,			2009
		2006	2007	2008	
			(US\$ million)		
Current assets	4,775	12,940	11,380	23,238	21,294
Property, plant and equipment, net	14,166	38,007	54,625	49,329	68,810
Investments in affiliated companies and joint ventures and other investments	1,672	2,353	2,922	2,408	4,585
Other assets	2,031	7,626	7,790	5,017	7,590
<b>Total assets</b>	<b>22,644</b>	<b>60,926</b>	<b>76,717</b>	<b>79,992</b>	<b>102,279</b>
Current liabilities	3,325	7,312	10,083	7,237	9,181
Long-term liabilities(1)	2,410	10,008	13,195	10,173	12,703
Long-term debt(2)	3,714	21,122	17,608	17,535	19,898
<b>Total liabilities</b>	<b>9,449</b>	<b>38,442</b>	<b>40,886</b>	<b>34,945</b>	<b>32,601</b>
Redeemable non-controlling interests		346	375	599	731
Stockholders' equity:					
Capital stock	5,868	8,119	12,306	23,848	23,839
Additional paid-in capital	498	498	498	393	411
Mandatorily convertible notes - common ADSs			1,288	1,288	1,578
Mandatorily convertible notes - preferred ADSs			581	581	1,225
Reserves and retained earnings	5,611	11,056	18,603	16,446	29,882
<b>Total Company shareholders' equity</b>	<b>11,977</b>	<b>19,673</b>	<b>33,276</b>	<b>42,556</b>	<b>56,935</b>
Non-controlling interests	1,218	2,465	2,180	1,892	2,831
<b>Total shareholders' equity</b>	<b>13,195</b>	<b>22,138</b>	<b>35,456</b>	<b>44,448</b>	<b>59,766</b>
<b>Total liabilities and shareholders' equity</b>	<b>22,644</b>	<b>60,926</b>	<b>76,717</b>	<b>79,992</b>	<b>102,279</b>

(1) Excludes long-term debt.

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

**Table of Contents****I. INFORMATION ON THE COMPANY****BUSINESS OVERVIEW****Summary**

We are the second-largest metals and mining company 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 are one of the world's largest producers of manganese ore, ferroalloys, bauxite, alumina and kaolin. We also produce aluminum, copper, coal, potash, cobalt, platinum group metals ( PGMs ) and other products. To support our growth strategy, we are actively engaged in mineral exploration efforts in 21 countries around the globe. We operate large logistics systems in Brazil, including railroads, maritime terminals and a port, which are integrated with our mining operations. In addition, we are building a maritime freight portfolio to transport iron ore. Directly and through affiliates and joint ventures, we have investments in the energy and steel businesses.

The following table presents the breakdown of our total operating revenues attributable to each of our main lines of business, each of which is described following the table.

	Year ended December 31,					
	2007		2008		2009	
	(US\$ million)	(% of total)	(US\$ million)	(% of total)	(US\$ million)	(% of total)
Ferrous minerals:						
Iron ore	US\$ 11,908	36.0%	US\$ 17,775	46.2%	US\$ 12,831	53.6%
Iron ore pellets	2,738	8.3	4,301	11.2	1,352	5.6
Manganese	69	0.2	266	0.7	145	0.6
Ferroalloys	719	2.2	1,211	3.1	372	1.6
Pig iron	81	0.2	146	0.4	45	0.2
Subtotal ferrous minerals	US\$ 15,515	46.9%	US\$ 23,699	61.6%	US\$ 14,745	61.6%
Non-ferrous minerals and metals:						
Nickel	US\$ 10,043	30.3%	US\$ 5,970	15.5%	US\$ 3,260	13.6%
Aluminum	2,722	8.2	3,042	7.9	2,050	8.6
Copper	1,985	6.0	2,029	5.3	1,130	4.7
Fertilizer nutrients	178	0.6	295	0.8	413	1.7
PGMs	314	1.0	401	1.0	132	0.6
Other precious metals	113	0.3	111	0.3	65	0.3
Other non-ferrous minerals(1)	374	1.1	420	1.1	215	0.9
Subtotal non-ferrous minerals/metals	US\$ 15,729	47.5%	US\$ 12,268	31.9%	US\$ 7,265	30.4%
Coal	178	0.5	577	1.5	505	2.1
Logistics services	1,525	4.6	1,607	4.2	1,104	4.6
Other investments	168	0.5	358	0.8	320	1.3
Total operating revenues	US\$ 33,115	100.0%	US\$ 38,509	100.0%	US\$ 23,939	100.0%

(1) Includes kaolin and cobalt.

***Ferrous minerals:***

- i *Iron ore and iron ore pellets.* We operate three systems in Brazil for producing and distributing iron ore. The Northern and the Southeastern Systems are fully integrated, consisting of mines, railroads, a maritime terminal and a port. The Southern System consists of three mining complexes and two maritime terminals. We operate 10 pellet-producing plants in Brazil. We also have a 50% stake in a joint venture that owns three integrated pellet plants in Brazil and a 25% stake in a pellet company in China.

**Table of Contents**

- i *Manganese and ferroalloys.* We conduct our manganese mining operations through subsidiaries in Brazil, and we produce several types of manganese ferroalloys through subsidiaries in Brazil, France and Norway.

***Non-ferrous minerals:***

- i *Nickel.* Our principal nickel mines and processing operations are conducted by our wholly owned subsidiary Vale Inco Limited ( Vale Inco ), which has mining operations in Canada, Indonesia and New Caledonia. We own and operate, or have interests in, nickel refining facilities in the United Kingdom, Japan, Taiwan, South Korea and China.
- i *Aluminum.* We are engaged in bauxite mining, alumina refining, and aluminum metal smelting. In Brazil, we own a bauxite mine, an alumina refinery and an aluminum smelter. We have a 40% interest in Mineração Rio do Norte S.A. ( MRN ), a bauxite producer, whose operations are also located in Brazil.
- i *Copper.* In Brazil, we produce copper concentrates at Sossego in Carajás, in the state of Pará. In Canada, we produce copper concentrate, copper anode and copper cathode in conjunction with our nickel mining operations at Sudbury and Voisey Bay.
- i *Fertilizer nutrients.* We are Brazil's sole producer of potash, with operations in Rosario do Catete, in the state of Sergipe. We are engaged in a major expansion of our fertilizer nutrients business through acquisitions and organic growth.
- i *PGMs.* We produce PGMs as by-products of our nickel mining and processing operations in Canada. The PGMs are concentrated at our Port Colborne facilities, in the Province of Ontario, Canada, and refined at our precious metals refinery in Acton, England.
- i *Other precious metals.* We produce gold and silver as by-products of our nickel mining and processing operations in Canada. Some of these precious metals are upgraded at our facilities in Port Colborne, Ontario, and all are refined by unrelated parties in Canada.
- i *Other non-ferrous minerals.* We are one of the world's largest producers of kaolin for coating used by the paper industry. We produce cobalt as a by-product of our nickel mining and processing operations in Canada and refine it at our Port Colborne facilities.

***Coal:*** We produce metallurgical and thermal coal through Vale Australia Holdings ( Vale Australia ), which operates coal assets in Australia through wholly owned subsidiaries and unincorporated joint ventures. Through our subsidiary Vale Coal Colombia Ltd. Sucursal Colombia ( Vale Colombia ) we produce thermal coal in the Cesar department of Colombia. We have minority interests in Chinese coal and coke producers.

***Logistics services:*** We are a leading provider of logistics services in Brazil, with railroads, maritime terminals and a port. Two of our three iron ore systems incorporate an integrated railroad network linked to automated port and terminal facilities, which provide rail transportation for our mining products, general cargo and passengers, bulk terminal storage, and ship loading services for our mining operations and for customers. We conduct seaborne dry bulk shipping and provide tug boat services. We own and charter vessels to transport our iron ore sold on a cost and freight ( CFR ) basis to customers. Our tug boat services provide an efficient and safe towing service at our terminals in Brazil. We also own a 31.3% interest in



Log-In Logística Intermodal S.A. ( Log-In ), which provides intermodal logistics services in Brazil, Argentina and Uruguay, and a 41.5% interest in MRS Logística S.A. ( MRS ), which transports our iron ore products from the Southern System mines to our Guaíba Island and Itaguaí maritime terminals, in the state of Rio de Janeiro.

## **Table of Contents**

### **Business strategy**

Our mission is to transform mineral resources into prosperity and sustainable development. Our vision is to become the largest mining company in the world, and to surpass established standards of excellence in research, development, project implementation and business operations. We aim to increase our geographical and product diversification and logistics capabilities. Iron ore and nickel will continue to be our main businesses while we boost the production capacity of our copper, coal and fertilizer nutrients businesses. To enhance our competitiveness, we will continue to invest in our railroads, maritime terminals, maritime freight portfolio and power generation capacities. We continue to seek opportunities to make strategic acquisitions, while focusing on disciplined capital management in order to maximize return on invested capital and total return to shareholders. Below we highlight 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 2008, we had an estimated market share of 30.2% of the total volume traded in the seaborne market, and in 2009 it decreased to 24.9% due to the severe impact of the global recession on the steel industry in Brazil and Europe, two major markets for the sale of our iron ore products. 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 strong and long-standing relationships with major customers will help us achieve this goal. We have also encouraged steelmakers to develop steel projects in Brazil through joint ventures in which we may preferably hold minority stakes, in order to create additional demand for our iron ore.

#### *Achieving leadership in the nickel business*

We are the world's second-largest nickel producer, with large-scale, long-life and low-cost operations, a substantial resource base, advanced technology and a robust growth profile. We have refineries in North 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 59% of our nickel sales in 2009. Our long-term goal is to strengthen our leadership in the nickel business.

#### *Developing our copper resources*

We believe that our copper projects, all of which are situated in the Carajás mineral province in the Brazilian state of Pará, could be among the most competitive in the world in terms of investment cost per metric ton of ore. We are developing the Salobo project to produce copper concentrate and testing a new hydro-metallurgical technology at the Usina Hidrometalúrgica de Carajás plant ( UHC ) that could enable the development of other copper projects in this region. We expect these copper mines to benefit from our infrastructure facilities serving the Northern System. We are developing the Tres Valles copper project in Chile, and we have growth options in the copper business in Africa through a joint venture with African Rainbow Minerals Limited ( ARM ). We are engaged in mineral exploration in several countries to increase our reserve base.

#### *Investing in coal*

We are pursuing various opportunities to become a large global player in the coal business. We have coal operating assets and a portfolio of exploration projects in Australia and Colombia, and minority interests in two joint ventures in China. We intend to continue pursuing organic growth in the coal business through the development of the Moatize

project in Mozambique, the development of more advanced coal exploration projects in Australia and Colombia, and mineral exploration initiatives in several countries, such as Mongolia.

## **Table of Contents**

### *Investing in fertilizer nutrients*

We are pursuing various opportunities to become a large producer of fertilizer nutrients in order to benefit from rising global consumption, which is expected to grow significantly in emerging market countries. We expect per capita income growth and biofuels to drive demand for fertilizers. In this context, Brazil is expected to play a key role in the global agricultural market, given its position as a global agricultural powerhouse and its growth potential due to its access to water and arable land for the expansion of the agricultural frontier.

We have developed an understanding of the fertilizer industry, having successfully operated a potash mine in Brazil (Taquari-Vassouras) since the early nineties. Our portfolio of phosphate projects in Peru and Africa and potash projects in Argentina, Brazil and Canada positions us to capture a significant portion of market growth, especially in Brazil. We are engaged in several phosphate and potash mineral exploration projects around the world, and we are seeking opportunities to accelerate our growth strategy. We are currently in the final stage of negotiations to acquire fertilizer assets in Brazil. For more information, see *Significant changes in our business* below.

### *Diversification and expansion of our resource base*

We are actively engaged in a mineral exploration program, with efforts in 21 countries around the globe. We are mainly seeking new deposits of bauxite, coal, copper, iron ore, manganese ore, nickel, phosphates, natural gas, PGMs, potash and uranium. Mineral exploration is an important part of our organic growth strategy.

### *Enhancing our logistics capacity to support our iron ore business*

We believe that the quality of our railway assets and extensive experience as a railroad and port operator, together with the lack of efficient transportation for general cargo in Brazil, 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.

To support our commercial strategy for our iron ore business, we continue to invest in a dedicated maritime freight shuttle service from Brazil to Asia and in the development of distribution centers in Asia and the Middle East in order to minimize freight costs and maximize flexibility so as to enhance the competitiveness of our iron ore business in these regions.

### *Developing energy projects*

Energy management and efficient supply have become a priority for us. As a large consumer of electricity, we believe that investing in power generation projects to support our operations will help protect us against volatility in the price of energy, regulatory uncertainties and the risk of energy shortages. Accordingly, we have developed hydroelectric power generation plants in Brazil, Canada and Indonesia, and we are using the electricity from these projects to supply our internal needs. As a potentially large consumer of natural gas, in 2007 we began investing in natural gas exploration in Brazil through consortia, and in 2009 we made our first discoveries. We are seeking to diversify and optimize our energy matrix through increased use of thermal coal, renewable fuels and natural gas.

## **Significant changes in our business**

We summarize below major acquisitions, divestitures and other significant developments since the beginning of 2009.

## **Table of Contents**

### *Production adjustments*

During the second half of 2009, given the global economic recovery and stronger demand fundamentals for minerals and metals, we resumed iron ore operations in some mines in the Southern and Southeastern Systems in the Brazilian state of Minas Gerais, and we increased the pace of production at the Carajás site. We resumed operations at the Itabasco and Hispanobras pellet plants in July and August, 2009, respectively, and resumed production at the Fábrica and São Luis plants in the first quarter of 2010, at which point all of our pellet plants are in operation.

In the third quarter of 2009, we resumed our manganese ore and ferroalloy operations, with the exception of two ferroalloy plants in Brazil. During the course of 2009, in response to improving market demand for kaolin, we increased production by our subsidiaries CADAM S.A., in the state of Amapá, Brazil, and PPSA, in the state of Pará, Brazil.

### *Acquisition of fertilizer nutrient assets*

In January 2010, we entered into an agreement to acquire 100% of the outstanding shares of Bunge Participações e Investimentos S.A. ( BPI ) for US\$3.8 billion from subsidiaries of Bunge Ltd. BPI's asset portfolio is composed of (i) phosphate rock mines and phosphate assets in Brazil and (ii) a 42.3% stake in the publicly traded Brazilian company Fertilizantes Fosfatados S.A.-Fosfertil ( Fosfertil ). Of the purchase price, US\$1.65 billion will be allocated to the phosphate rock and phosphate assets, and the remaining US\$2.15 billion to the shares of Fosfertil. The acquisition does not involve any retail or distribution business.

We also entered into contracts with Fertilizantes Heringer S.A. ( Heringer ), Fertilizantes do Paraná Ltda. ( Fertipar ), Yara Brasil Fertilizantes S.A. ( Yara ) and The Mosaic Company ( Mosaic ) that give us the right to directly and indirectly acquire Fosfertil shares for the same price per share paid to BPI, US\$12.019, totaling US\$1.9 billion, upon the closing of the BPI acquisition and the satisfaction of other conditions.

As a result of these acquisitions, we will hold a 78.9% stake in Fosfertil, corresponding to 99.8% of the common shares and 68.2% of the preferred shares. The total price to be paid for the acquisition of a 78.9% stake in Fosfertil is US\$4.007 billion. Including BPI's phosphate rock mines and phosphate assets in Brazil, the acquisition of fertilizer nutrients totals US\$5.7 billion.

Pursuant to Brazilian corporate law and capital markets regulations, once the acquisition of the above mentioned stakes in Fosfertil are concluded, we will launch a mandatory offer to buy the remaining 0.19% of the common shares held by the minority shareholders for the same price per share agreed with BPI, Heringer, Fertipar, Yara and Mosaic.

### *Acquisition of copper exploration assets in the African copperbelt*

In the first quarter of 2009, we acquired a 50% interest in a joint venture with African Rainbow Minerals Limited ( ARM ) for CAD81 million. The joint venture will develop and operate the assets of TEAL Exploration & Mining Incorporated ( TEAL ). TEAL has two copper projects in the African copperbelt, Konkola North and Kalumines, which together could represent a nominal production capacity of 65,000 metric tons of copper per year in the next few years, and an extensive copper exploration portfolio.

### *Acquisition of coal assets in Colombia*

In the first quarter of 2009, we acquired 100% of the export coal assets of Cementos Argos S.A. ( Argos ) in Colombia for US\$306 million, including inventories. Argos's coal assets consist of the El Hatillo mine, the Cerro Largo coal deposit, a port and a minority stake in a railroad. Since Colombia is the world's third-largest exporter of high-quality

thermal coal, given its low level of sulfur and high calorific value, we are seeking to build a coal asset platform in the country to enhance our growth options in the coal business.

## **Table of Contents**

### *Acquisition of potash deposits in Argentina and Canada*

In the first quarter of 2009, we acquired 100% of the Rio Colorado project ( Rio Colorado ) in Argentina and 100% of the Regina project in Canada, for US\$850 million from Rio Tinto plc. Rio Colorado includes the development of a mine with an initial nominal capacity of 2.4 million metric tons per year of potash, with potential for expansion to 4.35 million metric tons per year, construction of a 350-kilometer railway spur, port facilities and a power plant. The Regina project is still in the exploration stage, with potential to deliver an estimated annual output of 2.8 million metric tons of potash. Existing infrastructure near the project will allow transportation of the final product to Vancouver on the Canadian west coast, facilitating access to the fast-growing Asian market, or Saint John on the east coast, facilitating access to the Americas and the European market.

### *Acquisition of Corumbá iron ore assets*

In the third quarter of 2009, we acquired from Rio Tinto 100% of the Corumbá open-pit iron ore mining operations in Brazil, including associated logistics assets, inventory of final products, and cash balance, for US\$814 million. The Corumbá iron ore mine is a world-class asset, characterized by high grade and rich in direct-reduction lump ores. The logistics assets support 70% of the operations transportation needs.

### *Increasing our stake in TKCSA*

In the third quarter of 2009, we entered into an agreement with ThyssenKrupp Steel AG to increase our stake in ThyssenKrupp CSA Siderúrgica do Atlântico Ltda. ( TKCSA ) from our current 10% interest to 26.87%, by investing US\$1.424 billion. TKCSA is building an integrated steel slab plant, with nominal capacity of five million metric tons of slab per year, in the state of Rio de Janeiro, Brazil. Start-up is currently scheduled for the first half of 2010. As a strategic partner of ThyssenKrupp, we are the sole and exclusive supplier of iron ore to TKCSA.

### *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 and projects*. The main projects that have come into stream since the beginning of 2009 are summarized below:

We concluded Vargem Grande (formerly Itabiritos), a pellet plant, in the first half of 2009. Vargem Grande s operations have nominal production capacity of 7 million metric tons per year.

In September 2009, we installed and commissioned a longwall at the Carborough Downs coal mine in Queensland, Australia, which is expected to significantly increase nominal production capacity to 4.8 million metric tons per year in 2011.

We are in the initial stage of ramping up our Goro nickel project in New Caledonia. We expect to ramp-up Goro over a three-year period to reach nominal production capacity of 60,000 metric tons per year of nickel and 4,600 metric tons of cobalt.

We concluded the Southeastern Corridor project, expanding the capacity of the EFVM railroad and the Tubarão port and increasing our logistics capacity for iron ore in the Southeastern System.

### *Divestitures and asset sales*

We are always seeking to optimize our portfolio structure. To that end, we dispose of assets from time to time that we have determined to be non-strategic. We summarize below our key dispositions and asset sales since the beginning of 2009.



**Table of Contents**

In the second quarter of 2009, we sold our remaining 2.93% interest in Usiminas Siderúrgicas de Minas Gerais S.A. ( Usiminas ) for US\$273 million.

In July 2009, we entered into an agreement with Suzano Papel e Celulose ( Suzano ) for the sale of forest assets to Suzano, representing a total area of 84,700 hectares, including preservation areas and a eucalyptus plantation in Maranhão, for US\$120 million.

In December 2009, as a result of a strategic review of our downstream nickel operations, we sold The International Metals Reclamation Company ( INMETCO ) for US\$38.6 million and our 65% stake in Jinco Nonferrous Metals Co., Ltd ( Jinco ) for US\$6.5 million. During the same month, we entered into an agreement to sell our 76.7% stake in Inco Advanced Technology Materials (Dalian) Co. Ltd. ( IATM-D ), and our 77% stake in Inco Advanced Technology Materials (Shenyang) Co. Ltd. ( IATM-S ), which operate nickel foam manufacturing plants in China, for US\$7 million, to affiliates of the other shareholders.

In January 2010, we entered into an agreement to sell mineral rights for manganese and iron ore and related properties in the Brazilian state of Bahia for US\$16 million. In addition, we sold three small hydroelectric power plants, which we had used to supply part of the energy requirements of our ferroalloy plants in Minas Gerais, for US\$20 million.

In January 2010, our wholly owned subsidiary Valesul Alumínio S.A. entered into an agreement to sell its aluminum assets, in the state of Rio de Janeiro (Brazil), for US\$31.2 million.

In March 2010, we entered into an agreement with Mosaic and Mitsui & Co. Ltd. ( Mitsui ) to sell minority stakes in the Bayóvar project through a newly-formed company that will control and operate the project in Peru. We agreed to sell 35% of total capital to Mosaic for US\$385 million and 25% of total capital to Mitsui for US\$275 million. Following these transactions, we will retain control of the Bayóvar project, holding 51% of the voting shares and 40% of total capital of the newly formed company.

**Table of Contents**

**LINES OF BUSINESS**

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

**1. Ferrous minerals**

1.1 Iron ore

1.1.1 Operations

1.1.2 Production

1.2 Iron ore pellets

1.2.1 Operations

1.2.2 Production

1.3 Iron ore and iron ore pellets

1.3.1 Customers, sales and marketing

1.3.2 Competition

1.4 Manganese ore

1.5 Ferroalloys

1.6 Manganese ore and ferroalloys:  
sales and competition

1.7 Pig iron

**2. Non-ferrous minerals**

2.1 Nickel

2.1.1 Operations

2.1.2 Production

2.1.3 Customers and sales

2.1.4 Competition

2.2 Aluminum

2.2.1 Bauxite

2.2.2 Alumina

2.2.3 Aluminum

2.2.4 Customers and sales

2.2.5 Competition

2.3 Copper

2.3.1 Operations

- 2.3.2 Production
- 2.3.3 Customers and sales
- 2.3.4 Competition

#### 2.4 Fertilizer nutrients

- 2.4.1 Potash
- 2.4.2 Phosphates
- 2.4.3 Customers and sales
- 2.4.4 Competition

#### 2.5 PGMs and other precious metals

#### 2.6 Other non-ferrous minerals

- 2.6.1 Cobalt
- 2.6.2 Kaolin

### **3. Coal**

- 3.1 Operations
- 3.2 Production
- 3.3 Customers and sales
- 3.4 Competition

### **4. Infrastructure**

- 4.1 Logistics services
  - 4.1.1 Railroads
  - 4.1.2 Ports and maritime terminals
  - 4.1.3 Shipping
- 4.2. Energy
  - 4.2.1 Electric power
  - 4.2.2 Oil and natural gas

### **5. Other investments**

**Table of Contents**

**Table of Contents****1. Ferrous minerals**

Our ferrous minerals business includes iron ore mining, iron ore pellet production, manganese ore mining, ferroalloy production and a pig iron operation. Each of these activities is described below.

**1.1 Iron ore****1.1.1 Operations**

We conduct our iron ore business in Brazil, primarily at the parent-company level and through our wholly owned subsidiary Urucum Mineração S.A. ( Urucum ). These mining and related operations are concentrated in three systems: the Southeastern System, the Southern System and the Northern System, each with its own transportation capability. In addition, we conduct mining operations through our joint venture Samarco.

Company	System	Our share of capital		Partners
		Voting (%)	Total	
Vale	Northern, Southeastern and Southern			
Urucum	Southeastern	100	100	
Samarco		50.0	50.0	BHP Billiton

*Southeastern System*

The Southeastern System mines are located in the Iron Quadrangle region of the state of Minas Gerais, where they are divided into three mining complexes (Itabira, Minas Centrais and Mariana), and in the state of Mato Grosso do Sul, where the mines of Urucum and Corumbá are located.

The ore reserves in the three mining complexes have high ratios of itabirite ore relative to hematite ore. Itabirite ore has iron grade of 35-60% and requires concentration to achieve shipping grade, which is at least 63.5% average iron grade. Urucum ore reserves have high ratios of hematite ore, which has an average grade of 63%.

We conduct open-pit mining operations in the Southeastern System. At the three mining complexes, 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. In September 2009, we concluded the acquisition of Corumbá, where we produce lump ores. At the Urucum and Corumbá mines, we generally process the run-of-mine by means of standard crushing and classification steps, producing only lump ore. In 2009, we produced 100% of the electric energy consumed in the Southeastern System at our hydroelectric power plants (Igarapava, Porto Estrela, Funil, Candonga, Aimorés, Capim Branco I and Capim Branco II).

We own and operate integrated railroad and terminal networks in the three mining complexes, which are accessible by road or by spur tracks of our EFVM railroad. The EFVM railroad connects these mines to the Tubarão port in Vitória, in the state of Espírito Santo. For a more detailed description of the networks, see *Logistics*. Urucum and Corumbá iron ore is delivered to customers by barges through the Paraguay River.

*Southern System*

The Southern System mines are located in the Iron Quadrangle region of the state of Minas Gerais in Brazil. The mines of our subsidiary Minerações Brasileiras Reunidas S.A.-MBR ( MBR ) are operated at the parent-company level pursuant to an asset lease agreement. The Southern System has three major mining complexes: the Minas Itabirito complex (comprised of four mines, with two major beneficiation plants and three secondary beneficiation plants); the Vargem Grande complex (comprised of three mines and one major beneficiation plant); and the Paraopeba complex (comprised of four mines and three beneficiation plants).

**Table of Contents**

We use wet beneficiation processes to convert run-of-mine obtained from open-pit mining operations into sinter feed, lump ore and pellet feed, in addition to *hematitinha*, a product used primarily by Brazilian pig-iron producers. In 2009, we produced 100% of the electric energy consumed in the Southern System at our hydroelectric power plants (Igarapava, Porto Estrela, Funil, Candonga, Capim Branco I and Capim Branco II).

We enter into freight contracts with our affiliate, MRS, a railway company in which we own a 41.5% stake, to transport our iron ore products at market prices from the mines to our Guaíba Island and Itaguaí maritime terminals in the state of Rio de Janeiro.

*Northern System*

The Northern System mines, located in the Carajás mineral province of the Brazilian state of Pará, contain some of the largest iron ore deposits in the world. The reserves are divided into northern, southern and eastern ranges situated 35 kilometers apart. Since 1985, we have been conducting mining activities in the northern range, which is divided into three main mining bodies (N4W, N4E and N5). The Northern System has open-pit mines and an ore-processing plant. The mines are located on public lands for which we hold mining concessions.

Because of the high grade (66.7% on average) of the Northern System deposits, we do not need to operate a concentration plant at Carajás. The beneficiation process consists simply of sizing operations, including screening, hydrocycloning, crushing and filtration. Output from the beneficiation process consists of sinter feed, pellet feed, special fines for direct reduction processes and lump ore. We obtain all of the electrical power for the Northern System at market prices from regional utilities.

We operate an integrated railroad and maritime terminal network in the Northern System. After completion of the beneficiation process, our EFC railroad transports the iron ore to the Ponta da Madeira maritime terminal in the state of Maranhão. To support our Carajás operations, we have housing and other facilities in a nearby township. These operations are accessible by road, air and rail.

*Samarco*

We own 50% of Samarco, which operates an integrated system, comprised of a mine, pipeline, three pellet plants and a port. Samarco's Alegria mine complex, located in Mariana, Minas Gerais, is in the same region as our Southeastern System.

**Table of Contents****1.1.2 Production**

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

Mine/Plant	Type	Production for the year ended December 31,			Recovery rate (%)
		2007 (million metric tons)	2008	2009	
<b>Southeastern System</b>					
<i>Itabira complex</i>					
Cauê(1)	Open pit	24.8	21.5	13.8	65.5
Conceição(1)	Open pit	21.9	20.3	17.3	74.4
<i>Minas Centrais complex</i>					
Água Limpa/Cururu(2)	Open pit	4.2	4.7	1.4	51.7
Gongo Soco	Open pit	6.5	5.0	2.7	88.0
Brucutu	Open pit	21.9	26.4	23.6	76.0
Andrade(3)	Open pit	1.3	1.4	0.7	97.9
<i>Mariana complex</i>					
Alegria	Open pit	13.5	12.3	12.1	73.3
Fábrica Nova(4)	Open pit	14.6	14.0	13.7	77.8
Fazendão(5)	Open pit	3.7	9.8	3.1	100.0
Timbopeba	Open pit	1.3			
Corumbá(6)	Open pit			0.4	55.0
Urucum	Open pit	1.1	1.0	0.5	61.0
Total Southeastern System		114.9	116.4	89.5	
<b>Southern System(7)</b>					
<i>Minas Itabirito complex</i>					
Segredo/João Pereira	Open pit	11.8	12.1	8.4	67.3
Sapocado/Galinheiro(8)	Open pit	17.4	15.1	9.8	61.9
<i>Vargem Grande complex</i>					
Tamanduá(9)	Open pit	10.2	9.8	7.3	79.6
Capitão do Mato(9)	Open pit	11.5	9.7	8.0	79.6
Abóboras	Open pit	6.0	4.2	5.4	100.0
<i>Paraopeba Complex</i>					
Jangada	Open pit	3.9	4.3		
Córrego do Feijão	Open pit	9.3	8.4	5.6	71.8
Capão Xavier	Open pit	13.3	13.5	10.9	84.5
Mar Azul	Open pit	5.9	3.5		
Total Southern System		89.3	80.5	55.2	
<b>Northern System</b>					
<i>Serra Norte(10)</i>					
N4W	Open pit	40.3	44.3	31.0	92.4
N4E	Open pit	15.4	13.2	16.9	92.4
N5(11)	Open pit	36.0	39.1	36.8	92.4



Total Northern System	91.7	96.5	84.6	
Vale	295.9	293.4	229.3	
Samarco(12)	14.5	16.6	17.2	57.7
Total	310.4	310.0	246.5	

- (1) The run-of-mine from Minas do Meio is sent to the Cauê and Conceição concentration plants.
- (2) Água Limpa/Cururu is owned by Baovale, in which we own 100% of the voting shares and 50% of the total shares. Production figures for Água Limpa/Curucu have not been adjusted to reflect our ownership interest.
- (3) The lease for the Andrade mine was terminated in 2009.
- (4) Fábrica Nova ore is sent to the Alegria and Fábrica Nova plants.
- (5) Fazendão ore is sent to the Alegria plant and Samarco.
- (6) Production relative to 4Q09. On a pro forma basis, its production reached 2.0 Mt in 2009.
- (7) Former MBR mines were included in other complexes in the Southern System.
- (8) Galinheiro mine was separated from the Sapecado mine and includes the Pico mine.
- (9) Tamanduá and Capitão do Mato ores are processed at the Vargem Grande plant.
- (10) All Serra Norte ores are processed at the Carajás plant.
- (11) Our former N5E-N and N5-W mines were incorporated in the N5 reserve model.
- (12) Production figures for Samarco, in which we have a 50% interest, have not been adjusted to reflect our ownership interest.

**Table of Contents****1.2 Iron ore pellets****1.2.1 Operations**

Directly and through joint ventures, we produce iron ore pellets in Brazil and in China, as set forth in the following table. The total estimated nominal capacity of the 10 pellet plants directly operated by us, including Hispanobras, is 48 million metric tons per year.

Company	Site of operation	Our share of capital		Partners
		Voting (%)	Total	
	<i>Brazil:</i>			
	Tubarão, Fábrica, Vargem Grande and São Luís			
Vale				
Hispanobras	Tubarão	51.0	50.9	Arcelor Mittal
Samarco	Mariana and Anchieta	50.0	50.0	BHP Billiton
	<i>China:</i>			
				Zhuhai Yueyufeng Iron and Steel Co. Ltd. Pioneer Iron and Steel Group Co. Ltd.
Zhuhai YPM	Zhuhai, Guangdong	25.0	25.0	

In the Tubarão port area, in the Brazilian state of Espírito Santo, we operate our wholly owned pellet plants, Tubarão I and II, four plants we lease under operating leases and our jointly-owned plant, Hispanobras. We send iron ore from our Southeastern System mines to these plants and use our logistics infrastructure to distribute their final products.

Our São Luís pellet plant, located in the Brazilian state of Maranhão, is part of the Northern System. We send Carajás iron ore to this plant and ship its production to customers through our Ponta da Madeira maritime terminal.

The Fábrica and Vargem Grande pellet plants, located in the Brazilian state of Minas Gerais, are part of the Southern System. We send some of the iron ore from the Fábrica Nova mine to the Fábrica plant, and iron ore from the Pico mine to the Vargem Grande plant. We transport pellets from these plants using MRS.

Samarco operates three pellet plants in two operating sites with nominal capacity of 21 million tons per year. The pellet plants are located in the Ponta Ubu unit, in Anchieta, Espírito Santo. Iron ore from Alegria and our Southeastern System mine Fábrica Nova is sent to the Samarco pellet plants using a 396-kilometer pipeline, the longest pipeline in the world for the conveyance of iron ore. Samarco has its own port facilities to transport its production.

The Zhuhai YPM pellet plant, in China, is part of the Yueyufeng Steelmaking Complex. It has port facilities, which we use to send feed from our mines in Brazil. Zhuhai YPM's main customer is Yueyufeng Iron & Steel ( YYS ), which is also located in the Yueyufeng Steelmaking Complex.

We sell pellet feed to our pelletizing joint ventures at market prices. Historically, we have supplied all of the iron ore requirements of our wholly owned pellet plants and joint ventures, except for Samarco and Zhuhai YPM, to which we supply only part of their requirements. Of our total 2009 pellet production, 58.8% was blast furnace pellets, and the remaining 41.2% was direct reduction pellets, which are used in steel mills that employ the direct reduction process rather than blast furnace technology.



**Table of Contents**

The following table sets forth information about our iron ore sales to our pelletizing joint ventures for the periods indicated.

	<b>Sales for the year ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
		(million metric tons)	
Hispanobras	4.7	4.1	1.2
Itabrasco	4.4	3.2(1)	
Kobrasco	4.4	1.6(2)	
Nibrasco	7.4	2.0(3)	
Samarco(4)	7.1	11.3	4.9
Zhuhai YPM(5)		0.8	0.9
<b>Total</b>	<b>28.1</b>	<b>23.0</b>	<b>7.0</b>

(1) Sales through September 2008. We signed a 10-year operating lease for Itabrasco's pellet plant in October 2008.

(2) Sales through May 2008. We signed a five-year operating lease for Kobrasco's pellet plant in June 2008.

(3) Sales through April 2008. We signed a 30-year operating lease for Nibrasco's two pellet plants in May 2008.

(4) In 2007, we sold 1.9 million metric tons of concentrate and 5.2 million metric tons of run-of-mine; in 2008, we sold 1.8 million metric tons of concentrate and 9.5 million metric tons of run-of-mine; and in 2009, we sold 1.1 million metric tons of concentrate and 3.8 million metric tons of run-of-mine.

(5) Zhuhai YPM started operations in January 2008.

**1.2.2 Production**

The following table sets forth information about our iron ore pellet production. The table reflects 100% of production at each facility.

<b>Company</b>	<b>Production for the year ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
		(million metric tons)	
Vale(1)	17.6	26.6	15.3
Hispanobras(5)	4.3	3.8	1.2
Itabrasco(2)	4.0	2.9	
Kobrasco(3)	5.0	2.1	
Nibrasco(4)	9.0	2.7	
Samarco(5)	14.3	17.1	16.1
<b>Total</b>	<b>53.7</b>	<b>55.2</b>	<b>32.6</b>

(1) Figure includes actual production, including production from the four pellet plants we leased in 2008.

- (2) Production through September 2008. We signed a 10-year operating lease contract for Itabrasco's pellet plant in October 2008.
- (3) Production through May 2008. We signed a five-year operating lease contract for Kobrasco's pellet plant in June 2008.
- (4) Production through April 2008. We signed a 30-year operating lease contract for Nibrasco's two pellet plants in May 2008.
- (5) Production figures for Hispanobras and Samarco have not been adjusted to reflect our ownership interest.

### **1.3 Iron ore and iron ore pellets**

#### **1.3.1 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 Demand and prices*.

In 2009, China accounted for 56.8% of our iron ore and iron ore pellet shipments, and Asia as a whole accounted for 72.7%. Europe accounted for 13.4%, followed by Brazil with 10.2%. Our 10 largest customers collectively purchased 96.6 million metric tons of iron ore and iron ore pellets from us, representing 39% of our 2009 iron ore and iron ore pellet shipments and 38% of our total iron ore and iron ore pellet revenues. In 2009, no individual customer accounted for more than 10.0% of our iron ore and iron ore pellet shipments.

## **Table of Contents**

In 2009, the Asian market (mainly Japan and South Korea) and the European market were the primary markets for our blast furnace pellets, while North America, the Middle East 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 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, Muscat (Oman) and Shanghai (China), which support the sales made by our wholly owned subsidiary located in St. Prex, Switzerland. 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.

### **1.3.2 Competition**

The global iron ore and iron ore pellet markets are highly competitive. The main factors affecting competition are price, quality, 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 and Rio Tinto Ltd. 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 the market is very strong, our quality differential is in many cases more valuable to customers than a freight differential. Second, steel companies often develop sales relationships based on a reliable supply of a specific mix of iron ore and iron ore pellets. We have a customer-oriented marketing policy and place specialized personnel in direct contact with our customers to help determine the blend that best suits each particular customer.

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 are developing 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 ordered new ships, purchased used vessels and entered into medium- and long-term freight contracts.

Our principal competitors in Europe are Kumba Iron Ore Limited, Luossavaara Kiirunavaara AB ( LKAB ), Société Nationale Industrielle et Minière ( SNIM ), Rio Tinto Ltd. and BHP Billiton. We are competitive in the European market not only for the same reasons we are competitive 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, MHAG and Bahia Mineração. At the same time, there are vertically integrated steel companies such as Companhia Siderúrgica Nacional ( CSN ) and V&M do Brasil S.A. ( Mannesmann ). Usiminas has become partially integrated with the acquisition of an iron ore company. 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.

**Table of Contents**

With respect to pellets, our major competitors are LKAB, Cleveland-Cliffs Inc., Quebec Cartier Mining Co., Iron Ore Company of Canada (a subsidiary of Rio Tinto Ltd.) and Gulf Industrial Investment Co.

**1.4 Manganese ore**

We conduct our manganese mining operations in Brazil through our wholly owned subsidiaries Vale Manganês S.A. ( Vale Manganês ) and Urucum.

Company	Location	Our share of capital	
		Voting	Total
			(%)
	Brazil:		
	Pará and Minas		
Vale Manganês(1)	Gerais	100	100
Urucum	Mato Grosso do Sul	100	100

(1) Vale Manganês's mines are Azul and Morro da Mina.

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.

We operate on-site beneficiation plants at our Azul mine and at the Urucum mines, which are accessible by road. The Azul and Urucum mines have high-grade ores (at least 40% manganese grade), while our Morro da Mina mine has low-grade ores. All of these mines obtain electrical power at market prices from regional electric utilities. The following table sets forth information about our manganese production.

Mine	Type	Production for the year ended			Recovery rate (%)
		2007	2008	2009	
		December 31,			
		(million metric tons)			
Azul(1)	Open pit	0.9	2.0	1.4	62.4
Morro da Mina	Open pit	0.1	0.1	0.1	93.2
Urucum(2)	Underground	0.3	0.2	0.2	83.0
Total		1.3	2.4	1.7	



- (1) Given the need to prioritize iron ore transportation through the EFC railroad, we shut down the Azul mine from July to December 2007.
- (2) Urucum has a five-year renewable lease agreement with CPFL for its plant in Corumbá, in the Brazilian state of Mato Grosso do Sul.

## 1.5 Ferroalloys

The following table sets forth the subsidiaries through which we conduct our ferroalloys business.

Company	Location	Our share of capital	
		Voting	Total
			(%)
Vale Manganês	Minas Gerais and Bahia, Brazil	100	100
Urucum	Mato Grosso do Sul, Brazil	100	100
Vale Manganèse France	Dunkerque, France	100	100
Vale Manganese Norway AS	Mo I Rana, Norway	100	100

We produce several types of manganese ferroalloys, such as high carbon and medium carbon ferro-manganese and ferro-silicon manganese. Our facilities have nominal capacity of 651,000 metric tons per year. The production of ferroalloys consumes significant amounts of electricity, representing 4.8% of our total

**Table of Contents**

consumption in 2009. The electricity supply for our ferroalloy plant in Dunkerque, France and Mo I Rana, Norway are provided through long-term contracts. For information on the risks associated with potential energy shortages, see *Risk factors*.

The following table sets forth information about our ferroalloys production.

Company	Production for the year ended December 31,		
	2007	2008	2009
	(thousand metric tons)		
Vale Manganês(1)	288	288	99
Urucum(2)	22	20	0
Vale Manganèse France(3)	103	55	45
Vale Manganese Norway AS	129	112	79
Total	542	475	223

(1) Vale Manganês has five plants in Brazil: Santa Rita, Barbacena and Ouro Preto in the state of Minas Gerais; and Simões Filho in the state of Bahia. We sold Vale Manganês's São João del-Rei plant in June 2007.

(2) Urucum has one plant in Corumbá in the Brazilian state of Mato Grosso do Sul.

(3) From August to October 2007, we shut down our furnace at Vale Manganèse France due to technical problems. We shut it down again in August 2008 due to technical problems, and it was restarted in September 2009.

**1.6 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 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 and logistics and reductants. We compete both with 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 Demand and prices*.

**1.7 Pig iron**

We conduct a pig iron operation in northern Brazil. This operation was conducted through our wholly owned subsidiary Ferro-Gusa Carajás S.A. ( FGC ) until April 2008, when FGC was merged into Vale.

We utilize two conventional mini-blast furnaces to produce 350,000 metric tons of pig iron per year, using iron ore from our Carajás mines in northern Brazil. The charcoal source is exclusively from eucalyptus trees grown in a cultivated forest of 82,000 acres, with the total project encompassing 200,000 acres. In July 2009, we sold this forest to Suzano Papel e Celulose ( Suzano ) but retained a sufficient wood inventory to keep the mini blast furnaces

operating through the first half of 2012.

**Table of Contents****2. Non-ferrous minerals****2.1 Nickel****2.1.1 Operations**

We conduct our nickel operations primarily through our wholly owned subsidiary Vale Inco. Vale Inco operates two nickel production systems, one in North America and Europe and the other in Asia and the South Pacific, as set forth in the following table.

<b>System</b>	<b>Location</b>	<b>Operations</b>
North America & Europe	Canada Sudbury, Ontario	Fully integrated mines, mill, smelter and refinery (producer of intermediates and finished nickel and by-products)
	Canada Thompson, Manitoba	Fully integrated mines, mill, smelter and refinery (producer of finished nickel and by-products)
	Canada Voisey Bay, Newfoundland and Labrador	Mine and mill (producer of nickel concentrates and by-products)
Asia & the South Pacific	U.K. Clydach, Wales	Stand-alone nickel refinery (producer of finished nickel)
	Indonesia Sorowako, Sulawesi(1)	Mining and processing operations (producer of nickel matte, an intermediate product)
	New Caledonia Southern Province (2)	Mining and processing operations (producer of nickel oxide and cobalt)
	Japan Matsuzaka(3)	Stand-alone nickel refinery (producer of finished nickel)
	Taiwan Kaoshiung(4)	Stand-alone nickel refinery (producer of finished nickel)
	China Dalian, Liaoning(5)	Stand-alone nickel refinery (producer of finished nickel)
	South Korea Onsan(6)	Stand-alone nickel refinery (producer of finished nickel)

(1) Operations conducted through our 59.1%-owned subsidiary PT International Nickel Indonesia Tbk.

(2) Operations conducted through our 74%-owned subsidiary Vale Inco Nouvelle-Calédonie S.A.S.

(3) Operations conducted through our 76%-owned subsidiary Vale Inco Japan Limited.

(4) Operations conducted through our 49.9%-owned subsidiary Taiwan Nickel Refining Corporation.

(5) Operations conducted through our 98.3%-owned subsidiary Vale Inco New Nickel Materials (Dalian) Co. Ltd.

(6) Operations conducted through our 25% interest in Korea Nickel Corporation.

*North America & Europe**Sudbury operations*

Our long-established mines in Sudbury, Ontario, are primarily underground operations with nickel sulfide ore bodies. These ore bodies also contain co-deposits of copper, cobalt, PGMs, gold and silver. We have integrated mining, milling, smelting and refining operations to process ore into finished nickel at Sudbury. We also smelt and refine nickel concentrates from our Voisey Bay operations. We ship a nickel intermediate product, nickel oxide, from our Sudbury smelter to our nickel refineries in Wales, Taiwan, China and South Korea for processing into finished nickel. In 2009, we produced 31% of the electric energy consumed in Sudbury at our hydroelectric power plants there. The remaining electricity was purchased from Ontario's provincial electricity grid.

In July 2009, unionized maintenance and production employees at our Sudbury operations went on strike after rejecting a settlement offer for a new three-year collective bargaining agreement. We partially resumed production in September 2009, with a focus on copper. We are operating two high-copper mining zones and our Clarabelle Mill to produce copper concentrates. During the first quarter of 2010, we shifted our focus to nickel and partially resumed operations at the Garson and Coleman mines and the Copper Cliff smelter in Sudbury from which we send feed to the Clydach Refinery.

On March 31, 2009, members of USW Local 2020-005, that represents office, technical and professional employees, ratified a new three-year collective agreement with us. This agreement includes increases to salaries in each of the three years, a defined contribution pension plan for new employees and the

## **Table of Contents**

introduction of an annual incentive plan that supports the achievement of strategic objectives and rewards performance and various other improvements to collective agreement language.

### *Thompson operations*

Our long-established mines in Thompson, Manitoba, are primarily underground operations with nickel sulfide ore bodies. The ore bodies also contain co-deposits of copper and cobalt. We have integrated mining, milling, smelting and refining operations to process ore into finished nickel at Thompson. We also smelt and refine an intermediate product, nickel concentrate, from our Voisey Bay operations. Low-cost energy is available from purchased hydroelectric power at our Thompson operations.

### *Voisey Bay operations*

Our Voisey Bay operation in Newfoundland and Labrador is comprised of Ovoid, an open-pit mine, and deposits with the potential for underground operations at a later stage. We mine nickel sulfide ore bodies, which also contain co-deposits of copper and cobalt. We mill Voisey Bay ore on site and ship it as an intermediate product (nickel concentrates) primarily to our Sudbury and Thompson operations for final processing (smelting and refining). The electricity requirements of our Voisey Bay operations are supplied through diesel generators.

In August 2009, our unionized employees at our Voisey Bay operations went on strike after rejecting a settlement offer for a new three-year collective bargaining agreement. During the first quarter of 2010, we resumed production at the Voisey Bay Ovoid mine and the mill, which supplies nickel concentrates to our operations in Thompson, Manitoba and Sudbury, Ontario and copper concentrates to customers in Europe.

### *Clydach operations*

Clydach is a stand-alone nickel refinery in the U.K. that processes a nickel intermediate product, nickel oxide, supplied from our operations to produce finished nickel in the form of powders and pellets.

### *Asia & the South Pacific*

#### *Sulawesi operations*

Our subsidiary PTI operates an open cast mining area and related processing facility in Sorowako on the Island of Sulawesi, Indonesia. PTI mines nickel laterite saprolite ore and produces an intermediate product (nickel matte), which is shipped primarily to our nickel refinery in Japan. Pursuant to life-of-mine off-take agreements, PTI sells 80% of its production to our wholly owned subsidiary Vale Inco and 20% of its production to Sumitomo Metal Mining Co., Ltd. ( Sumitomo ). PTI is a public company whose shares are traded on the Indonesia Stock Exchange. We hold 59.1% of its share capital, Sumitomo holds 20.1%, 20.1% is publicly held and 0.7% is held by others.

Energy costs are a significant component of our nickel production costs for the processing of lateritic ores at our PTI operations in Indonesia. A major part of the electric furnace power requirements of PTI is supplied at low cost by its two hydroelectric power plants on the Larona River, Larona and Balambano. PTI has thermal generating facilities in order to supplement its hydroelectric power supply with a source of energy that is not subject to hydrological factors. In 2009, the hydroelectric power plants provided 96% of the electric energy consumed at our Indonesian operations, and the thermal generators provided the remainder.

We have committed to maintain a minimum 20% public float of PTI shares. In furtherance of this commitment, in August 2009 we sold, for US\$88 million, 2.07% of PTI's outstanding shares (205,680,000 shares).



## **Table of Contents**

### *Asian refinery operations*

Our 76%-owned subsidiary Vale Inco Japan Limited operates a refinery in Matsuzaka, which produces intermediate and finished nickel products, primarily using nickel matte sourced from PTI. Vale Inco Japan is a private company. The minority interest is held by Sumitomo (13%), Mitsui & Co., Ltd. (7%) and other Japanese companies (4%).

We also operate or have investments in nickel refining operations in Taiwan through our 49.9% stake in Taiwan Nickel Refining Corporation ( TNRC ), China through our 98.3% interest in Vale Inco New Nickel Materials (Dalian) Co. Ltd. ( VINNM ) and South Korea through our 25% stake in Korea Nickel Corporation ( KNC ). TNRC, INNEM and KNC produce finished nickel for the local stainless steel industry in Taiwan, China and South Korea, primarily using intermediate products containing about 75% nickel (in the form of nickel oxide) from Vale Inco Japan and our Sudbury operations. These refining operations are expected to start receiving nickel oxide from Goro in 2010.

### *New Caledonian operations*

We are in the initial stage of ramping up our Goro nickel project in New Caledonia in the South Pacific. Goro utilizes a High Pressure Acid Leach ( HPAL ) process to treat laterite ores. The construction of the project is complete and commissioning is underway. We expect to ramp-up Goro over a three-year period to reach nominal production capacity of 60,000 metric tons per year of nickel contained in nickel oxide and 4,600 metric tons of cobalt.

### *Other operations*

We process and sell nickel powders through our wholly owned subsidiary Novamet Specialty Products Corporation, in Wyckoff, New Jersey (United States).

## **2.1.2 Production**

The following table sets forth our annual mine production by operating mine (or on an aggregate basis for PTI because it has mining areas rather than mines) and the average percentage grades of nickel and copper. The mine production at PTI represents the product from PTI's dryer kilns delivered to PTI's smelting operations and does not include nickel losses due to smelting. For our Sudbury, Thompson and Voisey 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.



**Table of Contents**

	2007		2008				2009		
	(thousands of metric tons, except percentages)								
	Grade		Grade		Grade				
	%	%	%	%	%	%			
Production	Copper	Nickel	Production	Copper	Nickel	Production	Copper	Nickel	
<i>Ontario operating mines</i>									
Copper Cliff North	1,078	0.92	0.84	1,165	1.01	1.01	524	0.96	1.06
Copper Cliff South(1)	883	1.71	1.46	771	1.67	1.48	78	1.45	1.40
Creighton	963	1.62	2.08	1,001	1.56	2.14	395	1.57	1.82
Stobie	2,850	0.68	0.72	2,892	0.65	0.72	1,198	0.64	0.72
Garson	692	1.58	1.59	840	1.72	1.69	328	1.93	1.45
Coleman	1,408	2.75	1.74	1,425	2.66	1.62	624	3.28	1.64
Gertrude	12	0.25	0.66	124	0.29	0.72	–	–	–
Total Ontario operations	7,887	1.39%	1.25%	8,219	1.36%	1.26%	3,145	1.49	1.19
<i>Manitoba operating mines</i>									
Thompson	1,380	–	1.83	1,320	–	1.77	1,270	–	1.98
Birchtree	1,164	–	1.52	971	–	1.51	769	–	1.48
Total Manitoba operations	2,545	–	1.69%	2,291	–	1.66%	2,040	–	1.79
<i>Voisey Bay operating mines</i>									
Ovoid	2,147	2.47	3.74	2,385	2.38	3.50	990	2.57	3.20
Total Voisey Bay operations	2,147	2.47%	3.74%	2,385	2.38%	3.50%	990	2.57	3.20
<i>Sulawesi operating mining areas</i>									
Sorowako	4,615	–	2.03	4,258	–	2.08	3,598	–	2.02
Pomalaa(2)	645	–	2.30	417	–	2.29	–	–	–
Total Sulawesi operations	5,260	–	2.06%	4,675	–	2.10%	3,598	–	2.02

(1) This mine has been closed indefinitely since January 2009.

(2) This mine has been closed indefinitely since May 2008.

The following table sets forth information about our nickel production, including: (i) nickel refined through our facilities, (ii) nickel further refined into specialty products, and (iii) intermediates designated for sale. The numbers below are reported on an ore-source basis.

Mine	Type	Production for the year ended December 31,		
		2007	2008	2009
			(thousand metric tons)	
Sudbury(1)	Underground	70.7	85.3	43.6
Thompson(1)	Underground	29.8	28.9	28.8
Voisey Bay(2)	Open pit	58.9	77.5	39.7
Sorowako(3)	Open cast	75.8	68.3	68.8
External(4)	–	12.7	15.4	5.8
Total(5)		247.9	275.4	186.7

(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, as well as some finished nickel produced by unrelated parties under toll-smelting and toll-refining arrangements.

(3) We have a 59.1% interest in PTI, which owns the Sorowako mines, and these figures include the minority interests.

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

(5) Excludes finished nickel produced under toll-smelting and refining arrangements covering purchased intermediates with unrelated parties. Unrelated-party tolling of purchased intermediates was 14.2 thousand metric tons in 2007, 7.5 thousand metric tons in 2008 and 5.2 thousand metric tons in 2009.

## **Table of Contents**

### **2.1.3 Customers and sales**

Our nickel customers are broadly distributed on a global basis. In 2009, 65.3% of our total nickel sales were delivered to customers in Asia, 21.9% to North America, 11.7% to Europe and 1.1% 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 London Metal Exchange ( LME ), and most nickel products are priced according to a discount or premium to the LME price, depending 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 with various levels of nickel content, (ii) nickel pig iron has 1.5-6% nickel, (iii) ferro-nickel has 10-40% nickel, (iv) 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, strips and foams); and

size.

In 2009, the principal end-use applications for nickel were:

austenitic stainless steel (60-65% of global nickel consumption);

non-ferrous alloys, alloy steels and foundry applications (15-20% of global nickel consumption);

nickel plating (9% of global nickel consumption); and

specialty applications, such as batteries, chemicals and powder metallurgy (5-10% of global nickel consumption).

In 2009, 59% of our refined nickel sales were made into non-stainless steel applications, compared to the industry average for primary nickel producers of 35%. 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 offices in Saddle Brook, New Jersey (United States), London (England), St. Prex (Switzerland), Tokyo (Japan), Hong Kong, Shanghai (China), Kaohsiung (Taiwan), Bangkok (Thailand) and Bridgetown (Barbados). For information about demand and prices, see below *Operating and financial review and prospects* Demand and 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, and sophisticated exploration and processing technologies.

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.

**Table of Contents**

Our nickel deliveries represented 17% of global consumption for primary nickel in 2009. 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, Jinchuan Nonferrous Metals Corporation, BHP Billiton plc and Xstrata plc. Together with us, these companies accounted for about 58% of global finished primary nickel production in 2009.

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 43-49% of total nickel used for stainless steels, and primary nickel has accounted for about 51-57%. In 2006, a new primary nickel product entered the market, known as nickel pig iron. This is a low-grade nickel product made in China from imported lateritic ores (primarily from the Philippines and Indonesia) that is suitable primarily for use in stainless steel production. In 2009, Chinese nickel pig iron and ferro-nickel production totaled an estimated 94,500 metric tons, representing 7% of world primary nickel supply.

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.

**2.2 Aluminum**

We operate our aluminum businesses at the parent-company level and through subsidiaries and joint ventures, as set forth in the following table.

Company	Business	Our share of capital		Partners
		Voting (%)	Total	
Vale (Paragominas mine)	Bauxite	100	100	
MRN	Bauxite	40.0	40.0	Rio Tinto Alcan Brasil Ltda., BHP Billiton Metais S.A., Companhia Brasileira de Alumínio, Alcoa Alumínio S.A., Alcoa World Alumina LLC, Alcoa World Alumina Brasil Participações Ltda. and Norsk Hydro Brasil Ltda.
Alunorte	Alumina	59.0	57.0	Hydro Aluminum Brasil Investment BV, Companhia Brasileira de Alumínio, Nippon Amazon Aluminum Co., Ltd., Japan Alunorte Investment Co., Ltd. and Mitsui & Co., Ltd.

CAP	Alumina	61.0	61.0	Hydro Aluminum Para BV and Dubai Aluminum Company Limited
Albras	Aluminum	51.0	51.0	Nippon Amazon Aluminum Co., Ltd.
Valesul(1)	Aluminum	100	100	

(1) In January 2010, Valesul entered into an agreement to sell its aluminum assets.

### 2.2.1 Bauxite

We conduct our bauxite operations through our joint venture Mineração Rio do Norte S.A. ( MRN ) and at the parent-company level.

*MRN.* MRN, which is located in the northern region of the Brazilian state of Pará, is one of the largest bauxite operations in the world, operating four open-pit bauxite mines that produce high quality bauxite. In addition, MRN controls substantial additional high quality bauxite reserves.

**Table of Contents**

MRN also operates ore beneficiation facilities at its mines, which are connected by rail to a loading terminal and port facilities on the Trombetas River, a tributary of the Amazon River, that can handle vessels of up to 60,000 deadweight tons (DWT). MRN owns and operates the rail and the port facilities serving its mines. The MRN mines are accessible by road from the port area and obtain electricity from their own thermal power plant.

*Paragominas mine.* Operations at our Paragominas mine, in the Brazilian state of Pará, began in the first quarter of 2007 to supply Alunorte's alumina refinery. The first expansion of Paragominas (Paragominas II) was concluded in the second quarter of 2008. The mine produces a wet 12% moisture bauxite, and the bauxite quality is similar to that of MRN. The Paragominas site has a beneficiation plant with milling and a 244-kilometer slurry pipeline. We obtain electricity from Eletronorte, a state-owned power generation company in Brazil.

The following table sets forth information about bauxite ore production at our mining sites.

<b>Production for the year ended</b>					
<b>December 31,</b>					
<b>Mine(1)</b>	<b>Type</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Recovery rate</b>
		(million metric tons)			(%)
<i>MRN</i>					
Almeidas	Open pit	4.8	3.6	2.2	
Aviso	Open pit	14.4	14.5	13.5	
Saracá V	Open pit	2.1	2.3	0.9	
Saracá W	Open pit	3.5	3.9	4.1	
Total MRN		24.8	24.2	20.7	72-77
<i>Paragominas</i>					
Miltonia 3	Open pit	4.4	7.3	10.1	70

(1) These figures represent run-of-mine production.

The following table sets forth information about our bauxite production.

<b>Production for the year ended</b>					
<b>December 31,</b>					
<b>Mine</b>	<b>Type</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Recovery rate</b>
			(million metric tons)		(%)
MRN	Open pit	18.1	18.1	15.6	77

Paragominas	Open pit	1.9	4.4	6.2	70
-------------	----------	-----	-----	-----	----

### 2.2.2 Alumina

We conduct our alumina operations in Brazil, through our subsidiary Alunorte Alumina do Norte do Brasil S.A. ( Alunorte ), which produces alumina by refining bauxite supplied by MRN and the Paragominas mine. The Alunorte plant is the largest alumina refinery in the world, with a nominal production capacity of 6.3 million metric tons per year, after the last expansion concluded in the second quarter of 2008.

Alunorte sells alumina to our subsidiary Albras Alumínio Brasileiro S.A. ( Albras ), its principal customer, and to unaffiliated customers. Albras aluminum production facilities are located nearby, in the city



**Table of Contents**

of Barcarena in the state of Pará, and Alunorte and Albras share infrastructure and other resources. The following table sets forth information on our alumina production.

Company	Production for the year ended December 31,		
	2007	2008	2009
	(million metric tons)		
Alunorte	4.3	5.0	5.9

**2.2.3 Aluminum**

We conduct our aluminum operations in Brazil through our subsidiary Albras. The Albras smelter, located in Barcarena, in the state of Pará, is one of the largest aluminum plants in the Americas, with a nominal capacity of 455,000 metric tons per year. Albras produces aluminum using alumina supplied by Alunorte. Alunorte supplied 100% of Albras alumina requirements in 2009. Albras produces pure metal ingots.

Aluminum is produced from alumina by means of a continuous electro-chemical process, which requires substantial amounts of electricity. Albras purchases electric power from Eletronorte, a state-owned power generating facility. Eletronorte generates electricity at the Tucuruí hydroelectric power plant located on the Tocantins River. This plant is the sole source of electrical power in the region in the quantities required for Albras operations. Albras consumes approximately one-fifth of the non-peak period output of the Tucuruí plant.

The following table sets forth information on our aluminum and aluminum alloys production.

Company	Production for the year ended December 31,		
	2007	2008	2009
	(thousand metric tons)		
Albras	455	455	450
Valesul(1)	95	87	9
Total	551	543	459

(1) In January 2010, we entered into an agreement to sell Valesul's aluminum assets (in the Brazilian state of Rio de Janeiro) for US\$31.2 million. In 2007, 2008 and 2009, Valesul recycled 13,000, 15,000 and 18,000 metric tons, respectively, of aluminum scrap from unrelated parties. As of April 1, 2009, Valesul ceased its aluminum smelting operations and began production of billets for extrusion, using purchased aluminum ingots and scrap as its main raw materials. It produced 25,800 metric tons of billets in 2009.

**2.2.4 Customers and sales**

*Bauxite.* MRN produces bauxite for sale on a take-or-pay basis to the joint venture partners. Excess production may be sold to customers. The joint venture partners pay a price that is determined by a formula linked to the price of aluminum for three-month futures contracts on the LME and to the price of alumina FOB Australia. In 2009, our subsidiary Alunorte purchased 57.73% of its bauxite requirements from MRN. Paragominas sells all of its production

to our subsidiary Alunorte, which corresponds to 42.27% of its bauxite requirements in 2009.

*Alumina.* Each Alunorte partner must purchase on a take-or-pay basis all alumina produced by Alunorte in proportion to its respective interest. The partners pay the same price, which is determined by a formula based on the price of aluminum for three-month futures contracts on the LME. We usually use a portion of our share of Alunorte's alumina production to supply Albras, and we sell the remainder to customers in Argentina, Canada, Egypt, Norway, the United States and other countries.

*Aluminum.* Each Albras partner must purchase on a take-or-pay basis all aluminum produced by Albras in proportion to its ownership interests. We generally market our aluminum in the global markets, mainly Asia and Europe, to customers in the aluminum industry. Valesul's aluminum products were sold primarily in the Brazilian market.

**Table of Contents****2.2.5 Competition**

*Alumina.* The alumina market is competitive, but small compared to the primary aluminum market, because many of the major aluminum-producing companies have integrated bauxite, alumina and aluminum operations. Competition in the alumina market is based primarily on quality, reliability of supply and price, which is directly related to lower costs and logistics. We believe that Alunorte is competitive in the alumina market because of the high quality of its alumina, its advantages in scale and technology, lower conversion costs relative to other refineries on the Atlantic, its efficient port facilities, and the ongoing commitment of its shareholders to purchase a substantial portion of its annual production to place it both in Brazilian and other markets.

*Aluminum.* The global aluminum market is highly competitive. The world's largest producers are subsidiaries and affiliates of Alcoa, Rusal, Rio Tinto, Chalco, Norsk Hydro and BHP Billiton. As primary aluminum is a commodity, competition in the aluminum market is based primarily on the economics of transportation and the costs of production. We believe that Albras is competitive in the global aluminum market because of its relatively efficient and accessible port facilities and alumina supply.

**2.3 Copper****2.3.1 Operations**

We conduct our copper operations at the parent-company level in Brazil and through our subsidiary Vale Inco in Canada.

Company	Location	Our share of capital	
		Voting	Total
			(%)
Vale	Brazil		
Vale Inco	Canada	100	100

*Brazilian operations*

Our Sossego copper mine in Carajás, in the state of Pará, has two main copper ore bodies, Sossego and Sequeirinho. The copper ore is mined by 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. 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 the Carajás air and rail facilities and a power line that allows us to purchase electrical power at market prices. We have a long-term energy supply contract with Eletronorte.

In December 2008, we concluded the construction of the Usina Hidrometalúrgica de Carajás plant ( UHC ), located at the Sossego mining site, to test the application of hydro-metallurgical technology for the industrial-scale processing of copper concentrate to produce copper cathode. In 2009, we produced 2,178 metric tons of copper cathode in this plant using copper concentrate from our Sossego mine. The testing program will continue until the end of 2010 and the information gathered will be used to design and evaluate the feasibility of a larger hydro-metallurgical plant. If proven to be efficient, we believe this technology could be used to process the sulfide ore produced at the mines in the

Carajás mineral province at a relatively low cost.

*Canadian operations*

In Canada, we recover copper in conjunction with our nickel operations, principally at Sudbury and Voisey Bay. At Sudbury, we produce two intermediate copper products, copper concentrate and copper anodes,

**Table of Contents**

and we also produce electrowon copper cathode as a by-product of our nickel refining operations. At Voisey Bay, we produce copper concentrates. For information about strikes affecting some of our Canadian nickel operations, see *Management and employees Employees*.

**2.3.2 Production**

The following table sets forth information on our copper production.

Mine	Type	Production for the year ended December 31,		
		2007	2008 (thousand metric tons)	2009
<i>Brazil:</i>				
Sossego	Open pit	118	126	117
<i>Canada:</i>				
Sudbury	Underground	113	115	42
Voisey Bay	Open pit	42	55	24
Thompson	Underground	1	1	1
External(1)		9	14	14
Total		284	312	198

(1) We process copper at our facilities using feed purchased from unrelated parties.

**2.3.3 Customers and sales**

Copper concentrates from Sossego are sold under medium- and long-term contracts to copper smelters in South America, Europe and Asia. We have long-term off-take agreements to sell the entire production of copper concentrate from the first phase of the Salobo project to smelters. Electrowon copper from UHC is mainly sold in Brazil under short-term sales agreements. We have long-term copper supply agreements with Xstrata Copper Canada for the sale of copper anodes and copper concentrates produced in Sudbury. Copper in concentrates from Voisey Bay are sold under medium-term contracts to customers in Europe. Electrowon copper from Sudbury is sold in North America under short-term sales agreements.

**2.3.4 Competition**

The global copper cathode 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 Codelco, Freeport-McMoRan, Aurubis, Jiangxi and Xstrata, operating at the parent-company level or through subsidiaries. Our participation in the global copper cathode 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, the main producers are mining companies located in South America, Indonesia and Australia, while consumers are custom smelters located in Europe and Asia. Competition in the 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 Freeport-McMoRan, BHP Billiton, Xstrata and Rio Tinto, operating at the parent-company level or through subsidiaries. Our market share in 2009 was about 3% of the total custom copper concentrate market.

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

**Table of Contents**

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 are Anglo American, Xstrata and Codelco, operating at the parent-company level or through subsidiaries.

**2.4 Fertilizer nutrients****2.4.1 Potash**

We conduct potash operations in Brazil at the parent-company level. We lease Taquari-Vassouras, the only potash mine in Brazil (in Rosario do Catete, in the state of Sergipe), from Petrobras Petróleo Brasileiro S.A., the Brazilian state-owned oil company. The lease, signed in 1991, became effective in 1992 for a period of 25 years.

The following table sets forth information on our potash production.

Mine	Type	Production for the year ended December 31,			Recovery rate (%)
		2007	2008	2009	
		(thousand metric tons)			
Taquari-Vassouras	Underground	671	607	717	87.6

**2.4.2 Phosphates**

We have agreed to acquire a 78.9% stake (direct and indirect) in Fosfertil and 100% of BPI. See *Significant changes in our business*. Fosfertil is a Brazilian producer of phosphate rock, phosphates fertilizers ( P ) (e.g., monoammonium phosphate (MAP), diammonium phosphate (DAP), triple superphosphate (TSP) and single superphosphate (SSP)) and nitrogen ( N ) fertilizers (e.g., ammonium nitrate and urea). It is the largest producer of P and N crop nutrients in Brazil. Fosfertil operates three phosphate rock mines: Catalão, in the state of Goiás, Tapira and Patos de Minas, both in the state of Minas Gerais. In addition, it is developing Salitre, a greenfield project in Patrocínio, in the state of Minas Gerais. BPI owns two phosphate rock mines, Araxá, in the state of Minas Gerais, and Cajati, in the state of São Paulo. BPI also has four processing plants for the production of phosphates fertilizers, located at Araxá, Minas Gerais; Cajati, São Paulo; Cubatão, São Paulo; and Guará, São Paulo.

**2.4.3 Customers and sales**

All potash sales from the Taquari-Vassouras mine are to the Brazilian market. Our production represents 8-10% of total potash consumption in Brazil. We have a strong presence and long-standing relationships with the major players in Brazil.

**2.4.4 Competition**

Fertilizers have a strong demand growth potential, which is anchored in market fundamentals similar to those underlying the global demand for minerals, metals and energy. Rapid per capita income growth of emerging economies causes diet changes towards an increasing intake of proteins that ultimately contribute to boost fertilizer use. More recently, global output of biofuels has started to boom as they emerged as an alternative source of energy to reduce world reliance on sources of climate-changing greenhouse gases. Given that key inputs for the production of biofuels – sugar cane, corn and palm – are intensive in the use of fertilizers, they are becoming another major driver of

the global demand for crop nutrients.

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. Due to the lack of resources, the high level of investment and the long time for a project to mature, it is unlikely that other regions will emerge as major potash producers. While potash is a very scarce resource, phosphate is



**Table of Contents**

more available, but all major exporters are located in the northern region of Africa (Morocco, Algeria and Tunisia) and in the United States.

Brazil is one of the largest agribusiness markets in the world due to its high production and consumption of grains and biofuel. It is the fifth-largest consumer of fertilizers in the world and one of the largest importers of phosphates, potash, urea and phosphoric acid. Brazil imports 90% of its potash (6.8 Mt) from Canadian, Russian and German producers in descending order. The United States, Brazil, China and India are important consumers of potash, representing 60% of total global consumption. Our projects portfolios are highly competitive in terms of cost and logistics with these regions. The potash industry is highly concentrated, with the eight major producers being responsible for more than 80% of total world production capacity.

We are building our expertise in solution mine technology for potash mining. During the last period, we achieved very good results applying this technology for silvinitic and carnalite resources in the Rio Colorado and Carnalita projects, respectively. We believe that this technology will enhance our competitive advantage in operating and capital expenditures.

Most phosphate concentrate is consumed locally by downstream integrated producers, with the seaborne market corresponding to 15% of total phosphate rock production. Major phosphate rock exporters are concentrated in North Africa, mainly through state-owned companies, with OCP Group holding 49% of the total seaborne market. Brazil imports 49% of its total phosphate nutrients it needs in both phosphate fertilizer products and phosphate rock. The phosphate rock imports supply non-integrated producers of phosphate fertilizers products such as single superphosphate (SSP), triple superphosphate (TSP) and monoammonium phosphate (MAP).

**2.5 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 operate a processing facility in Port Colborne, Ontario, which produces PGMs, gold and silver intermediate products. 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 2009, PGM concentrates from our Sudbury operations supplied about 36% of our PGM production. Our global nickel 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. For information about strikes affecting some of our Canadian operations, see *Management and employees Employees*.

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

<b>Mine(1)</b>	<b>Type</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
			(thousand troy ounces)	
Sudbury:				
Platinum	Underground	140	166	103
Palladium	Underground	191	231	152
Gold	Underground	75	85	49

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

**2.6 Other non-ferrous minerals**

### **2.6.1 Cobalt**

We recover significant quantities of cobalt as a by-product of our Canadian nickel operations. In 2009, we produced 639 metric tons of refined cobalt metal at our Port Colborne refinery and 554 metric tons of cobalt in a cobalt-based intermediate at our Thompson nickel operations in Canada. Our remaining cobalt production consisted of 491 metric tons of cobalt contained in other intermediate products (such as nickel

**Table of Contents**

concentrates). For information about strikes affecting some of our Canadian operations, see *Management and employees Employees*. We expect to increase our production of cobalt as we increase nickel production in New Caledonia at the Goro mine, because the nickel laterite ore at this location contains significant co-deposits of cobalt.

We sell cobalt on a global basis. Our cobalt metal, which is electro-refined at our Port Colborne refinery, has very high purity levels (99.8%). Cobalt metal is used in the production of various alloys, particularly for aerospace applications, as well as the manufacture of cobalt-based chemicals.

The following table sets forth information on our cobalt production.

Mine	Type	Production for the year ended December 31,		
		2007	2008	2009
			(metric tons)	
Sudbury	Underground	727	804	359
Thompson	Underground	179	168	181
Voisey Bay	Open pit	1,239	1,695	971
External(1)		379	161	64
Total		2,524	2,828	1,575

(1) These figures do not include unrelated-party tolling of feeds purchased from unrelated parties.

**2.6.2 Kaolin**

We conduct our kaolin business in Brazil, through the subsidiaries set forth in the following table:

Company	Location	Our share of capital		Partners
		Voting	Total	
			(%)	
CADAM	Vitória do Jari, Amapá	100	61.5	Banco do Brasil and BNDES
PPSA	Barcarena, Pará	85.6	86.2	Mitsubishi Corporation

CADAM S.A. ( CADAM ) and Pará Pigmentos S.A. ( PPSA ) produce kaolin for paper coating. They also conduct research into other uses for kaolin products in order to develop a more diversified portfolio.

CADAM is located on the border of the states of Pará and Amapá, in the Amazon area in northern Brazil. CADAM's reserves are principally concentrated in the open-pit Morro do Felipe mine, in Vitória do Jari, in the state of Amapá. The beneficiation plant and private port facilities are situated on the west bank of the Jari River, in Munguba, in the state of Pará. CADAM produces the following products: Amazon SB, Amazon Premium and Amazon Plus. They are sold mainly in the European, Asian and Latin American markets.

PPSA operates an open-pit mine, Rio Capim, and a beneficiation plant. These operations are linked to the land and port facilities in Barcarena, via a 180-kilometer pipeline. The beneficiated kaolin is pumped through a slurry pipeline.

PPSA produces the following products: Century, Century S, Paraprint, Paraplate and Paralux. They are sold mainly in the European, Asian and North American markets. We are in preliminary negotiations to sell PPSA.

CADAM obtains electricity from its own thermal power plant, whose nominal capacity is 25.0 MW. PPSA has an energy supply contract with Rede Celpa, a power generation company in the state of Pará, Brazil.

**Table of Contents**

The following table sets forth information on our kaolin production.

Mine	Type	Production for the year ended December 31,			Recovery rate(1) (%)
		2007	2008 (thousand metric tons)	2009	
<i>CADAM</i> Morro do Felipe	Open pit	714	602	427	52.1
<i>PPSA</i> Rio Capim	Open pit	639	528	354	24.2
Total		1,354	1,129	781	

(1) Total recovery rate.

**3. Coal****3.1 Operations**

We produce thermal and metallurgical coal through our subsidiary Vale Australia, which operates coal assets in Australia through wholly owned companies and unincorporated joint ventures, and thermal coal through our subsidiary Vale Colombia.

We also have a minority interest in two Chinese companies, Henan Longyu Energy Resources Co., Ltd. ( Longyu ) and Shandong Yankuang International Coking Company Ltd. ( Yankuang ), as set forth in the following table.

Company	Business	Location	Our share of capital (%)	Partners
<i>Vale Australia</i>		<i>Australia:</i> Hunter Valley, New South		
Integra Coal	Thermal and metallurgical coal	Wales Bowen Basin,	61.2	NSC, JFE, Posco, Toyota
Carborough Downs	Metallurgical coal	Queensland	80.0	NSC, JFE, Posco, Tata
Isaac Plains	Thermal and metallurgical coal	Bowen Basin, Queensland	50.0	Aquila
Broadlea	Thermal and metallurgical coal	Bowen Basin, Queensland	100	
<i>Vale Colombia</i>	Thermal coal	Colombia	100	

				Yongmei Group Co., Ltd. (former Yongcheng Coal & Electricity (Group) Co. Ltd.), Shanghai Baosteel International Economic & Trading Co., Ltd. and other minority shareholders Yankuang Group Co. Limited, Itochu Corporation
<i>Longyu</i>	Coal and other related products	Henan Province, China	25.0	
<i>Yankuang</i>	Metallurgical coke and methanol	Shandong Province, China	25.0	

*Integra Coal Operations (underground and open-cut).* The Integra Coal Operations are located 10 kilometers north-west of Singleton in the Hunter Valley of New South Wales, Australia. The operations comprise an underground coal mine that produces coal by longwall methods, and an open-cut pit. Coal from the mine is processed at a coal handling and processing plant ( CHPP ) with a capacity of 1,200 metric tons per hour, loaded onto trains at a purpose-built rail loadout facility for transport to the port of Newcastle, New South Wales, Australia.

*Carborough Downs.* Carborough Downs is located in the Central Bowen Basin in central Queensland, Australia, 15 kilometers east of the township of Moranbah and 180 kilometers southwest of the coastal city of Mackay. Carborough Downs mining leases overlie the Rangal Coal Measures of the Bowen Basin with the

**Table of Contents**

economic seams of Leichardt and Vermont. Both seams have coking properties and can be beneficiated to produce coking and PCI products. 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 1000 metric tons per hour, and which operates seven days per week. The product is loaded onto trains at a rail loadout facility and transported 160 kilometers to the Dalrymple Bay Coal Terminal, Queensland, Australia.

*Isaac Plains.* The Isaac Plains open-cut mine 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. The coal is classified as a medium volatile bituminous coal with low ash and sulfur contents. Isaac Plains' s product split for the life of the mine is 75% metallurgical coal and 25% thermal coal. Coal is processed at the Isaac Plains CHPP and railed 172 kilometers to the Dalrymple Bay Coal Terminal.

*Broadlea.* Broadlea is an open-cut operation located just north of Carborough Downs' underground mine, consisting of a collection of small economic coal deposits. Broadlea is mined using the truck-and-shovel method, and product coal is toll-washed at the Carborough Downs CHPP and railed 172 kilometers to the Dalrymple Bay Coal Terminal in Queensland, Australia. At the end of 2009, Broadlea ceased operations and underwent maintenance due to increasing unit costs. The mine' s economic viability will undergo regular review to determine the potential recommencement of operations.

*El Hatillo.* The El Hatillo thermal coal mine is located in the central portion of the Cesar Department, 210 kilometers southeast of Santa Marta. The concession area is adjacent to the town of La Loma and encompasses an area of 9,693 hectares.

**3.2 Production**

The following table sets forth information on our coal production.

Operation	Mine type	Production for the year ended December 31,		
		2007(1)	2008	2009
(thousand metric tons)				
Thermal coal:				
El Hatillo(2)	Open-cut			1,143
Integra Coal(3)	Open-cut	255	557	702
Isaac Plains(4)	Open-cut	171	147	551
Broadlea	Open-cut	14	582	497
Total thermal coal		440	1,286	2,892
Metallurgical coal:				
Integra Coal(3)	Underground and open-cut	1,214	1,747	1,184
Isaac Plains(4)	Open-cut	249	382	487
Carborough Downs(5)	Underground	269	429	604
Broadlea	Open-cut	32	249	252

Total metallurgical coal	1,764	2,808	2,527
--------------------------	-------	-------	-------

- (1) We acquired AMCI HA, the previous owner of these mines, in April 2007. Figures for 2007 include production from May to December 2007 only.
- (2) We acquired El Hatillo in the first quarter of 2009. Figures for 2009 include production from April to December only.
- (3) These figures correspond to our 61.2% equity interest in Integra Coal, an unincorporated joint venture.
- (4) These figures correspond to our 50% equity interest in Isaac Plains, an unincorporated joint venture.
- (5) These figures correspond to our 80% equity interest in Carborough Downs, an unincorporated joint venture.



**Table of Contents**

<b>Operation</b>	<b>Mine type</b>
El Hatillo(1)	Open-cut
Integra Coal(2)	Underground and open-cut
Isaac Plains(3)	Open-cut
Carborough Downs(4)	Underground
Broadlea	Open-cut

- (1) We acquired El Hatillo in the first quarter of 2009. Figures for 2009 include production from April to December only.
- (2) These figures correspond to our 61.2% equity interest in Integra Coal, an unincorporated joint venture.
- (3) These figures correspond to our 50% equity interest in Isaac Plains, an unincorporated joint venture.
- (4) These figures correspond to our 80% equity interest in Carborough Downs, an unincorporated joint venture.

Longyu produces coal and other related products. Yankuang, a metallurgical coke plant, has production capacity of 2.0 million metric tons per year of coke and 200,000 metric tons per year of methanol.

**3.3 Customers and sales**

The coal sales from our Australian operations are primarily focused on East Asia. In 2009, 41% of our coal sales were made to Japanese steel mills and power utilities. In 2009, our Chinese coal joint ventures directed their sales mainly to the Chinese domestic market. The coal sales from our Colombian operations are primarily focused in Europe and the United States.

Integra's operations in New South Wales are similar to many Hunter Valley operations in that the vast majority of production is consumed in northern Asia. Our Queensland operations commenced production in late 2006. Aided by a strong market for metallurgical coal, we were able to market various types of coal from Carborough Downs, Broadlea and Isaac Plains mines in a number of target markets, predominantly those mentioned above.

**3.4 Competition**

The global coal industry, which is primarily comprised of the markets for hard coal (metallurgical coal and thermal coal) and brown coal/lignite, is highly competitive. Growth in steel demand, especially in Asia, underpins strong demand for metallurgical coal. Major port and rail constraints in some of the countries in which major suppliers are located could lead to limited availability of incremental metallurgical coal production.

The global seaborne thermal coal market has significantly expanded in recent years. Growth in thermal coal demand is closely related to growth in electricity consumption, which will continue to be driven by global economic growth, particularly from emerging economies. Large existing fleets of coal-fired power plants with long life cycles take decades to replace or upgrade, keeping a high share of thermal coal in the electricity matrix in countries with high consumption. The cost of fuel is typically the largest variable cost involved in electricity generation and coal is currently the most competitively priced fossil fuel for this purpose.

Competition in the coal industry is based primarily on the economics of production costs, coal quality and transportation costs. We believe that our operations and project pipeline are competitive, and our key competitive strengths include the strategic geographic location of our current and future supply bases and our production cash costs relative to several other coal producers.

Major participants in the coal seaborne market are subsidiaries and affiliates of Xstrata plc, BHP Billiton plc, PT Bumi Resources Tbk., Anglo Coal, Drummond Company, Inc., Rio Tinto Ltd., Teck Cominco, Peabody and the Shenhua Group.

**Table of Contents****4. Infrastructure****4.1 Logistics services**

We have developed our logistics business based on the transportation needs of our mining operations, mainly iron ore, and it also provides transportation services for customers' products and for passengers. We conduct logistics businesses at the parent-company level, through subsidiaries and through joint ventures, as set forth in the following table.

Company	Business	Location	Our share of capital		Partners
			Voting (%)	Total	
Vale	Railroad (EFVM and EFC), port and maritime terminal operations	Brazil	100.0	100.0	
FCA	Railroad operations	Brazil	100.0	99.9	Former employees of Rede Ferroviária Federal S.A.
FNS	Railroad operations	Brazil	100.0	100.0	
MRS	Railroad operations	Brazil	37.9	41.5	CSN, Usiminas and Gerdau
CPBS	Port and maritime terminal operations	Brazil	100.0	100.0	
Log-In	Port and maritime terminal operations and shipping activities	Brazil	31.3	31.3	Mitsui & Co., public investors
PTI	Port and maritime terminal operations	Indonesia	59.1	59.1	Sumitomo, public investors
SPRC	Port and maritime terminal operations	Colombia	100.0	100.0	
FENOCO	Railroad operations	Colombia	8.4	8.4	Drummond, Glencore and Coalcorp

**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. The EFVM railroad has a daily capacity of 342,000 metric tons of

iron ore. In 2009, the EFVM railroad carried a total of 60.5 billion ntk of iron ore and other cargo, of which 13.5 billion ntk, or 22%, consisted of cargo transported for customers, including iron ore for Brazilian customers. The EFVM railroad also carried 0.9 million passengers in 2009. In 2009, we had a fleet of 331 locomotives and 19,395 wagons at EFVM.

*Carajás railroad ( EFC ).* We operate the EFC railroad under a 30-year renewable concession, which expires in 2027. EFC is located in the Northern System, beginning at our Carajás iron ore mines in the Brazilian state of Pará and extending 892 kilometers to our Ponta da Madeira maritime terminal complex facilities located near the Itaqui Port in the Brazilian state of Maranhão. Its main cargo is iron ore, principally carried for us. It has a daily capacity of 301,000 metric tons of iron ore. In 2009, the EFC railroad carried a total of 85.04 billion ntk of iron ore and other cargo, 3.11 billion ntk of which was cargo for customers, including iron ore for Brazilian customers. EFC also carried 342,665 passengers in 2009. EFC supports the largest capacity train in Latin America, which measures 3.4 kilometers, weighs 42,300 gross metric tons when loaded and has 330 cars. In 2009, EFC also had a fleet of 226 locomotives and 12,627 wagons.

**Table of Contents**

*Ferrovias Centro-Atlântica ( FCA )*. Our subsidiary FCA 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 8,023 kilometers of track extending into the states of Sergipe, Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro and Goiás and Brasília, 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 Santos Port in the state of São Paulo. In 2009, the FCA railroad transported a total of 10.62 billion ntk of cargo for customers. In 2009, FCA had a fleet of 498 locomotives and 13,061 wagons.

*Ferrovias Norte-Sul railroad ( FNS )*. In October 2007, we won the auction for the subconcession for commercial operation for 30 years of a 720-kilometer stretch of the FNS railroad, in Brazil. Since 1989, we have operated a segment of the 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 2009, the FNS railroad transported a total of 1.16 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 2009, FNS had a fleet of 6 locomotives and 370 wagons.

The principal items of cargo of the EFVM, EFC, FCA and FNS 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;

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

other general cargo, such as building materials, 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*).

*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 2009, the MRS railroad carried a total of 56.25 million metric tons of cargo, including 51.1 million metric tons of iron ore and other cargo from Vale.

*Colombia*

*Ferrocarriles del Norte de Colombia S.A. ( FENOCO )*. We own an 8.4% equity stake in FENOCO, a company that owns a concession to restore and operate the Chiriguana - Santa Marta tranche (220 kilometers) of the Atlantic Railroad, which connects the Cesar coal-producing region with various ports in the Atlantic Ocean.

**4.1.2 Ports and maritime terminals**

*Brazil*

We operate a port and six 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 *Ferrous minerals Iron ore pellets Operations*. We

also use our port and terminals to handle customers cargo. In 2009, 10% of the cargo handled by our port and terminals represented cargo handled for customers.

**Table of Contents**

*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 four maritime terminals: (i) the iron ore maritime terminal, (ii) Praia Mole Terminal, (iii) Terminal de Produtos Diversos, and (iv) Terminal de Granéis Líquidos.

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 365,000 DWT at a time, limited at 20 meters draft plus tide. In Pier I there are two ship loaders, which can load up to a combined total of 14,000 metric tons per hour. In Pier II there are two ship loaders that work alternately and can each load up to 16,000 metric tons per hour. In 2009, 77.42 million metric tons of iron ore and iron ore pellets were shipped through the terminal for us. The iron ore maritime terminal has a stockyard capacity of 2.8 million metric tons.

Praia Mole terminal is principally a coal terminal and handled 8.9 million metric tons in 2009. See *Additional information Legal proceedings.*

Terminal de Produtos Diversos handled 5.9 million metric tons of grains and fertilizers in 2009.

Terminal de Granéis Líquidos handled 1 million metric tons of bulk liquid in 2009.

*Ponta da Madeira maritime terminal.* The Ponta da Madeira maritime terminal is located near the Itaqui Port in the Brazilian state of Maranhão. The terminal facilities can accommodate four vessels. Pier I can accommodate vessels displacing up to 420,000 DWT. Pier II can accommodate vessels of up to 155,000 DWT. Pier I has a maximum loading rate of 16,000 tons per hour. Pier II 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 220,000 DWT and has a maximum loading rate of 8,000 metric tons per hour in each shiploader. Cargo shipped through our Ponta da Madeira maritime terminal consists principally of our own iron ore production. Other cargo includes manganese ore, copper concentrate and pig iron produced by us and pig iron and soybeans for unrelated parties. In 2009, 87.3 million metric tons were handled through the terminal for us and 4.5 million metric tons for customers. The Ponta da Madeira maritime terminal has a stockyard capacity of 5.4 million metric 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 that allows the loading of ships up to 18 meters of draft and up to 230,000 DWT. In 2009, the terminal uploaded 19.6 million metric tons of iron ore. From December 2007 to February 2008, Itaguaí operated with limited capacity as a result of an accident with a ship in the terminal.

*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 that allows the loading of ships of up to 300,000 DWT. In 2009, the terminal uploaded 36.8 million metric tons of iron ore.

*Inácio Barbosa maritime terminal ( TMIB ).* We operate the Inácio Barbosa maritime terminal, located in the Brazilian state of Sergipe. The terminal is owned by Petrobras. Vale and Petrobras entered into an agreement in December 2002, which allows Vale to operate this terminal for a period of 10 years. In 2009, 0.9 million metric tons of fuel and agricultural and steel products were shipped through TMIB.

*Colombia*

*Sociedad Portuaria Rio Cordoba ( SPRC ).* SPRC is a seaport facility wholly owned by Vale and used to export coal from the El Hatillo operation, as well as other nearby mines. The port is located in Cienaga, on the Caribbean coast of

Colombia, in the Magdalena Department, about 67 kilometers from Barranquilla and 31 kilometers from Santa Marta.



**Table of Contents***Indonesia*

PTI 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 a pier that can accommodate vessels displacing up to 6,000 DWT.

The Harapan Tanjung Mangkasa Village is located in Harapan Tanjung Mangkasa Village, South Sulawesi, and has a pier that can accommodate vessels displacing up to 39,000 DWT.

**4.1.3 Shipping**

We operate in two distinct shipping areas: seaborne dry bulk shipping and tug boat services. The following table sets forth information on the volume of cargo that our seaborne dry bulk shipping service carried for the periods indicated.

	<b>Year ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>2009</b>
	(thousand metric tons)		
Iron ore:			
Vale Customers	1,324	1,884	2,739
Coal	147		
Other			
Total	1,471	1,884	2,739

We are developing a low-cost freight portfolio. Since 2007, we have operated three capesize vessels, which have been fully dedicated to performing shuttle services from Brazil to Asia. In 2009, we bought 17 used capesize vessels, seven of which begin operation in 2010. We have also entered into long-term freight contracts and have placed orders with shipyards for the construction of 16 very large ore carriers, each with a capacity of 400,000 DWT, and four additional capesize vessels, each with a capacity of 180,000 DWT. We expect this service to enhance our ability to offer our products in the Asian market at competitive prices and to increase our market share in China and the global seaborne market.

We have also entered into long-term freight contracts to transport pellet feed from Brazil to Oman, where we are building a pellet plant with nominal capacity of 9 million metric tons of direct reduction iron ore pellets per year and a distribution center with capacity to handle 40 million tons of iron ore or iron ore pellets.

We own 31.3% of Log-In, which conducts intermodal shipping business. Log-In offers port handling and container transportation services, by sea or rail, as well as container storage. It operates owned and chartered ships for coastal shipping, a container terminal (*Terminal Vila Velha*, or TVV) and two multimodal terminals. In 2009, Log-In's coastal shipping service transported 110,547 twenty-foot equivalent units (teus), TVV handled 211,387 teus and its express train service moved 41,475 teus.

We also operate a fleet of 25 tug boats (14 owned and 11 chartered) in maritime terminals in Brazil, in Vitória (state of Espírito Santo), Trombetas (state of Pará), São Luís (state of Maranhão) and Aracaju (state of Sergipe).



**Table of Contents****4.2 Energy****4.2.1 Electric power**

We have developed our energy assets based on the current and projected energy needs of our mining 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 and electric energy shortages (as experienced in Brazil in the second half of 2001). We currently have seven hydroelectric power plants in operation. In 2009, our total energy capacity in Brazil was 12,509 GWh. We use the electricity produced by these plants for our internal consumption needs. As a large consumer of electricity, we expect that investing in power projects will help us reduce costs and will protect us against energy price volatility. However, we may experience delays in the construction of certain generation projects due to environmental and regulatory issues, which may lead to higher costs.

*Canada*

In 2009, our wholly owned and operated hydroelectric power plants in Sudbury generated 31% 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 constraints imposed by a water management plan regulated by the provincial government. Over the course of 2009, the power system operator distributed electrical energy at the rate of 80.0 MW to all surface plants and mines in the Sudbury area.

In 2009, diesel generation provided 100% of the electric requirements of our Voisey 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 ores at PTI operations in Indonesia. A major portion of PTI's electric furnace power requirements are supplied at low-cost by its two hydroelectric power plants on the Laron River: (i) the Laron plant, which generates an average of 180 MW, and (ii) the Balambano plant, which generates an average of 110 MW. PTI has thermal generating facilities which include 24 Caterpillar diesel generators, with capacity of 1 MW each, five Mirrlees Blackstone diesel generators, and one oil burning steam turbine generator. These generators have the capacity to provide 80 MW of power.

**4.2.2 Oil and natural gas**

The use of natural gas in our energy matrix in Brazil is expected to increase from 1.3 million cubic meters per day ( Mm<sup>3</sup>/day ) in 2009 to 12.8 Mm<sup>3</sup>/day in 2020. In order to mitigate supply and price risks we started investing in natural gas exploration. Since 2007, we have developed a 29-block portfolio in Brazilian onshore and offshore basins.

During 2009, the operators of the consortia in which we participate drilled six offshore wells in the Santos and Espírito Santo basins. These wells delivered two oil and gas discoveries that are going to be delimited and tested in the current year. Both of them are located in the Santos basin, on the BM-S-48 concession area. Oil or gas existence has been detected at three other wells but common technical or commercial issues prevented their development.



## **Table of Contents**

### **5. Other investments**

We own a 50% 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 has annual production capacity of 1.8 million metric tons of flat rolled steel and pipe. CSI is adding a second reheat furnace with state-of-the-art environmental technology which will increase its capacity by about 50%. The total cost of the project is estimated to be US\$71.0 million.

## **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 2009, we performed an analysis of our reserve estimates for certain projects, which is reflected in new estimates as of December 31, 2009. Reserve estimates for each operation are for 100% of the operation and assume that we either have or will obtain all of the necessary rights to mine, extract and process ore reserves at each mine. 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*.

### **Iron ore reserves**

In preparing iron ore reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average prices for iron ore of US\$0.9217 per Fe unit for Southeastern System fines and US\$0.9518 per Fe unit for Carajás fines.

**Table of Contents**

The following tables set forth our iron ore reserves and other information about our iron ore mines. Our iron ore reserve estimates are of in-place material after adjustments for mining depletion, with no adjustments made for metal losses due to processing.

	Summary of total iron ore reserves(1)					
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade
Southeastern System	2,196.3	51.0	1,239.2	50.3	3,435.4	50.7
Southern System	1,508.2	52.4	1,864.8	49.0	3,373.0	50.5
Northern System	5,038.5	66.7	2,060.0	66.6	7,098.5	66.7
Samarco(2)	1,172.1	42.5	939.1	39.8	2,111.2	41.3
Total	9,915.1	58.2	6,103.1	53.8	16,018.2	56.5

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

(2) Reserves of Samarco's Alegria iron ore mines. Samarco is 50% owned by Vale.

	Iron ore reserves per mine in the Southeastern System(1)							
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade
<i>Itabira complex</i>								
Conceição	292.8	51.4	27.2	58.8	320.0	52.0	349.1	52.0
Minas do Meio	326.5	53.9	175.1	56.1	501.6	54.6	521.7	54.5
<i>Minas Centrais complex</i>								
Água Limpa(2)	44.8	41.8	6.0	42.2	50.8	41.8	52.8	41.8
Gongo Soco	50.9	64.7	20.2	58.6	71.1	63.0	74.4	63.0
Brucutu	429.5	50.5	252.6	47.2	682.1	49.3	659.2	51.1
Baú			37.1	55.7	37.1	55.7	37.1	55.7
Apolo	145.2	60.3	133.5	56.2	278.7	58.3	278.7	58.3
Andrade(3)							120.9	59.2
<i>Mariana complex</i>								
Alegria	179.1	50.2	41.3	47.1	220.5	49.7	240.8	49.7
Fábrica Nova	479.1	46.5	349.7	44.2	828.8	45.5	862.6	45.8
Fazendão	240.5	49.7	94.4	50.0	334.9	49.8	346.0	50.0
Timbopeba			73.2	55.2	73.2	55.2	73.3	55.2
<i>Corumbá complex(4)</i>								
Urucum	7.9	62.7	28.8	62.1	36.7	62.3	37.5	62.3
Total Southeastern System	2,196.3	51.0	1,239.2	50.3	3,435.4	50.7	3,654.2	51.4

(1)

Tonnage is stated in millions of metric tons of wet run-of-mine. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: 100m x 100m to proven reserves and 200m x 200m to probable reserves.

- (2) Vale's equity interest in Água Limpa is 50%.
- (3) Vale and Companhia Siderúrgica Belgo Mineira mutually agreed to terminate the lease for the Andrade mine in 2009.
- (4) The Corumbá complex also includes the Corumbá iron ore mine, which we acquired in 2009. We are conducting a review of the reserve model.

**Table of Contents**

	<b>Iron ore reserves per mine in the Southern System(1)</b>							
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2008 Grade</b>
<i>Minas Itabirito complex</i>								
Segredo	141.1	51.9	162.7	48.2	303.9	49.9	308.6	49.9
João Pereira	243.6	42.8	307.5	41.5	551.1	42.0	567.4	42.1
Sapocado	107.7	52.7	142.5	53.5	250.2	53.1	254.4	53.2
Galinheiro	129.6	54.6	191.0	54.1	320.6	54.3	323.6	54.3
<i>Vargem Grande complex</i>								
Tamanduá	267.1	54.8	248.4	51.3	515.4	53.1	516.0	54.5
Capitão do Mato	208.9	55.9	562.8	50.7	771.6	52.1	825.8	52.0
Abóboras	233.0	45.6	220.3	43.5	453.4	44.6	450.9	45.6
<i>Paraopeba complex</i>								
Jangada	43.6	66.6	15.2	66.2	58.8	66.5	61.3	66.5
Córrego do Feijão	30.3	67.0	3.4	63.1	33.6	66.6	35.0	66.6
Capão Xavier	84.5	65.1	9.3	64.3	93.8	65.0	103.0	65.0
Mar Azul	18.8	58.6	1.8	58.7	20.6	58.6	26.6	55.9
<b>Total Southern System</b>	<b>1,508.2</b>	<b>52.4</b>	<b>1,864.8</b>	<b>49.0</b>	<b>3,373.0</b>	<b>50.5</b>	<b>3,472.6</b>	<b>50.9</b>

(1) Tonnage is stated in millions of metric tons of wet run-of-mine. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves were: 100m x 100m to proven reserves and 200m x 200m to probable reserves.

	<b>Iron ore reserves per mine in the Northern System(1)</b>							
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2008 Grade</b>
<i>Serra Norte complex</i>								
N4W	1,243.5	66.5	283.7	66.1	1,527.3	66.5	1,569.7	66.5
N4E	315.8	66.6	92.2	66.0	408.0	66.4	427.7	66.4
N5(2)	377.6	67.3	485.1	66.9	862.7	67.1	904.1	67.1
<i>Serra Sul</i>								
S11	3,045.8	66.8	1,193.7	66.7	4,239.6	66.8	4,239.6	66.8
<i>Serra Leste</i>								
SL1	55.7	66.2	5.2	66.4	60.9	66.2	60.9	66.2
<b>Total Northern System</b>	<b>5,038.5</b>	<b>66.7</b>	<b>2,060.0</b>	<b>66.6</b>	<b>7,098.5</b>	<b>66.7</b>	<b>7,202.0</b>	<b>66.7</b>

(1) Tonnage is stated in millions of metric tons of wet run-of-mine. Grade is % of Fe. Approximate drill hole spacings used to classify the reserves are: 150m x 100 m to proven reserves and 300m x 200m to probable reserves, except SL1 which is 100m x 100m to proven reserves and 200m x 200m to probable reserves.

(2) Reserves previously classified under N5W and N5E are now grouped as the N5 reserve model.



	<b>Iron ore reserves per Samarco mine</b>					
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>
<i>Samarco</i>						
Alegria Norte/Centro	720.7	44.3	555.6	40.7	1,276.3	42.7
Alegria Sul	451.4	39.8	383.6	38.6	835.0	39.2
Total Samarco	1,172.1	42.5	939.1	39.8	2,111.2	41.3

Changes in iron ore reserves reflect mining production during 2008 and small changes in new updated geological models or pit designs and reserve classification.

**Table of Contents****Other mine data: Southeastern System iron ore mines**

	Type	Operating since	Projected exhaustion date	Vale interest (%)
<i>Itabira complex</i>				
Conceição	Open pit	1957	2023	100
Minas do Meio	Open pit	1976	2023	100
<i>Minas Centrais complex</i>				
Água Limpa	Open pit	2000	2019	50
Gongo Soco	Open pit	2000	2019	100
Brucutu	Open pit	1994	2023	100
Baú	Open pit		2029	100
Apolo	Open pit		2029	100
<i>Mariana complex</i>				
Alegria	Open pit	2000	2024	100
Fábrica Nova	Open pit	2005	2033	100
Fazendão	Open pit	1976	2040	100
Timbopeba(1)	Open pit	1984		100
<i>Corumbá complex</i>				
Urucum	Open pit	1994	2023	100

(1) The Timbopeba mine is running below full capacity, and we are reviewing its life of mine.

**Other mine data: Southern System iron ore mines**

	Type	Operating since	Projected exhaustion date	Vale interest (%)
<i>Minas Itabiritos complex</i>				
Segredo	Open pit	2003	2034	100
João Pereira	Open pit	2003	2034	100
Sapicado	Open pit	1942	2030	100
Galinheiro	Open pit	1942	2030	100
<i>Vargem Grande complex</i>				
Tamanduá	Open pit	1993	2039	100
Capitão do Mato	Open pit	1997	2040	100
Abóboras	Open pit	2004	2029	100
<i>Paraopeba complex</i>				
Jangada	Open pit	2001	2018	100
Córrego do Feijão	Open pit	2003	2014	100
Capão Xavier	Open pit	2004	2021	100
Mar Azul	Open pit	2006	2016	100

**Other mine data: Northern System iron ore mines**

	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
<i>Serra Norte</i>				
N4W	Open pit	1994	2028	100
N4E	Open pit	1984	2024	100
N5	Open pit	1998	2024	100
<i>Serra Sul</i>				
S11	Open pit		2059	100
<i>Serra Leste</i>				
SL1	Open pit		2039	100

**Table of Contents****Other mine data: Samarco iron ore mines**

	Type	Operating since	Projected exhaustion date	Vale interest (%)
<i>Samarco</i>				
Alegria Norte/Centro	Open pit	2000	2052	50
Alegria Sul	Open pit	2000	2052	50

**Manganese ore reserves**

In preparing manganese reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average price for manganese of US\$353.76 per metric ton (published by CRU, CIF China, 44% manganese grade). We have adjusted ore reserve estimates for extraction losses and metallurgical recoveries during extraction.

	Manganese ore reserves(1)							
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade
Azul	43.3	41.1	8.5	39.5	51.8	40.9	42.6	35.2
Urucum			6.9	45.1	6.9	45.1	7.0	44.4
Morro da Mina	9.2	24.3	6.0	24.3	15.2	24.3	15.3	24.3
Total	52.5	38.2	21.4	37.0	73.9	37.9	64.9	33.6

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

Our manganese ore reserve estimates increased in 2009, due to new reserves at the Azul mine (pit and talings ore). The cut off grade in the Azul mine changed, based on the new product specifications required by the market. New ore bodies were discovered in the 2008/2009 geological exploration program. In addition, reserves also included some tailing material from the Azul tailing dam that could be recovered in the mineral processing plant after the reconstruction occurred in 2007. Based on these new assumptions, some new materials were included in these new reserves.

**Other mine data: manganese ore mines**

	Type	Operating since	Projected exhaustion date	Vale interest (%)
Azul	Open pit	1985	2022	100
Urucum	Underground	1976	2020	100
Morro da Mina	Open pit	1902	2045	100



**Table of Contents****Nickel ore reserves**

In preparing nickel reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average LME spot price for nickel of US\$24,281 per metric ton. Our nickel reserve estimates are of in-place material after adjustments for mining depletion and mining losses (or screening and drying in the cases of Sulawesi and Goro) and recoveries, with no adjustments made for metal losses due to processing.

	Nickel ore reserves(1)							
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade
<i>Canada</i>								
Sudbury	69.9	1.23	47.0	1.15	116.9	1.20	150.4	1.17
Thompson	9.1	1.89	17.0	1.63	26.1	1.72	24.5	1.78
Voisey Bay	21.8	3.01	3.2	0.66	25.0	2.71	26.0	2.76
<i>Indonesia(2)</i>								
Sulawesi	82.3	1.84	38.8	1.70	121.1	1.79	152.7	1.77
<i>New Caledonia(2)</i>								
Goro	100.8	1.35	23.5	1.91	124.3	1.46	124.3	1.46
<i>Brazil</i>								
Onça Puma	55.1	1.79	27.6	1.62	82.7	1.73	82.7	1.73
Total	339.0	1.64	157.1	1.52	496.1	1.60	560.6	1.58

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

(2) We have rights to other properties in Indonesia, New Caledonia and in other locations, which have not yet been fully explored.

In Canada, reserves at our Sudbury operations decreased due primarily to mining depletion and reclassification of mineral reserves to mineral resources at the non-operating Creighton 3 Shaft and Kelly Lake deposits, partially offset by exploration additions at our operating mines. Reserves at our Thompson operations increased slightly due to exploration. Reserves at our Voisey Bay operations decreased primarily due to mining depletion. This reduction is supported by the reconciliation of production data with the life-of-mine plan estimates.

Reserves at Sulawesi decreased as a result of adjustments for mining depletion, changes in plant feed chemistry operational targets, changes to the duration of the life-of-mine plan (in accordance with the new mining law) and reclassification of mineral reserves to mineral resources. These adjustments were partially offset by drilling that converted mineral resources to reserves.

Reserves at Goro and Onça Puma remained unchanged from 2008 estimates, since there was virtually no production at these mines in 2009.

Other mine data: nickel ore mines			
Type	Operating since	Projected exhaustion date	Vale interest (%)

<i>Canada</i>				
Sudbury	Underground	1885	2040	100
Thompson	Underground	1961	2023	100
Voisey Bay	Open pit	2005	2022	100
<i>Indonesia</i>				
Sulawesi	Open cast	1977	2035	59.1
<i>New Caledonia</i>				
Goro	Open pit		2041	74.0
<i>Brazil</i>				
Onça Puma	Open pit		2042	100

**Table of Contents****Bauxite ore reserves**

In preparing bauxite reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average realized sales price for bauxite of US\$37.49 per metric ton. We have adjusted ore reserve estimates for mass recoveries during washing, bone dry.

	<b>Bauxite ore reserves(1)</b>							
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2008 Grade</b>
<i>MRN</i>								
Almeidas	0.8	49.8			0.8	49.8	1.8	50.2
Aviso	14.4	49.7			14.4	49.7	22.1	51.2
Bacaba	7.4	52.2			7.4	52.2	6.8	53.5
Saracá V	1.6	46.8			1.6	46.8	2.2	47.9
Saracá W	11.1	48.9			11.1	48.9	11.7	49.8
Bela Cruz	50.5	51.0	24.9	50.9	75.4	51.0	67.3	52.1
Cipó	2.3	48.7	5.2	48.7	7.5	48.7	6.7	49.8
Teófilo	31.3	49.0	6.0	49.0	37.3	49.0	33.2	50.1
Aramã	9.7	48.7	1.4	48.9	11.0	48.7	10.0	49.8
Greigh	2.0	47.8	0.8	47.6	2.7	47.8	2.4	48.8
Monte Branco	18.9	47.9	26.0	47.5	44.9	47.7	41.2	48.8
<b>Total MRN</b>	<b>150.1</b>	<b>49.7</b>	<b>64.3</b>	<b>49.2</b>	<b>214.3</b>	<b>49.6</b>	<b>205.4</b>	<b>50.6</b>
<i>Paragominas</i>								
Miltonia 3	134.8	49.4	55.3	49.4	190.1	49.4	196.4	49.4
Miltonia 5	95.7	47.3	2.9	47.3	98.6	47.3	98.6	47.3
<b>Total Paragominas</b>	<b>230.5</b>	<b>48.5</b>	<b>58.2</b>	<b>49.3</b>	<b>288.7</b>	<b>48.7</b>	<b>295.0</b>	<b>48.7</b>

(1) Tonnage is stated in millions of metric tons of washed product (bone dry). Grade is % of Al<sub>2</sub>O<sub>3</sub>.

MRN's bauxite reserves increased despite the depletion of 13 million metric tons in 2009 due to an update of the geological model.

Paragominas's bauxite reserves decreased primarily due to mining depletion. The mine contains 692,000 metric tons of stockpiled material that was taken into account in the reserve calculations.

	<b>Other mine data: bauxite ore mines</b>			
	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
<i>MRN</i>				
Almeidas	Open pit	2002	2010	40.0



Edgar Filing: Vale S.A. - Form 20-F

Aviso	Open pit	2003	2011	40.0
Bacaba	Open pit	2009	2012	40.0
Saracá V	Open pit	1979	2011	40.0
Saracá W	Open pit	2006	2013	40.0
Bela Cruz	Open pit		2018	40.0
Cipó	Open pit		2023	40.0
Teófilo	Open pit		2023	40.0
Aramã	Open pit		2019	40.0
Greigh	Open pit		2022	40.0
Monte Branco	Open pit		2019	40.0
<i>Paragominas</i>				
Miltonia 3	Open pit	2006	2032	100
Miltonia 5	Open pit		2032	100

**Table of Contents****Copper ore reserves**

In preparing copper reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average LME spot price for copper of US\$6,414 per metric ton. Our copper 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.

	Copper ore reserves(1)							
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade
<i>Canada</i>								
Sudbury	69.9	1.49	47.0	1.53	116.9	1.51	150.4	1.35
Thompson	9.1	0.12	17.0	0.12	26.1	0.12	24.5	0.12
Voisey Bay	21.8	1.76	3.2	0.38	25.0	1.58	26.0	1.62
<i>Brazil</i>								
Sossego	122.1	0.91	39.3	0.91	161.4	0.91	166.5	0.93
Salobo	508.2	0.80	420.3	0.74	928.5	0.77	928.5	0.77
Total	731.1	0.90	526.8	0.80	1,257.9	0.86	1,295.9	0.86

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

In Canada, our copper ore reserve estimates decreased for the reasons discussed above in connection with nickel reserves.

In Brazil, reserves at Sossego decreased due primarily to mining depletion and a review of pit optimization with an updated economic model with increased operational costs. Reserves at Salobo remain unchanged from 2008 estimates because no production occurred in 2009. The Salobo mine is currently under pre-stripping.

**Other mine data: copper ore mines**

	Type	Operating since	Projected exhaustion date	Vale interest (%)
<i>Canada</i>				
Sudbury	Underground	1885	2040	100
Thompson	Underground	1961	2023	100
Voisey Bay	Open pit	2005	2022	100
<i>Brazil</i>				
Sossego	Open pit	2004	2021	100
Salobo	Open pit		2030	100

**Cobalt ore reserves**

In preparing cobalt reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average realized sales price for cobalt of US\$22.7 per pound. We expect to recover significant quantities of cobalt as a by-product of our Canadian operations and from the Goro project. Our cobalt reserve

**Table of Contents**

estimates are of in-place material after adjustments for mining depletion and mining losses (or screening and drying in the case of Goro) and recoveries, with no adjustments made for metal losses due to processing.

	Cobalt ore reserves(1)							
	Proven Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade
<i>Canada</i>								
Sudbury	69.9	0.04	47.0	0.03	116.9	0.04	150.4	0.04
Voisey Bay	21.8	0.15	3.2	0.03	25.0	0.13	26.0	0.14
<i>New Caledonia</i>								
Goro	100.8	0.12	23.5	0.08	124.3	0.11	124.3	0.11
Total	192.6	0.09	73.7	0.05	266.3	0.08	300.7	0.08

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

Our cobalt reserve estimates decreased in 2009 for the reasons discussed above in connection with nickel reserves.

Other mine data: cobalt ore mines				
	Type	Operating since	Projected exhaustion date	Vale interest (%)
<i>Canada</i>				
Sudbury	Underground	1885	2040	100
Voisey Bay	Open pit	2005	2022	100
<i>New Caledonia</i>				
Goro	Open pit		2041	74.0

**PGMs and other precious metals reserves**

In preparing PGMs and other precious metals reserves data, we used price assumptions that did not exceed the three-year (2007 to 2009) average NYMEX price for platinum of US\$1,367.00 per troy ounce and the average Comex price for gold of US\$847.30 per troy ounce. We expect to recover significant quantities of precious metals as by-products of our Canadian operations, Sossego and from the Salobo project. 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 Tonnage	2009 Grade	Probable Tonnage	2009 Grade	Total Tonnage	2009 Grade	Total Tonnage	2008 Grade

Edgar Filing: Vale S.A. - Form 20-F

<i>Canada</i>								
Sudbury								
Platinum	69.9	0.70	47.0	1.20	116.9	0.90	150.4	0.70
Palladium	69.9	0.80	47.0	1.40	116.9	1.0	150.4	0.90
Gold	69.9	0.30	47.0	0.50	116.9	0.4	150.4	0.30
<i>Brazil</i>								
Sossego								
Gold	122.1	0.27	39.3	0.23	161.4	0.26	166.5	0.27
Salobo								
Gold	508.2	0.48	420.3	0.43	928.5	0.46	928.5	0.46
Total Gold	700.2	0.43	506.6	0.42	1,206.8	0.43	1,245.4	0.42

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

**Table of Contents**

In Canada, our mineral reserve estimates of platinum, palladium and gold decreased for the reasons discussed above in connection with nickel reserves. In Brazil, reserves at Sossego decreased due primarily to mining depletion.

<b>Other mine data: precious metals mines</b>				
	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
<i>Canada</i>				
Sudbury	Underground	1885	2040	100
<i>Brazil</i>				
Sossego	Open pit	2004	2021	100
Salobo	Open pit		2030	100

**Kaolin ore reserves**

In preparing kaolin reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average realized sales price for kaolin of US\$214.13 per metric ton. 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.

	<b>Kaolin ore reserves(1)</b>							
	<b>Proven 2009 Tonnage</b>	<b>2009 Brightness</b>	<b>Probable 2009 Tonnage</b>	<b>2009 Brightness</b>	<b>Total 2009 Tonnage</b>	<b>2009 Brightness</b>	<b>Total 2008 Tonnage</b>	<b>2008 Brightness</b>
Morro do Felipe	9.1	86.6	23.0	86.8	32.1	86.7	32.7	86.7
Capim I	33.2	82.5	8.6	81.9	41.8	82.4	43.5	82.4
Total	42.3	84.6	31.6	84.4	73.9	84.6	76.2	84.5

(1) Tonnage is stated in millions of metric tons. Brightness is stated in percentage terms.

Reserves at Morro do Felipe and Capim I decreased primarily reflecting mining depletion in 2009 and, to a lesser extent, a reduction in estimates to reflect differences between actual recoveries and amounts predicted by our reserve model.

<b>Other mine data: kaolin ore mines</b>				
	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
Morro do Felipe	Open pit	1976	2030	86.2
Capim I	Open pit	1996	2030	61.5

**Potash ore reserves**

In preparing potash reserve data, we used price assumptions that did not exceed the three-year (2007 to 2009) historical average benchmark price for potash of US\$521.0 per metric ton (published by CRU BSC FOB Vancouver). 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.

	<b>Potash ore reserves(1)</b>							
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2008 Grade</b>
Taquari-Vassouras	2.1	28.0	5.5	28.0	7.6	28.0	9.8	28.0
Rio Colorado	0	0	360.8	34.2	360.8	34.2	0	0
<b>Total</b>	<b>2.1</b>	<b>28.0</b>	<b>366.3</b>	<b>34.1</b>	<b>373.4</b>	<b>34.0</b>	<b>9.8</b>	<b>28.0</b>

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

**Table of Contents**

Our reserves increased in 2009 because we acquired Rio Colorado. Our Taquari-Vassouras potash reserves decreased in 2009 mainly reflecting mining depletion.

		<b>Other mine data: potash ore mines</b>		
	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
Taquari-Vassouras(1)	Underground	1986	2012	100
Rio Colorado	Solution mining		2039	100

(1) We have a 25-year lease, which was signed in 1991, with Petrobras.

**Phosphate reserves**

In preparing phosphate reserve data, we used price assumptions that did not exceed the three year (2007 to 2009) historical average benchmarking prices for phosphate concentrate of US\$149.7 per metric ton (published by CRU BSC FOB Marocco). Our phosphate reserve estimates are of in-place material after adjustments for mining dilution, with no adjustments made for process recovery. The decrease in our phosphate reserves estimates reflects adjustments in the reserve model.

	<b>Phosphate reserves(1)</b>							
	<b>Proven Tonnage</b>	<b>2009 Grade</b>	<b>Probable Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2009 Grade</b>	<b>Total Tonnage</b>	<b>2008 Grade</b>
Bayóvar	237.1	17.3	1.9	15.9	239.0	17.2	247.5	17.1

(1) Tonnage is stated in millions of dry metric tons. Grade is % of P<sub>2</sub>O<sub>5</sub>.

		<b>Other mine data: phosphate ore mine</b>		
	<b>Type</b>	<b>Operating since</b>	<b>Projected exhaustion date</b>	<b>Vale interest (%)</b>
Bayóvar	Open pit		2037	100

**Coal reserves**

In preparing coal reserve data, we used price assumptions that did not exceed the following (2007 to 2009) historical average prices (based on realized sales or reference prices): for Australian reserves, realized prices of US\$130 per metric ton of hard metallurgical coal and US\$104 per metric ton of pulverized coal injection ( PCI ); realized prices of US\$58 per metric ton for the El Hatillo reserves; and for hard metallurgical coal for Moatize reserves US\$175 per metric ton (hard coking coal FOB Australia reference price).



Our coal reserve estimates have been provided on an in-place material basis after adjustments for mining depletion, derived in-situ moisture content (other than Integra North Open-cut for which air dried moisture applied), anticipated mining losses and dilution, but excluding any adjustment for losses associated with beneficiation of raw coal mined to meet saleable product requirements. Our coal reserve estimates were prepared by the following independent consultants: Colin Coxhead (Integra Coal), SRK Consulting (Carborough Downs), MB Mining Services (Isaac Plains), Snowden Mining Industry Consultants Pty Ltd.

**Table of Contents**

(Moatize) and John T. Boyd Company (El Hatillo), each of whom has consented to the inclusion of these estimates herein.

	Coal type	Coal ore reserves(1)					
		Proven 2009 (tonnage)	Probable 2009 (tonnage)	Total 2009 (tonnage)	2009 (calorific value)	Total 2008 (tonnage)	2008 (calorific value)
Integra Coal:							
South Open-cut	Metallurgical & thermal		1.0	1.0	28.5 (thermal)		28.5 (thermal)
Middle Liddell Seam	Metallurgical		14.3	14.3		15.8	
Total Integra Coal			15.3	15.3		15.8	
Carborough Downs	Metallurgical & PCI	39.1	5.2	44.3	31.7 (PCI)	46.2	31.7 (PCI)
Isaac Plains	Metallurgical, PCI & thermal	20.1	3.6	23.7	31.0 (PCI) 27.8 (thermal)	23.7	31.0 (PCI) 27.8 (thermal)
El Hatillo	Thermal	50.0	0	50.0	25.4 (thermal)		
Moatize	Metallurgical & thermal	422	532	954	32	838	32
Total		531.2	556.1	1,087.3		923.7	

(1) Tonnage is stated in millions of metric tons. All reserves are based on in-situ moisture except for Integra North Open-cut which is reported on an air-dried 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. Marketable coal quality reported is based on 2009 sales contract specifications, except for Moatize.

Reserves at Middle Liddell Seam for Integra Underground decreased in 2009 due to depletion. Reserves at Carborough Downs decreased, mainly reflecting mining depletion, and an updated reserve estimate was completed. Reserves at Isaac Plains were maintained at the same level, mainly reflecting mining depletion in accordance with ROM production in 2008 offset by increases resulting from an updated reserve estimate. Reserves for El Hatillo were included in 2009 following the completion of a life-of-mine options planning study. Reserves at Moatize increased, reflecting a reserve update.

Type	Other mine data: coal mines		Vale interest (%)
	Operating since	Projected exhaustion date	

Integra Coal:				
South Open-cut	Open pit	1999	2010	61.2
Middle Liddell Seam	Underground	1999	2014	61.2
Carborough Downs	Underground	2006	2022	80.0
Isaac Plains	Open pit	2006	2016	50.0
Broadlea	Open pit	2006	2010	100
El Hatillo	Open pit	2007	2021	100
Moatize	Open pit		2046	100

**Table of Contents****CAPITAL EXPENDITURES AND PROJECTS****Capital expenditures**

We have an extensive program of investments in the organic growth of our businesses. During 2009, we made capital expenditures and other investments of US\$9.013 billion, of which US\$6.855 billion was on organic growth, while US\$2.157 billion was invested in maintaining existing operations. Research and development expenditures are treated as current expense for accounting purposes. As previously disclosed, the 2010 investment budget approved by our Board of Directors in October 2009 is US\$12.9 billion. A large part of the capital expenditures budget will be invested in Brazil (US\$8.165 billion, or 63.3%) and in Canada (US\$1.153 billion, or 8.9%). The remainder is allocated to investments in Argentina, Australia, Chile, China, Indonesia, Malaysia, Mozambique, Oman and Peru, among other countries. The actual amount of our investment will depend on various factors, including changes in exchange rates relative to our basic assumptions, prices of equipment and engineering services, the scope of projects and the pace of project execution. The allocation of total expenditures in 2009 and budgeted expenditures in 2010 is set forth in the following table.

	<b>2009 expenditures</b>		<b>2010 budget</b>		
	(US\$	million)	(US\$	million)	(% of total)
Organic growth		6,855		9,876	76.6
Project execution		5,845		8,647	67.1
Research and development		1,010		1,228	9.5
Investments to support existing operations		2,158		3,019	23.4
<b>Total</b>		<b>9,013</b>		<b>12,894</b>	<b>100.0</b>

The following table summarizes by major business area the breakdown of our capital expenditures in 2008 and 2009 and our investment budget for 2010.

	<b>2008</b>		<b>2009</b>		<b>2010 budget</b>	
	(US\$ million)	(% of total)	(US\$ million)	(% of total)	(US\$ million)	(% of total)
Ferrous minerals	2,171	21.3	2,124	23.6	3,863	30.0
Non-ferrous minerals	4,614	45.3	3,144	34.9	4,075	31.6
Logistics services	1,952	19.2	1,985	22.0	2,654	20.6
Coal	392	3.8	564	6.3	892	6.9
Power generation	406	4.0	688	7.6	834	6.5
Steel	146	1.4	184	2.0	343	2.7
Other	510	5.0	324	3.6	235	1.8
<b>Total</b>	<b>10,191</b>	<b>100.0</b>	<b>9,013</b>	<b>100.0</b>	<b>12,894</b>	<b>100.0</b>



**Table of Contents**

The following table sets forth total expenditures in 2009 for our main investment projects and expenditures budgeted for those projects in 2010, together with estimated total expenditures for each project. The status of each project is described after the table.

Business area	Project	Actual(1)	Budgeted	Total(2)
		2009	2010 (US\$ million)	
Ferrous minerals and Logistics	Carajás additional 20 Mtpy iron ore mine	45	90	575
	Carajás additional 30 Mtpy iron ore mine	384	480	2,478
	Carajás Serra Sul (mine S11D) iron ore mine	213	1,126	11,297
	Apolo iron ore mine	9	38	2,509
	Vargem Grande Itabiritos iron ore mine		79	975
	Conceição Itabiritos iron ore mine	7	184	1,174
	Tubarão VIII pellet plant	208	122	636
	Oman pellet plant and iron ore distribution center	344	484	1,356
	Teluk Rubiah maritime terminal and distribution center	4	98	900
Non-ferrous minerals	Onça Puma nickel mine	486	510	2,646
	Totten nickel mine	56	146	362
	Long-Harbour nickel processing facility	101	441	2,821
	Tres Valles copper mine	52	27	109
	Salobo copper mine	436	600	1,808
	Salobo copper mine expansion	2	66	1,025
	Konkola North copper mine		50	145
	Bayóvar phosphate mine	296	219	566
Rio Colorado potash mine		304	4,118	
Coal	Moatize coal mine	302	595	1,322
Energy	Estreito hydroelectric power plant	284	186	703
	Karebbe hydroelectric power plant	53	126	410
	Biofuels	46	55	407

(1) All figures presented on a cash basis.

(2) Estimated total capital expenditure cost for each project.

**Iron ore and iron ore pellet projects**

*Carajás additional 20 Mtpy.* This brownfield project is located in the Northern System and consists of an expansion of the original project (additional 10 Mtpy). Our estimated total investment in this project is US\$575 million, representing a relatively low capital expenditure cost per ton of capacity of US\$29. Our

investment will be applied in part to overhauling a dry plant and the acquisition of a new plant. Start-up is scheduled for the first half of 2010.

*Carajás additional 30 Mtpy.* This brownfield project, also located in the Northern System, will add 30 million metric tons per year to our capacity with investments in the installation of a new plant, composed of primary crushing, processing and classification units and significant investment in logistics. This project is currently scheduled to come on stream in the first half of 2012, subject to obtaining the required environmental licenses.

*Vargem Grande Itabiritos.* This project, in the Southern System, also involves the construction of a concentration plant, which will be fed by low grade iron ore produced by the Abóboras mine, in the Vargem Grande complex in the Southern System. It is expected to have nominal capacity of

## **Table of Contents**

10 million metric tons per year of pellet feed. Start-up is expected for the second half of 2012, subject to Board approval of the project.

*Conceição Itabiritos.* This is a brownfield project aimed at increasing pellet feed capacity through the processing of low-grade itabirites. The project involves the construction of a concentration plant to add 12 million metric tons per year to the current nominal capacity of pellet feed, using as feed run-of-mine from the Conceição mine, in the Itabira complex in the Southeastern System. Start-up is targeted for the second half of 2013.

*Carajás Serra Sul (mine S11D).* This project, located in the Northern System, is the largest greenfield project in our history and in the history of the iron ore industry. We expect it to have a production capacity of 90 million metric tons of iron ore per year. Completion is currently scheduled for the second half of 2013, subject to obtaining the required environmental licenses. This project is subject to approval by our Board of Directors.

*Apolo.* We expect this greenfield project, located in the Southeastern System, to have production capacity of 24 million metric tons per year and expected start-up for the first half of 2014, subject to Board approval.

*Oman.* In Oman, at the Sohar industrial complex, we are developing a pellet plant, a bulk terminal and a distribution center with capacity to handle 40 million metric tons. The plant will have annual nominal production capacity of 9 million metric tons of direct reduction pellets. Operations are scheduled to begin in the second half of 2010.

*Tubarão VIII.* We are building a new pellet plant at our existing seven-plant complex at the Tubarão Port. We expect the plant to have production capacity of 7.5 million metric tons per year. Start-up is scheduled for the second half of 2012.

*Teluk Rubiah.* In 2010, we will start construction of distribution facilities in Teluk Rubiah, Malaysia. The project comprises a maritime terminal with enough depth to receive 400,000 dwt ore carriers and a stockyard capable of handling up to 30 million metric tons per year in an initial phase. There is potential to expand it in the future to up to 90 million metric tons per year. Start-up is targeted for the first half of 2013, subject to Board approval of the project.

## **Nickel projects**

*Onça Puma.* Onça Puma is a nickel operation (mine and plant) built on deposits of nickel laterite saprolite in the Brazilian state of Pará. We expect it to reach nominal production capacity of 58,000 metric tons per year of nickel contained in ferro-nickel, its final product. Commissioning is scheduled to begin in the second half of 2010, with commercial production starting in 2011.

*Totten.* We are working on the re-opening of the Totten nickel mine in Sudbury, Ontario, which was closed in 1972. The mine will have annual production capacity of 8,200 metric tons of nickel, with copper and precious metals (platinum, gold and silver) as by-products. Completion is scheduled for the first half of 2011.

*Long-Harbour.* We are building a nickel refining facility pursuant to a commitment with the government of the Province of Newfoundland and Labrador, Canada. The facility will have nominal production capacity of 50,000 metric tons per year of finished nickel, utilizing feed from the Ovoid mine at Voisey



Bay. Start-up is scheduled for the first half of 2013.

## **Table of Contents**

### **Copper projects**

*Tres Valles.* We are investing in the Tres Valles project in the Coquimbo region of Chile, which has an estimated nominal production capacity of 18,000 metric tons per year of copper cathode. The completion of this project is scheduled for the second half of 2010.

*Salobo.* In the first phase of development of the Salobo copper deposit in Carajás, annual nominal capacity will be 100,000 metric tons of copper in concentrates, with 130,000 troy ounces of gold in concentrate as a by-product. The concentrate will be processed using conventional smelting technology. Salobo is scheduled to come on stream in the second half of 2011.

*Salobo expansion.* The project will expand the Salobo mine's production capacity from 100,000 to 200,000 metric tons per year of copper in concentrates. The scope of the project contemplates the expansion of the industrial and support facilities, raising the height of the tailing dam and increasing mine movement. This project is scheduled to be completed by the first half of 2013.

*Konkola North.* Konkola North, estimated to be the second-largest known resource in the Zambian Copperbelt, is an underground mine with estimated nominal production capacity of 44,000 metric tons per year of copper in concentrate. This project is part of our joint venture with African Rainbow Minerals ( ARM ) in Africa. We will begin development in the second half of 2010, and the conclusion of the project, which is subject to Board approval, is targeted for 2013.

### **Fertilizer nutrients projects**

*Bayóvar.* We are developing a phosphate project in Bayóvar, Peru, which consists of an open-pit phosphate mine with nominal production capacity of 3.9 million metric tons per year and a maritime terminal. Completion is expected in the second half of 2010. We have started a marketing campaign and will focus on establishing long-term contracts.

*Rio Colorado.* This project, in Argentina, comprises an operation with initial nominal capacity of 2.4 million metric tons per year of potash, with potential expansion to up to 4.35 million metric tons per year, the construction of a 350-kilometer railway spur, port facilities and a power plant. Start-up is targeted for the second half of 2013, subject to Board approval of the project.

### **Coal projects**

*Moatize.* We have obtained all of the required licenses from the government of Mozambique for the construction of the Moatize mine, which will have nominal annual production capacity of 11 million metric tons, comprising 8.5 million metric tons of metallurgical coal and 2.5 million metric tons of thermal coal. In 2008, we signed a memorandum of understanding with the government of Mozambique establishing railroad tariffs for the Sena-Beira line and a coal port terminal will be built by a concessionaire owned by the Mozambican government. Start-up is scheduled for the first half of 2011.

### **Energy projects**

*Estreito.* We are constructing the Estreito hydroelectric power plant near the Tocantins River, on the border of the Brazilian states of Maranhão and Tocantins. The plant will have an installed capacity of 1,087 MW. We have a 30% stake in the consortium that will build and operate the plant. Completion is scheduled for the second half of 2010.



## **Table of Contents**

*Karebbe.* Karebbe will be the third hydroelectric power plant built by PTI in Sulawesi, Indonesia. It is intended to reduce production costs and to produce enough energy to enable the potential expansion of annual production to 90,000 metric tons of nickel in matte. Start-up is scheduled for the second half of 2011.

*Biofuels.* We own a 41% stake in a consortium with Biopalma da Amazônia S.A. to invest in biodiesel in the Northern region of Brazil, using the B20 mix (20% of biodiesel and 80% of ordinary diesel), from 2014 onwards. The oil production related to our stake will be used to feed our biodiesel plant, with estimated capacity of 160,000 metric tons per year. Biodiesel production will supply our operations in northern Brazil.

## **Steel projects**

We have the following steel projects, which will create additional demand for our iron ore and iron ore pellets.

*ThyssenKrupp-CSA Siderúrgica do Atlântico Ltda ( TKCSA ).* We have a 26.87% stake in the TKCSA integrated steel slab plant in the Brazilian state of Rio de Janeiro. Production of the first slab is scheduled for the second semester. Once completed, it will have a nominal annual production capacity of 5 million metric tons.

*Companhia Siderúrgica do Pecém ( CSP ).* In partnership with Dongkuk Steel Mill Co. ( Dongkuk ), one of the largest steel producers in South Korea, we are taking steps to build a steel slab plant in the Brazilian state of Ceará. The plant will have nominal production capacity of 3.0 million metric tons per year, with potential for expansion to 6 million metric tons per year in a second stage. The estimated total investment for the first stage is US\$4 billion, and our contribution will depend on the size of our final stake in the project. Start-up is expected to occur in 2014. The development of this project depends on the conclusion of feasibility studies and the approval of CSP's shareholders.

*Aços Laminados do Pará ( ALPA ).* We are taking steps to implement the ALPA project, which involves the construction of a steel plant in Marabá, in the Brazilian state of Pará. The plant would have production capacity of 2.5 million metric tons per year of slabs and would entail an estimated investment of US\$3.2 billion. Start-up of this project, which is subject to Board approval, is expected for 2013. Our share of total investment has not yet been determined.

*Companhia Siderúrgica Ubu ( CSU ).* At CSU (formerly known as CSV) we started in December 2009 the official licensing process for an integrated steel slab project with nominal capacity of 5 million tons per year. We have initiated a feasibility study, and start-up is expected for 2014. The project is subject to Board approval. Total investment is currently estimated to be US\$6.2 billion and our share of total investment has not yet been determined.

## **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.

**Table of Contents****Mining rights**

In order to conduct mining activities, we generally require some form of governmental permits, which differ in form depending on the jurisdiction but may include concessions, licenses, claims, tenements, leases or permits (all of which we refer to below as "concessions"). Some concessions are of indefinite duration, but many have specified expiration dates, and may not be renewable. The legal and regulatory regime governing concessions differs among jurisdictions, often in important ways. For example in many jurisdictions, including Brazil, mineral resources belong to the state and may only be extracted pursuant to a concession. In other jurisdictions, including Canada, a substantial part of our mining operations is conducted pursuant to leases, often from government agencies.

The table below summarizes our principal mining concessions and other similar rights. In addition to the concessions described below, we have exploration licenses covering 5.1 million hectares in Brazil and 16.1 million hectares in other countries.

<b>Location</b>	<b>Concession or other right</b>	<b>Approximate area covered (in hectares)</b>	<b>Expiration date</b>
<i>Brazil</i>	Mining concessions	765,855	Undetermined
<i>Canada</i>			
<i>Ontario</i>	Mining rights	82,085	Not applicable
	Surface rights	60,000	Not applicable
	Mining leases	14,116	2010-2028
	License of occupation	2,939	Revocable on 30 days notice
<i>Manitoba</i>	Mineral claims	8,942(1)	2010-2015
	Order in Council Leases	109,043	2020-2025
	Mineral leases	4,151	2013
	Mining claims	35,200	2010-2030
<i>Newfoundland and Labrador</i>	Mining lease	1,600	2027
	Surface lease	4,015	2027
	Mineral licenses	49,450	2014
<i>Indonesia</i>	Contract of Work	218,000	2025(3)
<i>Australia</i>	Mining tenements	32,857	2010-2040
<i>New Caledonia</i>	Mining concessions	20,300	2016-2051(2)
	Mining concessions (outside the Goro project area)	12,191	2027-2040
<i>Peru</i>	Mining concessions	126,382	Undetermined
<i>Colombia</i>	El Hatillo concessions	9,695	2027
	Cerro Largo Sur concessions	1,092	2032
<i>Argentina</i>	Mining concessions	63,978	Undetermined

<i>Chile</i>	Mining concessions	41,841	Undetermined
<i>Mozambique</i>	Mining concessions	23,780	2030

- (1) 6,596 hectares are jointly held with third parties.
- (2) Our Goro project is located on eight mining concessions covering 6,571 hectares. Three of these concessions are renewable in 2016 while the others are due for renewal in 2048 and 2051.
- (3) The Contract of Work for our Indonesian mining operations expires in 2025. However, under the new Mining Law, we may be entitled to apply for at least one 10-year extension.

## **Table of Contents**

Many concessions impose specific obligations on the concessionaire governing such matters as how operations are conducted and what investments are required to be made. For example, under the concession for our Indonesian mining operations (known as the Contract of Work), we are required to construct two production plants, each in a specific region, subject to economic and technical feasibility. Our ability to maintain our mineral rights depends on meeting these requirements, which often involve significant capital expenditures and operating costs.

### **Regulation of mining activities**

Mining and processing are subject to extensive regulation, which differs in each jurisdiction in which we operate. Our major operations are subject to legislation and regulations that apply to mining activities, which in many countries include state or provincial law in addition to national or federal law. In addition, many of our concessions, particularly for large operations, impose additional obligations on the concessionaire.

The jurisdictions in which we operate typically have government agencies that are charged with granting mining concessions and monitoring compliance with mining law and regulations. For example, mining activities in Brazil are supervised by the National Mineral Production Department (*Departamento Nacional de Produção Mineral*), or DNPM, an agency of the federal Ministry of Mines and Energy.

Changes in mining legislation can have significant effects on our operations. Among the jurisdictions in which we currently have major operations, there are several proposed or recently adopted changes in mining legislation that could materially affect us. These include the following:

The Brazilian Ministry of Mining and Energy is planning to propose changes to the Brazilian Mining Code, which if adopted may have important implications for mining operations in Brazil or require unexpected capital expenditures.

In Indonesia, a new Mining Law came into effect in January 2009 that introduces a new licensing regime. In 2010, certain government regulations implementing the Mining Law were promulgated, but some remain outstanding. PTI, in collaboration with its Indonesian legal advisors, is investigating the impacts that the new Mining Law and regulations may have on PTI's current operations and its future prospects in Indonesia. Until all of the implementing regulations are promulgated, we will be unable to assess how and to what extent PTI's Contract of Work and operations will be affected.

In New Caledonia, a new mining law was passed in March 2009 requiring new mining projects to obtain formal authorization rather than a declaration. Our application for authorization (replacing a 2005 declaration) must be made by April 2012 and, once submitted, we should obtain the authorization by April 2015. We believe it is unlikely that the application for the authorization will be rejected, but there is a risk that new conditions will be imposed.

### **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 or permits 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 additional investments to mitigate environmental impacts. We must also operate our facilities in compliance with the terms of the approvals, licenses or permits.

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, natural caverns, watersheds and other features of the ecosystem; water use; and decommissioning and reclamation. In many cases, the mining concessions or environmental permits under which we operate impose specific environmental requirements on our operations. Environmental regulations can sometimes change and ongoing compliance can require significant costs for capital expenditures, operating costs, reclamation costs and



**Table of Contents**

compliance. For example, in Brazil, a suit challenging a Brazilian environmental decree that permits mining in certain subterranean areas may adversely affect our ability to conduct some mining operations or even reserves.

Environmental legislation is becoming stricter worldwide, which could lead to greater costs for environmental compliance. For instance, if we are required to modify installations, develop new operational procedures or purchase new equipment, our environmental compliance costs could increase. In particular, we expect heightened attention from various governments to reducing greenhouse gas emissions as a result of concern over climate change. For example:

Our operations in Canada and at PTI in Indonesia are subject to air emission regulations that address, among other things, sulfur dioxide (SO<sub>2</sub>), particulates and metals. We will be required to make significant capital expenditures to ensure compliance with these emissions standards. The imposition of more stringent standards in the future, especially for SO<sub>2</sub> and nickel, could further increase our costs.

In 2007, the Canadian government launched its Turning the Corner plan. The plan proposed Greenhouse Gas (GHG) emissions reduction targets for each industrial sector. The final targets are expected to align with the U.S. objective of reducing emissions by 17%, below 2005 levels, by 2020. In addition, several provinces, including Manitoba and Ontario, have introduced mandatory emission reduction targets and compliance mechanisms including emissions trading. Compliance with the GHG targets will require investment in our Canadian operations or the purchase of carbon allowances or offsets. At this stage in the legislative process, however, it is unclear whether additional operating or capital expenditures will be required to comply with enacted amendments or what effect these regulations will have on our business, financial results or cash flow from operations.

In Canada, a number of studies have been completed or are in progress in Sudbury and Port Colborne related to contamination of soil and water from past and continuing activities. We are taking steps, in partnership with other stakeholders, to remediate the ecological impact of our activities.

The Australian government is seeking to introduce a Carbon Pollution Reduction Scheme ( CPRS ) as part of an overall strategy to address climate change and its impact, both within Australia and globally. The government has committed to certain reductions in greenhouse gas emissions by 2020, and draft legislation was released in the first quarter of 2009. The legislation has not yet been passed by the Australian parliament. It is expected that whatever form the legislation finally takes will include some form of a carbon tax. We are taking steps to manage our greenhouse gas emission exposure, including improving systems to monitor, measure and report greenhouse gas emissions, including the cost of emissions in modeling for decision making purposes and identifying opportunities to reduce our carbon emissions.

In October 2009, Indonesia adopted new legislation on Environmental Protection and Management. It sets out a broad regulatory structure and provides that many important details will be clarified in later implementing regulations, which the law provides should be issued within one year of its effective date.

## **Table of Contents**

### **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:

In 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 annual rates on our products are: 2% for iron ore, kaolin, copper, nickel, fertilizers and other materials; 3% on bauxite, potash and manganese ore; and 1% on gold. The Brazilian government is considering changes in the CFEM regime. These changes will only be enforceable once a final proposal is issued by DNPM and approved by the National Congress. We are currently engaged in several administrative and legal proceedings alleging that we have failed to pay the proper amount of CFEM. See *Additional information Legal proceedings CFEM-related proceedings*.

The Canadian provinces in which we operate charge us a tax on profit 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; 17% in Manitoba; and 15% in Newfoundland and Labrador.

In Indonesia, our subsidiary PTI pays a royalty fee on, among other items, its nickel production on the concession area and has made certain other commitments. Until March 2008 the royalty was equal to 1.5% of revenues from sales of nickel products. As of April 2008, the royalty payment was changed to equal a fixed amount based on sales volume (US\$78 per metric ton).

### **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, electricity generation, and oil and gas. We are also subject to more general legislation on workers health and safety, safety and support of communities near mines, and other matters.

Our Brazilian railroad business is subject to regulation and supervision by the Brazilian Ministry of Transportation and the transportation regulatory agency (Agência Nacional de Transportes Terrestres), or ANTT, and operates pursuant to concession contracts granted by the federal government. The concession contracts impose certain shareholder ownership limitations. The concession contract for FCA limits shareholder ownership to 20% of the voting capital of the concessionaire, unless such limit is waived by ANTT. We own 99.9% of FCA, which ANTT has authorized. The 20% ownership limitation does not apply to our EFVM, EFC and FNS railroads. ANTT also sets different tariff limits for railroad services for each of the concessionaires and each of the different products transported. So long as these limits are respected, the actual prices charged can be negotiated directly with the users of such services.

The MRS concession contract provides that each shareholder can only own up to 20% of the voting capital of the concessionaire, unless otherwise permitted by ANTT. As a result of our acquisitions of CAEMI and Ferteco, our share in the voting capital of MRS surpassed this threshold. As a result, Vale waived its voting and veto rights with respect to MRS shares in accordance with a 2006 ANTT resolution. We continue to have some voting rights through the shareholdings of a subsidiary.

Our railroad concession contracts have a duration of 30 years and are renewable. The FCA and MRS concessions expire in 2026, and the concessions for EFC and EFVM expire in 2027. We also own the



## **Table of Contents**

subconcession for commercial operation for 30 years of a 720-kilometer segment of the FNS railroad, in Brazil. This concession expires in 2037.

In connection with the approval in 2006 of our acquisition of Vale Inco, we made a number of undertakings to the Canadian Minister of Industry under the Investment Canada Act. We believe we are substantially in compliance with these undertakings, which include locating our global nickel business in Toronto, Canada; accelerating the Voisey Bay development project; enhancing investments in a number of areas in Canada; and honoring agreements with provincial governments, local governments, labor unions and aboriginal groups.

Some of our products are subject to regulations applicable to the marketing and distribution of chemicals and other substances. For example, the European Commission has adopted a European Chemicals Policy, known as REACH ( Registration, Evaluation, and Authorization of Chemicals ). Under REACH, manufacturers and importers will be required to register new 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 regulation could face restrictions to commercialize its products in Europe. We have complied with registration requirements for the substances we import into or manufacture in the EU and continue to take measures to manage our exposure to the authorization process.

## **II. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

### **Overview**

The year 2009 was a year of significant challenges brought on by a major recession that caused one of the few episodes of global GDP contraction over the last 40 years. As a producer of minerals and metals, the end consumers of our products are primarily the manufacturing and construction industries, two of the most cyclical components of economic activity and thus severely affected by recessions.

While severe economic downturns often cause serious negative effects on financial and operational performance, they also create extraordinary opportunities for companies that embrace change and structural transformation. We have leveraged our competitive advantages – low-cost, world-class assets, a healthy balance sheet, a large pool of liquidity, discipline in capital allocation, a highly skilled and motivated labor force and an entrepreneurial spirit – to launch several initiatives to make us stronger in the future, seeking to reduce costs on a permanent basis and increase efficiency. We have not cancelled any investment project, and we have identified new growth opportunities, and as a result we believe our growth potential has been enhanced.

Despite weaker performance compared to previous years, our response to the recessionary environment has heightened our capacity to create sustainable shareholder value. Below are the main highlights of Vale's performance in 2009:

Gross operating revenue of US\$23.9 billion;

Net income of US\$5.3 billion, or US\$1.00 per share on a fully diluted basis;

Operating margin, measured as the ratio of operating income to net operating revenues, of 26.0%;

Operating income of US\$6.1 billion;

Capital expenditures, including organic growth and maintenance, reached US\$9.0 billion; and

Strong financial position, supported by large cash holdings of US\$11.0 billion, availability of significant medium and long-term credit lines and a low-risk debt portfolio.

**Table of Contents****Demand and prices**

The following table sets forth our average realized prices for our principal products for each of the periods indicated.

	<b>Year ended December 31,</b>			
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
	(US\$ per metric ton, except where indicated)			
Iron ore	40.00	45.33	67.32	55.99
Iron ore pellets	75.21	78.62	131.76	73.75
Manganese	70.60	107.34	350.46	147.06
Ferrous alloys	886.97	1,311.48	2,709.60	1,395.26
Nickel	31,981.53	37,442.28	21,662.14	14,596.55
Copper	6,380.84	6,611.27	6,331.07	5,229.39
Kaolin	164.78	195.88	194.06	216.52
Potash	195.09	264.09	591.18	521.46
Platinum (US\$/oz)	1,115.59	1,314.25	1,557.07	1,073.98
Cobalt (US\$/lb)	14.93	24.56	31.01	10.03
Aluminum	2,558.76	2,784.70	2,805.86	1,686.87
Alumina	343.99	338.76	348.42	226.46
Bauxite	30.46	36.08	41.47	34.15
Coal:				
Thermal coal		53.73	85.38	66.60
Metallurgical coal		67.37	170.55	115.55

***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 according to the wide array of quality levels and physical characteristics. Various factors influence price differences among the various 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 and manganese ore) in the ore. Fines, lump ore and pellets typically command different prices.

In general, our iron ore sales are made pursuant to long-term supply contracts. Since April 2010, we reached agreements on a new iron ore pricing regime with the majority of our customers around the world based on short-term market references and price changes on a quarterly basis. These agreements, some of which are permanent and some of which are provisional, reached 97% of our customer base, which corresponds to 90% of sales volumes under contracts. Previously, a majority of our contracts provided for annual price adjustments. Our 2009 annual reference prices for iron ore fines decreased by 28.2%, and prices for our iron ore pellets were 44.5% lower than in 2008. Carajás iron ore fines were priced at a premium of US\$0.0444 per dry metric ton Fe unit over the 2009 reference price for fines from the Southeastern and Southern Systems.

Chinese iron ore imports in 2009 reached an all-time high of 627.8 million metric tons, up 41.6% on a year-on-year basis, driven by steel production growth and the increasing reliance on imported iron ore.

We expect Chinese imports to remain at a high level in 2010, primarily due to strength in the final demand for carbon steel. The increase in capacity utilization rates of the steel industry in Japan, Korea, Brazil and Europe, although somewhat below pre-crisis levels, coupled with very large Chinese import volumes, has produced a dramatic change in the global iron ore market from surplus to excess demand, and these conditions should persist.

**Table of Contents*****Manganese and ferroalloys***

The prices of manganese ore and ferroalloys are influenced by trends in the carbon steel market. Ferroalloy prices are also influenced by the prices of the main production inputs, such as manganese ore, power and coke. Price negotiations for manganese ore are held mainly on a spot or quarterly basis. Ferroalloy prices are settled on a quarterly basis.

***Nickel***

Nickel is an exchange-traded metal, listed on the LME, that is mainly used to produce stainless steel. Most nickel products are priced according to 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 corresponds on average to 60-65% of global nickel consumption. Nickel demand for sources of consumption other than stainless steel production represents 35-40% 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 2009, 59% of our refined nickel sales were made into non-stainless steel applications, compared to the industry average for primary nickel producers of 35%. 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 2009, the stainless steel scrap ratio fell from 49% to 43%. Nickel pig iron production is estimated to have reached 7% of the global supply of primary nickel, compared to 5% in 2008.

We expect strong demand for nickel in 2010. Stainless steel production is picking up in 2010 in major Asian producing countries, including China, Japan, Korea and Taiwan. In North America and Europe utilization rates are also increasing. The per capita consumption of stainless steel in high-growth emerging economies is still low, and there is still great potential for demand of non-stainless steel applications to grow. The demand for nickel in plating applications is expanding as a consequence of the recovery of the automobile industry. Similarly, there is growing demand for non-stainless steel applications originating from a number of industries including aerospace, energy, electronics and batteries.

***Aluminum***

Our sales of aluminum are realized at prices based on the LME of the previous month. Our sales of alumina are based on a percentage of the aluminum price traded on the LME, and our prices for bauxite are determined by a formula linked to the price of aluminum for the three-month futures contracts on the LME and to the price of alumina FOB Australia.

***Copper***

Growth in copper demand in recent years has been driven primarily by Chinese imports. 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 and copper anode (which comprise most of our sales), 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.

## **Table of Contents**

Copper consumption is expanding at a brisk pace, partly as a result of the broadening global economic recovery. Given the structural limitations to supply growth of concentrates, there is fundamental support for the persistence of a relatively high price level.

### ***Fertilizer nutrients***

Demand for fertilizers is driven by agricultural production, which is a function of food demand and driven mainly by population growth, age distribution, economic development and dietary preferences. Demand is also driven by bio-fuels production, which is a function of economic growth, competitiveness in relation to fossil fuels and environmental regulations.

Price negotiations for fertilizers are mainly held in a spot basis following international benchmarks, despite some large importers, such as China and India, which 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.

### ***Coal***

Demand for metallurgical coal is driven by demand for steel, especially in Asia. Demand for thermal coal is closely related to electricity consumption, which will continue to be driven by global economic growth, particularly from emerging markets economies. Price negotiations for metallurgical coal are mainly held on an annual basis. Price negotiations for thermal coal are held both on a spot and annual basis.

### ***Logistics***

Demand for our transportation services in Brazil is primarily driven by Brazilian economic growth, mainly in the agricultural and steel sectors. We earn our logistics revenues primarily from fees charged to customers for the transportation of cargo via our railroads, port and ships. Our railways generate most of these revenues. Nearly all of our logistics revenues are denominated in *reais* and subject to adjustments for changes in fuel prices. Prices in the Brazilian market for railroad services are subject to ceilings set by the Brazilian regulatory authorities, but they primarily reflect competition with the trucking industry.

## **Production levels**

Our financial performance depends, among other factors, on the volume of production at our facilities. Increases in the capacity of our facilities, resulting from our capital expenditure program, accordingly have an important effect on our performance. In 2008 and 2009, our results were also affected by our decision to reduce or suspend production at several of our facilities in late 2008 as a result of the economic crisis, and by the resumption of normal operations in the second half of 2009 with the global economic recovery.

Our results have also been 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 and dispositions since the beginning of 2009, see *Information on the Company Business overview Significant changes in our business*.

## **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, principally the *real* (64% in 2009) and the Canadian dollar (16% in 2009). As a result, changes in exchange rates affect our costs and operating margins. Our margins are adversely affected by a decline in the value of the U.S. dollar.

## **Table of Contents**

Most of our long-term debt is denominated in currencies other than the *real*, principally the U.S. dollar (US\$15,592 million at December 31, 2009). 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 in our financial results.

We had *real*-denominated debt of US\$6,952 million at December 31, 2009. 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 was strong against the *real* and the Canadian dollar during the first half of 2009 but began to depreciate in the second semester of the year. At December 31, 2009, the U.S. dollar had depreciated 25.5% against the *real* and 14.1% against the Canadian dollar relative to December 31, 2008. These currency price changes affected our operating margins and resulted in higher foreign exchange gains and gains on derivatives, as described under *Critical accounting policies and estimates Derivatives*.

### **Operating expenses**

Our principal operating expenses consist of: (i) cost of goods sold, (ii) selling, general and administrative expenses and (iii) research and development expenses. Our cost of goods sold consists of costs of energy (fuel and electric energy), materials (such as components for railroad and mining equipment), outsourced services (especially ore and waste removal, transportation and maintenance), purchased products for processing or resale (such as iron ore, iron ore pellets, nickel and aluminum products), personnel, and depreciation and depletion. Our selling, general and administrative expenses consist principally of personnel expense, sales expense and depreciation. Our research and development expenses consist primarily of investments related to mineral exploration and studies for the development of projects, which are recorded as expenses until the economic viability of the related mining activities is established.

**Table of Contents****Results of operations 2009 compared to 2008****Revenues**

Our net operating revenues decreased 37.7%, to US\$23.311 billion, in 2009, as a result of a decline in both volume sold and sale prices. The following table summarizes our gross revenues by product and our net operating revenues for the periods indicated.

	Year ended December 31,				% change
	2008	2009	(US\$ million)		
Ferrous minerals:					
Iron ore	US\$ 17,775	US\$ 12,831			(27.8%)
Iron ore pellets	4,301	1,352			(68.6)
Manganese	266	145			(45.5)
Ferroalloys	1,211	372			(69.3)
Pig iron	146	45			(69.2)
Subtotal	23,699	14,745			(37.8)
Non-ferrous minerals:					
Nickel and other products(1)	7,829	3,947			(49.6)
Potash	295	413			40.0
Kaolin	209	173			(17.2)
Copper concentrate(2)	893	682			(23.6)
Aluminum	3,042	2,050			(32.6)
Subtotal	12,268	7,265			(40.8)
Total minerals and metals	35,967	22,010			(38.8)
Logistic services	1,607	1,104			(31.3)
Other products and services(3)	935	825			(11.8)
Gross revenues	38,509	23,939			(37.8)
Value-added tax	(1,083)	(628)			42.0
Net operating revenues	US\$ 37,426	US\$ 23,311			(37.7%)

(1) Includes copper, precious metals, cobalt and other by-products produced by Vale Inco.

(2) Does not include copper produced by Vale Inco.

(3) Includes coal.

*Iron ore.* Gross revenues from iron ore decreased by 27.8% primarily as a result of a 13.2% decrease in volume sold and a 16.8% decrease in the average sale price. Although 2009 benchmark prices were lower than 2008 benchmark

prices by 28.2% for fines and 44.5% for lumps the average sale price for iron ore in 2009 was only 16.8% lower than in 2008. This is primarily because (i) some of the 2008 benchmark prices did not take effect until the second quarter of 2008, (ii) the 2009 benchmark prices took effect in the second quarter of 2009 and (ii) we began selling on a cost and freight basis in early 2009 in accordance with a more flexible stance towards iron ore pricing.

*Iron ore pellets.* Gross revenues from iron ore pellets decreased by 68.6% due to a 43.9% reduction in volume sold as a result of weakened demand, and a 44.0% decrease in average sale prices. During an economic downturn, demand for iron ore pellets tends to be negatively affected earlier and more strongly than the demand for iron ore fines.

*Manganese ore.* Gross revenues from manganese ore decreased by 45.5% due primarily to lower prices. The effect of lower prices was partially offset by higher volume sold as a result of strong Chinese demand.

**Table of Contents**

*Ferroalloys.* Gross revenues from ferroalloys decreased by 69.3% due to a 48.5% decline in average selling prices and a 36.1% decrease in volume sold. The decline in volume is primarily attributable to a decline in demand.

*Nickel and other products.* Gross revenues from this segment decreased by 49.6%, mainly due to the following factors:

Gross revenues from nickel sales decreased 45.4%, to US\$3.260 billion in 2009 from US\$5.970 billion in 2008. Due to weaker demand, average nickel prices declined 32.6%. Volume sold declined by 18.8% in 2009, primarily due to lower demand and the shutdown of our Sudbury and Voisey Bay operations as a result of labor strikes in the second half of 2009.

Gross revenues from copper sales decreased by 60.5%, from US\$1.136 billion in 2008 to US\$449 million in 2009, primarily due to a 52.7% drop in volume sold due to the shutdowns described above.

Gross revenues from sales of precious metals and other products decreased 61.4%, from US\$511 million in 2008 to US\$197 million in 2009, primarily due to a decline in volume sold.

*Potash.* Gross revenues from sales of potash increased by 40.0%. The increase was due to a 58.7% increase in volume sold as a result of the strong performance of the Brazilian agricultural sector, which was partially offset by an 11.8% decline in average selling prices compared to the prior year.

*Kaolin.* Gross revenues from sales of kaolin decreased by 17.2%, due principally to a 25.8% decrease in volume, which was partially offset by an 11.6% increase in the average sale price.

*Copper concentrate.* Gross revenues from sales of copper concentrate decreased by 23.6% due to a 5.3% decrease in volume sold and a 19.3% decrease in the average sale price.

*Aluminum.* Gross revenues from our aluminum business decreased by 32.6%. This decrease is attributable to the following factors:

Gross revenues from sales of aluminum decreased 44.7%, from US\$1.545 billion in 2008 to US\$855 million in 2009, primarily due to a 40% decline in the average sale price.

Gross revenues from sales of alumina decreased 19.2%, from US\$1.470 billion in 2008 to US\$1.188 billion in 2009 due to a 34.9% lower average sale price. The decline was partially offset by a 24.3% increase in volume sold.

Gross revenues from sales of bauxite decreased 74.1%, from US\$27 million in 2008 to US\$7 million in 2009, due to a reduction in volume sold.

*Logistics services.* Gross revenues from logistics services decreased by 31.3%. The decrease reflects the following factors:

Revenues from railroad transportation decreased by 35.7%, from US\$1.303 billion in 2008 to US\$838 million in 2009, primarily reflecting the drop in Brazilian exports in 2009, which caused a sharp decline in the volume of steel inputs and products transported.

Revenues from port operations decreased by 13.2%, from US\$304 million in 2008 to US\$264 million in 2009, reflecting weaker demand.

*Other products and services.* Gross revenues from other products and services decreased from US\$935 million in 2008 to US\$825 million in 2009, primarily due to lower revenue from coal sales, which was partially offset by higher revenue from sales of electricity.



**Table of Contents****Operating costs and expenses**

	<b>Year ended December 31,</b>				<b>% change</b>
	<b>2008</b>	<b>2009</b>			
	(US\$ million)				
Cost of ores and metals	US\$ 14,055	US\$ 10,026			(28.7%)
Cost of logistic services	930	779			(16.2)
Cost of aluminum products	2,267	2,087			(7.9)
Others	389	729			87.4
Cost of goods sold	17,641	13,621			(22.8)
Selling, general and administrative expenses	1,748	1,130			(35.4)
Research and development	1,085	981			(9.6)
Impairment of goodwill	950				(100.0)
Other costs and expenses	1,254	1,522			21.4
<b>Total operating costs and expenses</b>	<b>US\$ 22,678</b>	<b>US\$ 17,254</b>			<b>(23.9%)</b>

**Cost of goods sold**

The following table summarizes the components of our cost of goods sold for the periods indicated.

	<b>Year ended December 31,</b>				<b>% change</b>
	<b>2008</b>	<b>2009</b>			
	(US\$ million)				
Outsourced services	US\$ 2,880	US\$ 2,264			(21.4%)
Materials costs	2,900	2,698			(7.0)
Energy:					
Fuel	1,842	1,277			(30.7)
Electric energy	1,078	844			(21.7)
Subtotal	2,920	2,121			(27.4)
Acquisition of iron ore and pellets	1,179	155			(86.9)
Acquisition of other products:					
Nickel	687	271			(60.6)
Aluminum	317	279			(12.0)
Other	31	38			22.6
Subtotal	1,035	588			(43.2)
Personnel	2,139	1,939			(9.4)
Depreciation and depletion	2,664	2,332			(12.5)
Others	1,924	1,524			(20.8)
<b>Total</b>	<b>US\$ 17,641</b>	<b>US\$ 13,621</b>			<b>(22.8%)</b>

Our total cost of goods sold decreased 22.8% from 2008 to 2009. The decline is attributable to the decline in volume sold, exchange rate variations and our efforts to reduce costs. Of the US\$4,020 million decline in cost of goods sold, lower volume sold and exchange rate variations were responsible for US\$2,738 million and US\$895 million, respectively. Further details are set forth below:

*Outsourced services.* Outsourced services costs decreased by 21.4% in 2009 due to lower volume sold.

*Material costs.* Material costs decreased by 7.0% in 2009, primarily reflecting lower volume sold, the effect of which was partially offset by increased maintenance expenses due to the acceleration of scheduled maintenance for some operations and the higher value of the Brazilian *real* against the U.S. dollar.

*Energy costs.* Energy costs decreased by 27.4% in 2009 driven primarily by lower volume sold, lower average prices and exchange rate changes.

**Table of Contents**

*Personnel costs.* Personnel costs decreased by 9.4%, mainly due to lower staffing levels and the effects of idle capacity, which were offset by the impact of wage increases pursuant to a two-year agreement with our Brazilian employees entered into in November 2009.

*Acquisition of products.* Costs related to the acquisition of iron ore and iron ore pellets decreased by 86.9%, and costs related to the acquisition of other products declined by 43.2%. These declines were primarily driven by lower purchased volumes of iron ore, iron ore pellets and nickel products and lower average prices of purchased products.

*Other costs.* The decrease of US\$400 million in other costs was mainly due to lower lease payments for the Tubarão pellet plants and lower demurrage charges, both due to lower volume sold.

**Selling, general and administrative expenses**

Selling, general and administrative expenses decreased by 35.4%, or US\$618 million. The year-on-year comparison reflects an adjustment of US\$316 million related to copper sales recognized in 2008, when sharply declining copper prices in the fourth quarter resulted in an adjustment to sales based on provisional prices in earlier quarters.

**Research and development expenses**

Research and development expenses decreased by 9.6%. The US\$104 million decrease primarily reflects lower research expenditures related to copper, nickel, coal and logistics and was partially offset by an increase in research expenditures related to gas and energy.

**Impairment of goodwill**

No impairment was registered in 2009. In 2008, we recognized a US\$950 million impairment of the goodwill associated with our 2006 acquisition of Vale Inco.

**Other costs and expenses**

Other costs and expenses increased by US\$268 million, primarily as a result of an idle capacity increase of US\$880 million. The impact on the comparison was partially offset by the effects in 2008 of one-off tax assessments on third-party railroad transportation services used in our iron ore operations in previous years (US\$204 million), a provision for loss on materials (US\$199 million) and a fair value assessment of nickel inventories (US\$77 million).

**Table of Contents****Operating income by segment**

The following table provides information about our operating income by segment and as a percentage of revenues for the years indicated.

	<b>Year ended December 31,</b>			
	<b>2008</b>		<b>2009</b>	
	<b>Segment operating income (loss)</b>	<b>Segment operating income (loss)</b>	<b>Segment operating income (loss)</b>	<b>Segment operating income (loss)</b>
	(% of net operating revenues)	(% of net operating revenues)	(% of net operating revenues)	(% of net operating revenues)
	(US\$ million)	(US\$ million)	(US\$ million)	(US\$ million)
<b>Ferrous minerals:</b>				
Iron ore	US\$ 9,988	57.4%	US\$ 6,659	52.6%
Iron ore pellets	1,606	39.1	19	1.5
Manganese ore	169	67.3	31	21.7
Ferroalloys	604	55.8	34	10.4
Pig iron	76	52.1	(18)	
<b>Non-ferrous minerals:</b>				
Nickel and other products	1,131	14.4	(361)	
Potash	140	50.2	180	45.5
Kaolin	(45)		(16)	
Copper concentrate	111	12.7	129	19.5
Aluminum products	516	17.3	(191)	
<b>Logistics:</b>				
Railroads	246	22.4	65	9.3
Ports	41	15.5	36	15.9
Ships			(7)	
Others	165	18.2	(503)	
<b>Total</b>	<b>US\$ 14,748</b>	<b>39.4%</b>	<b>US\$ 6,057</b>	<b>26.0%</b>

Our operating income decreased as a percentage of net operating revenues, from 39.4% in 2008 to 26.0% in 2009, due to lower shipment volumes and prices. The effects on individual segments are summarized below:

The decrease in operating margin for iron ore and iron ore pellets primarily reflects lower average selling prices and volume sold.

The decrease in operating margins for manganese and ferroalloys is attributable to lower prices.

The decrease in operating margin for potash is attributable to lower prices.

The decrease in operating margin for nickel and other products primarily reflects (i) the decline in average selling prices and volume sold and (ii) the shutdown of some operations as a result of the continuing strikes at some of our Canadian operations.

The margin declines in the aluminum products segment resulted primarily from lower volume sold.

The decrease in railroad margins declined due to lower volume of transported steel products.

The increase in the copper concentrate margin reflects the effects of recognizing price adjustments in 2008.

**Table of Contents****Non-operating income (expenses)**

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

	<b>Year Ended December 31,</b>			
	<b>2008</b>		<b>2009</b>	
	(US\$ million)			
Financial income	US\$	602	US\$	381
Financial expenses		(1,765)		(1,558)
Gains (losses) on derivatives, net		(812)		1,528
Foreign exchange and monetary gains, net		364		675
Gain on sale of assets		80		40
Non-operating income (expenses)	US\$	(1,531)	US\$	1,066

We had net non-operating income of US\$1.066 billion in 2009, compared to net non-operating expenses of US\$1.531 billion in 2008. This change primarily reflects a US\$1,528 million gain on derivatives in 2009, compared to a US\$812 million loss in 2008, primarily due to swaps of *real*-denominated debt into U.S. dollars. These transactions generated a US\$1,600 million gain in 2009 compared to a US\$833 million loss in 2008. The change in net non-operating income was also affected by the following factors:

A decrease in financial income, principally due to lower average interest rates on cash balances in 2009.

A decrease in financial expenses, mainly due to lower floating interest rates.

Higher foreign exchange gains due to the depreciation of the U.S. dollar.

A US\$40 million net gain on sales of assets in 2009 compared to a US\$80 million gain on sales of assets in 2008. The net gain in 2009 was primarily attributable to the sale of shares of Usiminas (US\$153 million) and the sale of certain assets to Suzano (US\$61 million), partially offset by losses recognized on Valesul assets (US\$82 million) and UTE Barcarena (US\$70 million).

**Income taxes**

For 2009, we recorded net income tax expense of US\$2.100 billion, compared to US\$535 million in 2008. Our effective tax rate has historically been lower than the Brazilian statutory rate because: (i) income of some non-Brazilian subsidiaries is subject to lower rates of tax; (ii) we are entitled under Brazilian law to deduct the amount of our distributions to shareholders that we classify as interest on shareholders' equity; (iii) we benefit from tax incentives applicable to our earnings on production in certain regions of Brazil, and (iv) functional currency movements on some non-Brazilian subsidiaries are not taxable under Brazilian law. In addition, some of the foreign exchange variations that affect our operating results are not taxable. These variations produced a net exchange loss in 2009, after a net exchange gain in 2008, and contributed to the increase in net income tax expense in 2009.

**Affiliates and joint ventures**

Our equity in the results of affiliates and joint ventures resulted in a gain of US\$433 million in 2009, compared to a gain of US\$794 million in 2008. The decrease was primarily due to lower prices and volume sold as a result of the global economic downturn.

**Table of Contents****Results of operations 2008 compared to 2007****Revenues**

Our gross operating revenues rose to US\$38.509 billion in 2008, a 16.3% increase over 2007. Our net operating revenues increased 16.1% to US\$37.426 billion in 2008. The following table summarizes our gross revenues by product and our net operating revenues for the periods indicated.

	Year ended December 31,			% change
	2007	2008		
	(US\$ million)			
Ferrous minerals:				
Iron ore	US\$ 11,908	US\$ 17,775		49.3%
Iron ore pellets	2,738	4,301		57.1
Manganese	77	266		245.5
Ferroalloys	711	1,211		70.3
Pig iron	81	146		80.2
Subtotal	15,515	23,699		52.7
Non-ferrous minerals:				
Nickel and other products (1)	11,789	7,829		(33.6)
Potash	178	295		65.7
Kaolin	238	209		(12.2)
Copper concentrate (2)	802	893		11.3
Aluminum	2,722	3,042		11.8
Subtotal	15,729	12,268		(22.0)
Total minerals and metals	31,244	35,967		15.1
Logistic services	1,525	1,607		5.4
Other products and services (3)	346	935		170.2
Gross revenues	33,115	38,509		16.3
Value-added tax	(873)	(1,083)		24.1
Net operating revenues	US\$ 32,242	US\$ 37,426		16.1%

(1) Includes copper, precious metals, cobalt and other by-products produced by Vale Inco.

(2) Does not include copper produced by Vale Inco.

(3) Includes coal.

*Iron ore.* Gross revenues from iron ore increased by 49.3% due primarily to higher prices. The increase in average selling prices resulted mostly from a 65.0% increase in 2008 reference prices for iron ore fines, effective as of April 2008 for the majority of our customers. Sales volume increased slightly year-on-year. In the fourth quarter of 2008,



our sales volume decreased by 37.9% compared to third quarter 2008, due to the impact of the global macroeconomic conditions.

*Iron ore pellets.* Gross revenues from iron ore pellets increased by 57.1% due to 67.6% higher average sales prices, which more than offset a 4.3% reduction in sales volume. The higher realized prices resulted from an 86.7% increase in 2008 reference prices for blast furnace and direct reduction pellets. However, fourth quarter sales volume decreased by 20.9% compared to third quarter 2008, due to lower global demand for iron ore pellets.

*Manganese ore.* Gross revenues from manganese ore increased by 245.5% due primarily to higher prices. However, the deterioration of market conditions in the fourth quarter of 2008 had a negative impact on volumes sold, which decreased by 75.7% compared to the third quarter of 2008.

*Ferroalloys.* Gross revenues from ferroalloys increased by 70.3% due to a substantial increase in average selling prices, which was partially offset by an 18.9% decrease in volume sold. The decline in volume is primarily attributable to the shut-down of our ferroalloy operations in Dunkerque, France, since August 2008 due to problems with the electric furnace. During the fourth quarter of 2008, sales volume decreased by 44.2% compared to the third quarter of 2008, as a result of a decline in demand.

**Table of Contents**

*Nickel and other products.* Gross revenues from this segment decreased by 33.6%, mainly due to the following factors.

Gross revenues from nickel sales decreased 40.6%, from US\$10.043 billion in 2007 to US\$5.970 billion in 2008, due to a 42.1% decline in average nickel prices. In the fourth quarter of 2008, the average nickel sales price declined by 39.4% compared to third quarter 2008. Nickel sales volume in the fourth quarter of 2008 remained in line with volumes sold in the third quarter of 2008.

Gross revenues from copper sales decreased by 4.0%, from US\$1.183 billion in 2007 to US\$1.136 billion in 2008, due to a 4.2% drop in the average sales price. In the fourth quarter of 2008, the average copper sales price declined by 54.2% compared to the third quarter of 2008. Copper sales volume in the fourth quarter of 2008 remained in line with volumes sold in the third quarter of 2008.

Gross revenues from sales of precious metals and other products increased 19.9%, from US\$427 million in 2007 to US\$512 million in 2008.

*Potash.* Gross revenues from sales of potash increased by 65.7%. The increase was due to a 123.9% increase in average selling prices, which was partially offset by a 26.0% decline in sales volume compared to the prior year. Volumes sold in the fourth quarter of 2008 were 73.0% lower than in the third quarter of 2008, as a result of the weak performance of the Brazilian agricultural sector and the accumulation of large inventories by farmers in anticipation of higher fertilizer prices.

*Kaolin.* Gross revenues from sales of kaolin decreased by 12.2%, due principally to an 11.4% decrease in volume.

*Copper concentrate.* Gross revenues from sales of copper concentrate increased by 11.3% due to an 8.1% increase in sales volumes and a 3.0% increase in the average sales price.

*Aluminum.* Gross revenues from our aluminum business increased by 11.8%. This increase is attributable to the following factors.

Gross revenues from sales of aluminum decreased 1.6%, from US\$1.570 billion in 2007 to US\$1.545 billion in 2008, due to lower volume sold. Since there is a one-month lag between aluminum market prices and sales prices, our average aluminum sales price in the fourth quarter of 2008 did not fully reflect the drop in aluminum market prices.

Gross revenues from sales of alumina increased 33.4%, from US\$1.470 billion in 2008 compared to US\$1.102 billion in 2007, due to higher volumes sold in connection with the Alunorte expansion.

Gross revenues from sales of bauxite decreased 44.9%, from US\$49 million in 2007 to US\$27 million in 2008, due to a reduction in sales volume caused by increased usage of bauxite at our alumina refinery.

*Logistics services.* Gross revenues from logistics services increased by 5.4%. The increase reflects higher prices caused by the increase in fuel costs and changes in the mix of cargo, which more than offset the slight reduction in volume of freight cargo.

Revenues from railroad transportation increased by 6.8%, from US\$1.220 billion in 2007 to US\$1.303 billion in 2008. Average prices increased by 13.0%, and volume shipped decreased by 5.5%. The decline in volumes of general cargo resulted from the reduction in transportation of agricultural products, mainly grains, as a consequence of weaker Brazilian exports during 2008.



**Table of Contents**

The reduction of Brazilian steel output and pig iron exports in the fourth quarter of 2008 also contributed to reduced levels of activity in our logistics business.

Revenues from port operations increased by 13.9%, from US\$267 million in 2007 to US\$304 million in 2008.

We had no revenues from shipping in 2008, compared to US\$38 million in 2007, due to the sale of our controlling interest in Log-In in 2007 as a result of which Log-In is no longer consolidated in our results.

*Other products and services.* Gross revenues from other products and services increased from US\$346 million in 2007 to US\$935 million in 2008, primarily reflecting increased sales of coal. Revenues from sales of metallurgical coal were US\$457 million in 2008, compared to US\$128 million in 2007. Revenues from sales of thermal coal were US\$120 million in 2008, compared to US\$32 million in 2007. Increased coal sales were driven by two factors: (i) a full year of consolidation of Vale Australia in 2008, compared to eight months of consolidation in 2007; and (ii) the increase in average coal prices in 2008 compared to 2007.

**Operating costs and expenses**

		Year ended December 31,		
		2007	2008	% change
		(US\$ million)		
Cost of ores and metals	US\$	13,628	US\$ 14,055	3.1%
Cost of logistic services		853	930	9.0
Cost of aluminum products		1,705	2,267	33.0
Others		277	389	40.4
Cost of goods sold		16,463	17,641	7.2
Selling, general and administrative expenses		1,245	1,748	40.4
Research and development		733	1,085	48.0
Impairment of goodwill			950	
Other costs and expenses		607	1,254	106.6
Total operating costs and expenses	US\$	19,048	US\$ 22,678	19.1%

**Table of Contents****Cost of goods sold**

The following table summarizes the components of our cost of goods sold for the periods indicated.

	<b>Year ended December 31,</b>		
	<b>2007</b>	<b>2008</b>	<b>% change</b>
	(US\$ million)		
Outsourced services	US\$ 2,628	US\$ 2,880	9.6%
Materials costs	2,313	2,900	25.4
Energy:			
Fuel	1,406	1,842	31.0
Electric energy	878	1,078	22.8
Subtotal	2,284	2,920	27.8
Acquisition of iron ore and pellets	976	1,179	20.8
Acquisition of other products:			
Nickel	1,522	687	(54.9)
Aluminum	288	317	10.1
Other	86	31	(64.0)
Subtotal	2,872	2,214	(22.9)
Personnel	1,873	2,139	14.2
Depreciation and depletion	2,049	2,664	30.0
Inventory adjustment	1,062		
Others	1,382	1,924	39.2
Total	US\$ 16,463	US\$ 17,641	7.2%

Our total cost of goods sold increased 7.2% from 2007 to 2008. This increase resulted primarily from the factors described below.

*Depreciation of the U.S. dollar.* Given most of our costs and expenses are denominated in currencies other than the U.S. dollar, the depreciation of the U.S. dollar during 2008 led to higher costs in 2008. COGS currency exposure in 2008 was made up as follows: 62% in Brazilian *reals*, 20% in Canadian dollars, 14% in U.S. dollars, 2% in Indonesian rupiah and 2% in other currencies.

*Outsourced services.* Outsourced services costs increased by 9.6% in 2008 due to higher sales volumes, the depreciation of the U.S. dollar against the *real*, higher prices of services and maintenance costs. During the fourth quarter, lower sales volumes and the appreciation of the U.S. dollar contributed to reduce costs by 28.6% against the third quarter of 2008.

*Material costs.* Material costs increased by 25.4% in 2008, primarily reflecting higher sales volumes and higher costs for the maintenance of equipment. In the fourth quarter of 2008, material costs dropped 24.8% compared to the third quarter of 2008, due to an overall reduction in volumes and the average U.S. dollar appreciation against the *real*.

*Energy costs.* Energy costs increased by 27.8% in 2008. This increase primarily reflected higher energy prices, higher consumption due to the leasing of the pelletizing operations from our joint ventures, and the depreciation of the U.S. dollar. In the fourth quarter, the overall reduction in volumes and the average U.S. dollar appreciation against the *real* led to a 31.2% reduction compared to the third quarter of 2008.

*Personnel costs.* Personnel costs increased by 14.2%, mainly reflecting the depreciation of the U.S. dollar against the *real* and the impact of wage increases pursuant to a two-year agreement with our Brazilian employees entered into in November 2007. During the fourth quarter, the overall

## **Table of Contents**

reduction in volumes and the appreciation of the U.S. dollar against the *real* contributed to a 12.9% decline in costs compared to the third quarter of 2008.

*Acquisition of iron ore and iron ore pellets.* The cost of iron ore and iron ore pellets purchased from third parties increased 20.8%, mainly due to higher benchmark prices. We purchased 11.9 million metric tons of iron ore from third parties in 2008 compared to 8.3 million metric tons in 2007, a 43.4% increase. This was partly offset by a decrease in the volume of pellets purchased from third parties, from 11.7 million metric tons in 2007 to 5.9 million metric tons in 2008, as a result of the leasing of the pellet plants from our joint ventures.

*Other costs.* The increase of US\$542 million was mainly due to the operating lease agreements signed during 2008 with our joint ventures Nibrasco, Itabrasco and Kobrasco, under which we leased four pellet plants for a period from five to 30 years.

The increase in total cost of goods sold was partially offset by the following factors.

Acquisition of products, which includes nickel concentrates for processing under tolling contracts, intermediary products and finished nickel, totaled US\$2,214 million in 2008 compared to US\$2,872 million in 2007, as a result of lower prices and volumes.

We recognized additional cost of goods sold in 2007, in the amount of US\$1.062 billion, because of the adjustment of inventory resulting from the acquisition of Vale Inco.

### **Selling, general and administrative expenses**

Selling, general and administrative expenses increased by 40.4%, or US\$503 million. The increase was mainly attributable to an adjustment related to copper sales and to higher expenses related to global integration of IT infrastructure advertising and brand management. The adjustment for copper sales arose from the effects of sharply declining copper prices under the MAMA pricing system. In the fourth quarter of 2008, copper prices declined 48.8% compared to the third quarter of 2008, causing final prices for copper sales be much lower than the previously set provisional prices. The difference was accounted for as an adjustment of US\$316 million.

### **Research and development expenses**

Research and development expenses increased by 48.0%. The US\$352 million increase primarily reflects an increase in mineral exploration and project studies in several regions, including South America, Asia, Africa and Australia.

### **Impairment of goodwill**

In 2008, we recognized a US\$950 million impairment of the goodwill associated with our 2006 acquisition of Vale Inco, of which US\$1.336 billion remained at December 31, 2008. For a full description of the impairment test, see Note 13 of our financial statements herein.

### **Other costs and expenses**

Other costs and expenses increased by US\$647 million as a consequence of non-recurring events, as follows: US\$204 million due to an additional payment related to tax assessments on third-party railroad transportation services by our iron ore operations in previous years, US\$199 million relating to provision for loss on materials and US\$77 million of market value assessment of nickel inventories.





**Table of Contents****Operating income by segment**

The following table provides information concerning our operating income by segment and as a percentage of revenues for the periods indicated.

	<b>Year ended December 31,</b>				
	<b>2007</b>		<b>2008</b>		
	<b>Segment operating income (loss)</b>		<b>Segment operating income (loss)</b>		
	(% of net operating revenues)		(% of net operating revenues)		
	(US\$ million)		(US\$ million)		
Ferrous minerals:					
Iron ore	US\$	6,325	54.4%	US\$ 9,988	57.4%
Pellets		659	25.3	1,606	39.1
Manganese ore		(9)		169	67.3
Ferroalloys		182	28.0	604	55.8
Pig iron		19	23.5	76	52.1
Non-ferrous minerals:					
Nickel and other products		4,785	40.6	1,131	14.4
Potash		37	22.0	140	50.2
Kaolin		(32)		(45)	
Copper concentrate		252	32.6	111	12.7
Aluminum products		828	31.2	516	17.3
Logistics services:					
Railroads		297	29.1	246	22.4
Ports		22	10.0	41	15.5
Ships		(12)			
Others		(159)		165	18.2
<b>Total</b>	<b>US\$</b>	<b>13,194</b>	<b>40.9%</b>	<b>US\$ 14,748</b>	<b>39.4%</b>

Our operating income decreased as a percentage of net operating revenues, from 40.9% in 2007 to 39.4% in 2008, due to the impairment charge in the nickel segment. In the fourth quarter of 2008, operating margin was 14.7%, compared to 47.2% in the third quarter of 2008, due to lower shipment volumes and prices. Our ferrous minerals business was responsible for 93.6% of our cash generation in the fourth quarter of 2008, compared to 79.9% in the third quarter.

This comparison reflects the effect of margin reductions in nickel, copper concentrate, aluminum products and railroads, counterbalanced by higher margins in iron ore, iron ore pellets, manganese ore, ferroalloys, potash and ports.

The increase in operating margin for iron ore and iron ore pellets primarily reflects higher average selling prices, which were partially offset by (i) the impact of the appreciation of the *real* against the U.S. dollar on our operating costs and expenses and (ii) higher research and development expenditures.

The significant increase in operating margins for manganese and ferroalloys is attributable to higher prices, reflecting market tightness during most of 2008.

The increase in operating margin for potash is attributable to higher prices, which offset the decrease in volumes during the fourth quarter of the year.

The decrease in operating margin for nickel and other products primarily reflects (i) the decline in average selling prices and (ii) the goodwill impairment in 2008.

The margin declines in the aluminum products segment resulted primarily from higher energy costs and higher freight costs. The higher freight costs are due to an increase in the volume of bauxite transported from the Trombetas bauxite mine, which belongs to MRN.

**Table of Contents****Non-operating income (expenses)**

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

	<b>Year ended December 31,</b>			
	<b>2007</b>		<b>2008</b>	
	(US\$ million)			
Financial income	US\$	295	US\$	602
Financial expenses		(2,517)		(1,765)
Gains (losses) on derivatives, net		931		(812)
Foreign exchange and monetary gains, net		2,553		364
Gain on sale of investments		777		80
Non-operating income (expenses)	US\$	2,039	US\$	(1,531)

We had net non-operating expenses of US\$1.531 billion in 2008, compared to net non-operating revenues of US\$2.039 billion in 2007. This change primarily reflects the following factors.

An increase in financial income, principally due to higher average cash balances, resulting from our global equity offer.

A decrease in financial expenses, mainly due to lower average total debt.

A US\$812 million loss in 2008, compared to a US\$931 million gain in 2007, principally related to a swap of *real*-denominated debt into U.S. dollars. The transaction generated a gain of US\$791 million in 2007 and a loss of US\$833 million in 2008 due to the exchange rate variation.

Lower foreign exchange gains due to the depreciation of the U.S. dollar. Despite the appreciation of the U.S. dollar against our functional currency, the *real*, in the second half of the year, the larger average cash holdings in U.S. dollar softened the negative effect of the foreign exchange variation in our U.S. dollar-denominated liabilities.

A US\$80 million gain on sales of investments in 2008 from the sale of our interest in Jubilee Mines, compared to a US\$777 million gain in 2007 from our sales of interests in Usiminas (US\$456 million gain), Log-In (US\$238 million gain) and Lion Ore Mining (US\$80 million gain).

**Income taxes**

For 2008, we recorded net income tax expense of US\$535 million, compared to US\$3.201 billion in 2007. Our effective tax rate has historically been lower than the Brazilian statutory rate because: (i) income of some non-Brazilian subsidiaries is subject to lower rates of tax; (ii) we are entitled under Brazilian law to deduct the amount of our distributions to shareholders that we classify as interest on shareholders' equity; and (iii) we benefit from tax incentives applicable to our earnings on production in certain regions of Brazil. As a result, the effective tax rate on our pretax income was 4.0% in 2008 and 21% in 2007. The accounting effects of foreign exchange variation, which are not taxable, also contributed to lower net income tax expense in 2008.

**Affiliates and joint ventures**

Our equity in the results of affiliates and joint ventures resulted in a gain of US\$794 million in 2008, compared to a gain of US\$595 million in 2007. The increase was primarily due to higher net income at our investee Samarco, where a new plant began operations in 2008. Note 12 to our financial statements herein summarizes our equity in the results of affiliates and joint ventures.

**Table of Contents**

**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. In 2009, we issued US\$2.0 billion in bonds and US\$942 million in mandatorily convertible notes. For 2010, we have budgeted capital expenditures of US\$12.9 billion, and announced a minimum dividend payment of US\$2.5 billion and the acquisition for US\$5.65 billion of BPI and Fosfertil. 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 internally generated funds or with borrowings, supplemented in some cases by dispositions of assets.

**Sources of funds**

Our principal sources of funds are operating cash flow and borrowings. Our operating activities generated cash flows of US\$7.1 billion in 2009.

We completed two debt offerings and an offering of mandatorily convertible notes in 2009. In November 2009, our wholly owned finance subsidiary Vale Overseas issued US\$1 billion of 30-year notes guaranteed by Vale. These notes bear interest at 6.875%. In September 2009, Vale Overseas also issued US\$1 billion of 10-year notes guaranteed by Vale. These notes bear interest at 5.625% per annum. In July 2009, our wholly owned finance subsidiary Vale Capital II issued US\$942 million of notes due 2012 that are mandatorily convertible into American depositary shares of Vale. These notes bear interest at 6.75% per annum, and we will pay additional remuneration based on the net amount of cash distributions paid to ADS holders.

During 2008, we signed framework agreements with the Japan Bank for International Cooperation ( JBIC ) and Nippon Export and Investment Insurance ( NEXI ) for the financing of mining, logistics and power generation projects. In November 2009, we entered into a US\$300 million export facility agreement with Japanese financial institutions to finance the construction of the Karebbe hydroelectric power plant on the Laron River in Sulawesi, Indonesia. As of December 31, 2009, we had drawn US\$150 million under this facility.

In 2008, we established a credit line for R\$7.3 billion, or US\$4.3 billion, with Banco Nacional de Desenvolvimento Econômico e Social BNDES (the Brazilian National Development Bank) to help finance our investment program. As of December 31, 2009, we had drawn the equivalent of US\$892 million under this facility.

We also have revolving credit facilities. At December 31, 2009, the total amount available under these facilities was US\$1.9 billion, of which US\$1.150 billion was granted to Vale International and the remaining balance to our wholly owned subsidiary Vale Inco. As of December 31, 2009, neither Vale International nor Vale Inco had drawn any amounts under these facilities, but US\$115 million of letters of credit were issued and outstanding pursuant to Vale Inco's facility.

On March 17, 2010 we issued 750 million notes, equivalent to US\$1.030 billion, due 2018 with a coupon of 4.375% per year, payable annually.



## **Table of Contents**

### **Uses of funds**

#### **Capital expenditures**

Capital expenditures amounted to US\$9.013 billion in 2009, and we have budgeted US\$12.9 billion for 2010. Our actual capital expenditures may differ from the budgeted amount for a variety of reasons, including unexpected changes in currency prices. These capital expenditure figures include some amounts that are treated as current expenses for accounting purposes, such as expenses for project development, maintenance of existing assets, and research and development. For more information about the specific projects for which we have budgeted funds, see our report on Form 6-K furnished to the Securities and Exchange Commission on November 3, 2009.

#### **Distributions**

We paid total dividends of US\$2.724 billion in 2009 (including distributions classified for tax purposes as interest on shareholders' equity). The minimum dividend announced for 2010 is US\$2.5 billion. The first installment of this dividend, in the amount of US\$1.250 billion, will be paid on April 30, 2010.

#### **Debt**

At December 31, 2009, we had aggregate outstanding debt of US\$22.880 billion. Our outstanding long-term debt (including the current portion of long-term debt and accrued charges) was US\$22.831 billion, compared with US\$18.168 billion at the end of 2008. At December 31, 2009, US\$719 million of our debt was secured by liens on some of our assets. At December 31, 2009, the average debt maturity was 9.17 years, compared to 9.28 years in 2008.

We are currently rated BBB+ (Standard & Poor's), Baa2 (Moody's), BBB high (Dominion) and BBB (Fitch). Ratings are not a recommendation to purchase, hold or sell notes, as ratings do not comment as to market price or suitability for a particular investor. The ratings are based upon current information furnished to the rating agencies by Vale and information obtained by the rating agencies from other sources. The ratings are only accurate as of the date thereof and may be changed, superseded or withdrawn as a result of changes in, or unavailability of, such information, and therefore a prospective purchaser should check the current ratings before purchasing notes. Each rating should be evaluated independently of any other rating.

In general, our short-term debt consists primarily of U.S. dollar-denominated trade financing, mainly in the form of export prepayments and export sales advances with financial institutions. At December 31, 2009, we had US\$30 million of outstanding short-term debt and US\$19 million of loans from related parties.

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

*U.S. dollar-denominated loans and financing (US\$5.875 billion at December 31, 2009).* These loans include export financing lines, import finance from export credit agencies, and loans from commercial banks and multilateral organizations. The largest facility is a pre-export financing facility, linked to future receivables from export sales, that was originally entered into in the amount of US\$6.0 billion as part of the refinancing of the acquisition debt for Vale Inco. The outstanding amount at December 31, 2009 was US\$3.9 billion.

*U.S. dollar-denominated fixed rate notes (US\$8.481 billion at December 31, 2009).* We, through our finance subsidiary Vale Overseas Limited, have issued in public offerings fixed-rate debt securities guaranteed by Vale. The amount of these securities outstanding at December 31, 2009 was

US\$7.381 billion. Our subsidiary Vale Inco has issued fixed rate debt in the amount of US\$1.100 billion.



**Table of Contents**

*U.S. dollar-denominated loans secured by export receivables (US\$150 million at December 31, 2009).* We had a US\$400 million securitization program based on existing and future receivables generated by our subsidiary CVRD Finance from exports of iron ore and iron ore pellets to customers in Europe, Asia and the United States. On January 15, 2010 we redeemed all outstanding export receivables securitization notes.

*Real-denominated non-convertible debentures (US\$3.453 billion at December 31, 2009).* In November 2006, we issued US\$2.6 billion of non-convertible debentures with four- and seven-year maturities. The first series, representing US\$700 million at issuance, matures in 2010 and bears interest at 101.75% of the accumulated variation of the Brazilian CDI (interbank certificate of deposit) interest rate. The second series, representing US\$1.9 billion at issuance, matures in 2013 and bears interest at the Brazilian CDI interest rate plus 0.25% per year. At December 31, 2009, the total outstanding amount of these two series was US\$3.159 billion.

*Perpetual notes (US\$78 million at December 31, 2009).* We have issued perpetual notes that are exchangeable for 48 billion preferred shares of our subsidiary Mineração Rio do Norte S.A. Interest is payable on the notes in an amount equal to dividends paid on the underlying preferred shares.

*Other debt (US\$4.507 billion at December 31, 2009).* We have outstanding debt, principally owed to BNDES and Brazilian commercial banks denominated in Brazilian *reais*, and loans and financing in currencies other than U.S. dollars and *reais*.

Some of our long-term debt instruments contain financial covenants. Our principal covenants require us to maintain certain ratios, such as debt to equity, 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.

**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.

Total payments made under the shareholder debentures amounted to US\$11 million in 2007, US\$11 million in 2008 and US\$7 million in 2009. In April 2010, we paid semi-annual remuneration of US\$5 million. See Note 20 to our consolidated financial statements for a description of the terms of the debentures.

**Table of Contents****CONTRACTUAL OBLIGATIONS**

The following table summarizes our long-term debt, short-term debt, operating lease obligations, purchase obligations and take-or-pay obligations of our subsidiary Alunorte at December 31, 2009. 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.

	<b>Payments due by period</b>					
	<b>Total</b>	<b>Less than</b>		<b>2011-2012</b>	<b>2013-2014</b>	<b>Thereafter</b>
		<b>1 year</b>		<b>(US\$ million)</b>		
Long-term debt(1)	US\$ 22,545	US\$ 2,646	US\$ 3,832	US\$ 4,176	US\$ 11,891	
Short-term debt	30	30	0	0	0	
Interest payments(2)	15,184	1,212	2,541	2,216	9,215	
Operating lease obligations(3)	3,107	194	388	388	2,137	
Purchase obligations(4)	12,589	3,764	2,819	1,349	4,657	
Take-or-pay obligation (Alunorte)(5)	874	195	335	344	0	
<b>Total</b>	<b>US\$ 54,329</b>	<b>US\$ 8,041</b>	<b>US\$ 9,915</b>	<b>US\$ 8,473</b>	<b>US\$ 27,900</b>	

(1) Amounts include the current portion of long-term debt and do not include accrued charges.

(2) 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, 2009 and assuming (i) that all amortization payments and payments at maturity on our loans, financings and debentures will be made on their scheduled payments dates, and (ii) that our perpetual bonds are redeemed on the first permitted redemption date.

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

(4) Obligations to purchase materials. Amounts are based on contracted prices, except for purchases of iron ore from mining companies located in Brazil, which are based on 2009 average prices.

(5) Our subsidiary Alunorte is committed under a take-or-pay agreement to purchase bauxite from MRN at a price that is determined by a formula based on prevailing world prices of aluminum. The values in the table are based on year-end 2009 aluminum prices.

**OFF-BALANCE SHEET ARRANGEMENTS**

At December 31, 2009, 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 20 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 prices, currency prices, inflation rates, mining technology, availability of permits and production costs. Changes in some or all of these assumptions could have a significant impact on our recorded proven and probable reserves.

## **Table of Contents**

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.

### **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 all of our mines and sites are reviewed annually, 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, 2009, we estimated the fair value of our aggregate total asset retirement obligations to be US\$1.116 billion.

### **Impairment of long-lived assets and goodwill**

We have made acquisitions that included a significant amount of goodwill, as well as intangible and tangible assets. Under generally accepted accounting principles, except for goodwill and indefinite-life intangible assets, all long-lived assets, including these acquired assets, are amortized over their estimated useful lives, and are tested to determine if they are recoverable from operating earnings on an undiscounted

**Table of Contents**

cash flow basis over their useful lives whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors that could trigger an impairment review include the following:

- significant underperformance relating to expected historical or projected future operating results of entities or business units;
- significant changes in the manner in which we use the acquired assets or our overall business strategy; or
- significant negative industry or economic trends.

When we determine that the carrying value of definite-life intangible assets and long-lived assets may not be recoverable based upon verification of one or more of the above indicators of impairment, we measure any impairment loss based on a projected discounted cash flow method using a discount rate determined by our management to be commensurate with the risk inherent in our current business model.

We are required to assign goodwill to reporting units and to test each reporting unit's goodwill for impairment at least annually and whenever circumstances indicating that recognized goodwill might not be fully recovered are identified. In the first step of a goodwill impairment test, we compare a reporting unit's fair value with its carrying amount to identify any potential goodwill impairment loss. If the carrying amount of a reporting unit exceeds the unit's fair value, we must carry out the second step of the impairment test to measure the amount, if any, of the unit's goodwill impairment loss. Goodwill arising from a business combination with a continuing non-controlling interest must be tested for impairment by using an approach that is consistent with the approach that the entity used to measure the non-controlling interest at the acquisition date. For equity investees we determine annually whether there is an other-than-temporary decline in the fair value of the investment.

Following the downturn in the economy, which contributed to the decline in the prices of certain commodities produced by us during the last quarter of 2008 we determined that the goodwill associated with the acquisition of Vale Inco, included within the reportable segment Non-ferrous nickel, was partially impaired at December 31, 2008. The impairment charge recorded in operating results in the fourth quarter of 2008 was US\$950 million. We did not recognize any impairments in 2009.

For impairment test purposes, management determined discounted cash flows based on approved budget assumptions. Gross margin projections were based on past performance and management's expectations of market developments. Information about sales prices is consistent with the forecasts included in industry reports, taking into account quoted prices when available and appropriate. The discount rates used reflect specific risks relating to the relevant assets in each reporting unit, depending on their composition and location.

Recognition of additional goodwill impairment charges in the future would depend on several estimates, including market conditions, recent actual results and management's forecasts. This information will be obtained when our assessment is updated during the fourth quarter of 2010, or earlier if impairment indicators are identified. It is not possible at this time to determine whether an impairment charge will be taken in the future and if it were to be taken, whether such charge would be material.

**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 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

## **Table of Contents**

the financial instruments, we use estimates and judgments related to present values, taking into account market curves, projected interest rates, exchange rates, forward market prices and their respective volatilities, when applicable. We consider non-performance risk on financial instruments and derivative transactions, and we enter into such 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 2009, we implemented hedge accounting partially for an aluminum hedge and for a foreign exchange hedge. At December 31, 2009, we had US\$2 million of unrealized gains related to derivative instruments designated as cash flow hedges. In 2009, we recorded to the income statement unrealized gains of US\$1.528 billion in relation to fair value adjustments on derivative instruments.

## **Income taxes**

We recognize deferred tax effects of tax losses carryforward 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 establish a valuation allowance. When we establish a valuation allowance or increase this allowance in an accounting period, we record a tax expense in our statement of income. When we reduce the valuation allowance, we record a tax benefit in our statement of income.

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 losses carryforward 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.

## **Contingencies**

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 20 to our 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.



## **Table of Contents**

The provision for contingencies at December 31, 2009, totaling US\$1.763 billion, consists of provisions of US\$657 million for labor, US\$582 million for civil, US\$489 million for tax and US\$35 million for other claims.

### **Employee post-retirement benefits**

We sponsor defined benefit pension plans covering some of our employees. The determination of the amount of our obligations for pension benefits depends on certain actuarial assumptions. These assumptions are described in Note 18 to our consolidated financial statements and include, among others, the expected long-term rate of return on plan assets and increases in salaries. In accordance with U.S. GAAP, actual results that differ from our assumptions and are not a component of net benefit costs for the year are recorded in other comprehensive income (loss).

## **RISK MANAGEMENT**

The aim of our risk management strategy is to promote enterprise-wide risk management, through an integrated framework that considers the impact on our business of not only market risk factors (market risk), but also risks arising from third party obligations (credit risk) and risks inherent in our operational processes (operational risk). In furtherance of this objective, our Board of Directors has established an enterprise-wide risk management policy and a risk management committee.

Our risk management policy requires that we regularly evaluate the risk to our cash flow, as well as mitigation strategies. The Board of Executive Officers is responsible for the evaluation and approval of long-term risk mitigation strategies recommended by the risk management committee. The committee is responsible for overseeing and reviewing our risk management principles and risk management instruments, in addition to reporting periodically to the Board of Executive Officers regarding major risks and exposures and their impact on our cash flow. As of April 2010, the members of the risk management committee were: Fabio de Oliveira Barbosa, Chief Financial Officer, Tito Martins, Executive Officer for Non-Ferrous Minerals, Guilherme Cavalcanti, Corporate Finance Director, and Jennifer Maki, Vale Inco Chief Financial Officer.

In addition to our risk management governance model, we also rely on our corporate structure with its well-defined roles and responsibilities. The recommendation and execution of derivative transactions are implemented by different and independent areas. The strategy and risk management department is responsible for defining and proposing to the risk management committee, risk mitigation strategies consistent with our corporate strategy. The finance department is responsible for the execution of risk mitigation strategies through the use of derivatives. The independence of these departments promotes an effective control over these operations.

### **Market risk**

The consolidated market risk exposure and portfolio of derivatives are measured monthly and monitored in order to evaluate the financial results and the possible risk impacts on our cash flows, measured against the initial goals. Fair value changes in the derivatives portfolio are monitored weekly. We also periodically review the credit limits and creditworthiness of our hedging counterparties.

Considering the nature of our business and operations, the principal market risks we face are interest rates, currency prices, product prices and input prices.

We recognize all derivatives on our balance sheet at fair value, and the gain or loss in fair value is recognized in our current earnings, except as described in the next paragraph. Fair value accounting of



**Table of Contents**

derivatives may introduce unintended volatility in our quarterly earnings. However, it does not generate volatility in our cash flows, given the nature of our derivatives transactions.

During 2009, we implemented hedge accounting partially for an aluminum hedge and for a currency price hedge. Hedge accounting modifies the usual accounting treatment of a hedging instrument by changing the timing of recognition of gains and losses on the hedging instrument to enable gains and losses on the hedging instrument to be recognized in the income statement in the same period as offsetting losses or gains on the hedged item. This avoids much of the volatility that would arise if the derivative gains and losses were recognized in the income statement, as otherwise required.

The asset (liability) balances at December 31, 2009 and 2008 and the movement in fair value of derivative financial instruments are shown in the following table.

	Interest rates (LIBOR)/ Currencies		Aluminum products	Copper	Nickel	Platinum	Gold	Freight	Fuel/ Natural Gas	Total
Fair value at January 1, 2008	US\$	632	US\$ (98)	US\$ (188)	US\$ 42	US\$ (24)	US\$ (36)	US\$ 0	US\$ (6)	US\$ 32
Financial settlement		(394)	120	173	38	27	41	0	0	
Realized gains (losses) in the year		(686)	(18)	(29)	(46)	(6)	(30)	0	4	(83)
Effect of exchange rate changes		(123)	(4)	44	(2)	3	25	0	0	(5)
Realized gain (loss) at December 31, 2008	US\$	(571)	US\$ 0	US\$ 0	US\$ 32	US\$ 0	US\$ 0	US\$ 0	US\$ (2)	US\$ (54)
Fair value at January 1, 2009	US\$	(571)	US\$ 0	US\$ 0	US\$ 32	US\$ 0	US\$ 0	US\$ 0	US\$ (2)	US\$ (54)
Financial settlement		(241)	5	0	139	0	0	(37)	(11)	(14)
Realized gains (losses) in the year		1,681	(90)	0	(188)	0	0	66	58	1,527
Effect of exchange rate changes		1	(2)	0	(11)	0	0	0	4	
Realized gain (loss) December 31, 2009	US\$	870	US\$ (87)	US\$ 0	US\$ (28)	US\$ 0	US\$ 0	US\$ 29	US\$ 49	US\$ 834

**Interest rate and foreign exchange rate risks**

Our cash flows are exposed to the volatility of several different currencies against the U.S. dollar. While most of our product prices, representing around 90% of total revenue, are denominated or indexed to the U.S. dollar, most of our

costs, disbursements and investments are denominated or indexed to currencies other than the U.S. dollar, mainly *reais* and Canadian dollars.

In order to reduce potential cash flow volatility arising from this currency mismatch, we use foreign exchange derivative instruments. Our currency and interest rate derivative portfolio consists basically of swaps to convert floating cash flows in *reais* to fixed or floating U.S. dollar cash flows, without any leverage.

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

Our floating rate debt denominated in *reais* includes debentures, loans obtained from BNDES and property and service acquisition financing in the Brazilian market. Interest on these obligations is mainly based on the CDI (Interbank Deposit Certificate), the benchmark interest rate in the Brazilian interbank market, and the TJLP, the benchmark Brazilian long-term interest rate.

**Table of Contents**

The following table sets forth our floating and fixed rate long-term debt, categorized by Brazilian *reais* and other currencies, and as a percentage of our total long-term debt portfolio at the dates indicated, except for accrued charges and translation adjustments, as reflected in our consolidated financial statements.

	<b>At December 31,</b>			
	<b>2008</b>	(US\$ million, except percentages)		<b>2009</b>
Floating rate debt:				
<i>Real</i> -denominated	4,374	24.5%	6,949	30.8%
Denominated in other currencies	6,612	37.0%	6,764	30.0%
Subtotal	10,987		13,713	
Fixed rate debt:				
<i>Real</i> -denominated	1	0%	0	0%
Denominated in other currencies	6,868	38.5%	8,830	39.2%
Subtotal	17,857	100%	22,544	100%
Accrued charges	311		287	
Total	18,168		22,831	

The following table provides information about our debt obligations as of December 31, 2009. It presents the principal cash flows and related weighted average interest rates of these obligations by expected maturity date. Weighted average variable interest rates are based on the applicable reference rate at December 31, 2009. Actual cash flows of these debt obligations are denominated mainly in U.S. dollars or *reais*, as indicated.

	<b>Weighted average interest rate(1)(2) (%)</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>To 2037</b>	<b>Total</b>	<b>Fair value cash flow at December 31, 2009(3)</b>
		(US\$ million)							
<b>US\$-denominated</b>									
<i>Fixed rate:</i>									
Bonds	6.70	5.7	5.7	401.8	122.9		7,961.7	8,497.8	8,871.9
Loans	8.22	4.7	1.5	0			32.9	39.1	39.3
Securitization notes	5.87	150.0	0	0	0			150.0	164.9
<i>Floating rate:</i>									
Loans	1.89	290.4	505.3	293.4	303.3	181.1	817.8	2,391.3	2,591.5
Trade finance	1.57	1,250.0	2,025.0	375.0	400.0			4,050.0	4,190.1
Subtotal		1,700.8	2,537.5	1,070.2	826.2	181.1	8,812.4	15,128.2	15,857.8

**Real-denominated**

floating rate loans	9.26	923.6	68.7	109.3	2,394.0	716.7	2,441.7	6,654.0	6,724.0
Subtotal		923.6	68.7	109.3	2,394.0	716.7	2,441.7	6,654.0	6,724.0
<b>Denominated in other currencies</b>									
fixed rate loan	9.71	1.9	3.1	1.6	1.6	1.7	134.2	144.1	144.2
floating rate loan	1.74	19.7	13.2	27.9	28.2	26.8	129.4	245.2	243.5
Subtotal		21.6	16.3	29.5	29.9	28.5	263.6	389.3	387.7
At maturity							372.8	372.8	372.8
Total		2,646.0	2,622.5	1,209.0	3,250.1	926.3	11,890.5	22,544.3	23,342.3

(1) Weighted average interest rates do not take into account the effect of the derivatives.

(2) Weighted average variable interest rates are based on the applicable reference rate at December 31, 2009.

(3) Includes only long-term debt obligations.

**Table of Contents**

As of December 31, 2009, the total principal amount and interest of our *real*-denominated debt converted through swaps into U.S. dollars was US\$6.7 billion, with an average cost in U.S. dollars of 4.47% per year after swap transactions and with maturity between November 2010 and December 2027. Most of those contracts are subject to semi-annual interest payments.

Some of these swap transactions have shorter settlement dates than and similar notional amounts to the interest and principal payment dates, taking into account the liquidity restrictions of the market. At each settlement date the financial results of the swap transaction partially offset the impact of the foreign dollar exchange rate in our obligations, contributing to a stable flow of cash disbursements in U.S. dollars for the interest and principal payments on our *real*-denominated debt.

In the event of an appreciation (depreciation) of the *real* against the U.S. dollar, the negative (positive) impact on our *real*-denominated debt obligations (interest and/or principal payment) measured in U.S. dollars will be largely offset by a positive (negative) effect from any existing swap transaction, regardless of the *real*/U.S. dollar exchange rate on the payment date.

*Protection program for real-denominated debt indexed to CDI*

In order to reduce cash flow volatility, we entered into swap transactions to convert to U.S. dollars the cash flows on debt instruments denominated in *reais* linked to CDI. In those swaps, Vale pays either fixed rates or floating LIBOR rates in U.S. dollars and receives payments linked to CDI. These instruments were used to convert cash flows from: debentures issued in 2006 with a nominal value of R\$5.5 billion (US\$2.5 billion at the disbursement date), credit export notes issued in 2008 with a nominal value of R\$2.0 billion (US\$1.1 billion at the disbursement date) and acquisition financing obtained in 2006 and 2007 with a nominal value of R\$1.0 billion (US\$464 million at the disbursement dates).

Notional value	At December 31, 2008			Notional value	At December 31, 2009			Financial maturity
	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)		Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	
			(US\$ million, except interest rate ranges)					
430.0	LIBOR + (0.676-0.99%)	CDI + 0.40%/103.5% CDI	(95)	430.0	LIBOR + (0.676-0.99%)	CDI + 0.40%/103.5% CDI	52	Jan 20
3,672	US\$ + (0.90-5.98%)	(100-103.5%) CDI	(375)	3,670.0	US\$ + (4.40-5.98%)	(100-103.5%) CDI	633	Jan 20
US\$ 4,102			US\$ (470)	US\$ 4,100			US\$ 685	

*Protection program for real-denominated debt indexed to TJLP*

In order to reduce cash flow volatility, we entered into swap transactions to convert to U.S. dollars the cash flows related to loans with BNDES indexed to TJLP. In these swaps, we pay either fixed or floating rates in U.S. dollars and receive payments linked to TJLP.

	At December 31, 2008			At December 31, 2009			Final maturity		
	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	Notional value	Rate range (payable)		Rate range (receivable)	Unrealized gain (loss)
TJLP vs. US\$ floating rate swap	378	LIBOR + (1.89-0.86%)	TJLP + (-0.8-1.8%)	(29)	385	LIBOR + (-1.89-0.86%)	TJLP + (0.8-1.8%)	31	Dec 2019
TJLP vs. US\$ fixed rate swap	304	US\$ + (2.83-4.30%)	TJLP + (0.8-1.8%)	(61)	1,048	US\$ + (1.88-4.30%)	TJLP + (0.8-1.8%)	77	Dec 2019
Total	US\$ 682			US\$ (90)	US\$ 1,433			US\$ 108	



**Table of Contents***Protection program for euro-denominated floating rate debt*

We entered into a swap transaction to convert cash flows related to a euro-denominated loan with an outstanding notional amount of 5.3 million. In this swap, we receive floating rates in EURIBOR and pay floating rates in LIBOR.

	At December 31, 2008				At December 31, 2009				Final maturity
	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	
US\$ 8 million euro-denominated debt	US\$ 8	EURIBOR + 0.875%	LIBOR + 1.0425%	US\$ 2	US\$ 5	EURIBOR + 0.875%	LIBOR + 1.0425%	US\$ 1.7	Dec 2011

(US\$ million, except interest rate ranges)

*Foreign exchange hedges*

We entered into swap transactions (cash flow hedges and non-deliverable forward transactions) to mitigate our exchange rate exposure arising from the currency mismatch between our revenues in U.S. dollars and our disbursements and investments in *reais*. Those transactions were designated as cash flow hedges.

	At December 31, 2008			At December 31, 2009				
	Notional value	Rate range (payable)	Rate range (receivable)	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	Final maturity
Cash flow hedging				US\$ 1,469	USD + 0%	6.12-8.29	US\$ 73.5	Dec 2011

(US\$ million, except interest rate ranges)

*Foreign exchange protection program on cash flow*

This program follows the same concept as the previous one, but in this case the transactions were not designated as cash flow hedges.

	At December 31, 2008			At December 31, 2009				
	Notional value	Rate range (payable)	Rate range (receivable)	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	Final maturity
Forwards sold				US\$ 60		1.83-1.86	US\$ (0.11)	Oct 2010

(US\$ million, except interest rate ranges)

*Protection program for dividends*

We entered into a swap on October 14, 2009 to hedge the exchange rate risk related to the disbursement of our *real*-denominated dividend payment. We paid a fixed rate in U.S. dollars and received payment linked to CDI. On the settlement date, October 29, 2009, we paid R\$1.4 million.

**Table of Contents***Protection program for US\$ floating rate debt*

Our wholly owned subsidiary Vale Inco entered into a swap to convert U.S. dollar floating rate debt into U.S. dollar fixed rate debt in connection with debt issued in 2004 with a notional amount of US\$200 million. In this swap, Vale pays fixed rates in U.S. dollars and receives floating rates in LIBOR.

	At December 31, 2008			At December 31, 2009			Final maturity		
	Notional value	Rate range (payable)	Rate range (receivable)	Unrealized gain (loss)	Notional value	Rate range (payable)		Rate range (receivable)	Unrealized gain (loss)
US\$ floating rate debt	200	US\$ + 4.795%	LIBOR 3M	(14)	200	US\$ + 4.795%	LIBOR 3M	(8.0)	Dec 2011

(US\$ million, except interest rate ranges)

*Foreign exchange protection program for fixed price coal sales*

In order to reduce cash flow volatility associated with a fixed price coal contract, we entered into an Australian dollar forward purchase contract to equalize production cost and revenue currencies exposure.

	At December 31, 2008			At December 31, 2009			
	Notional	Price range	Unrealized gain (loss)	Quantity (AUD million)	Price range (USD/AUD)	Unrealized gain (loss) (US\$ million)	Final maturity
Forward purchase				41	0.66	8.61	Jan 2011

**Product price risk**

We are exposed to various market risks relating to the volatility of world market prices for the following products:

iron ore and iron ore pellets, which represented 59.2% of our 2009 gross consolidated revenues;

nickel, which represented 13.6% of our 2009 gross consolidated revenues;

copper products, which represented 4.7% of our 2009 gross consolidated revenues;

aluminum products, which represented 8.6% of our 2009 gross consolidated revenues;

coal, which represented 2.1% of our 2009 gross consolidated revenues;

PGMs and other precious metals, which represented 0.9% of our 2009 gross consolidated revenues; and

other products.

*Nickel Strategic cash flow protection program*

In order to reduce cash flow volatility in 2009 and 2010, we entered into hedging transactions that effectively fix nickel prices for part of our sales for these periods.

	At December 31, 2008			At December 31, 2009		Final
	Notional	Unrealized	Notional	Unrealized	Final	
	value	gain (loss)	value	gain (loss)	maturity	
	range	(US\$		(US\$		
	(US\$	million)	(US\$	million)		
	per ton)		per ton)			
	(tons)		(tons)			
Forwards sold			29,122	15,300-21,050	(20.68)	Dec 2010

104

**Table of Contents***Nickel fixed price program*

In prior years, we have entered into derivatives in connection with fixed price nickel contracts to maintain exposure to nickel price fluctuations. These transactions are intended to achieve a minimum price equal to the average LME price on the date of product delivery. These transactions normally involve buying nickel forwards (over-the-counter) or futures (exchange negotiated) and are usually settled on the settlement dates of the related commercial contracts. We also have contracts subject to margin calls for some nickel trades executed by Vale Inco, but the total cash amount as of December 2009 was not material.

	At December 31, 2008			At December 31, 2009			Final maturity
	Quantity	Price range	Unrealized gain (loss)	Quantity	Price range (US\$ per metric ton)	Unrealized gain (loss)	
	(metric tons)	(US\$ per metric ton)	(US\$ million)	(metric tons)	(US\$ per metric ton)	(US\$ million)	
Nickel fixed price program	10,140	9,355-37,480	(50)	3,426	14,886	12.06	Mar 2011

*Aluminum strategic cash flow protection program*

In order to reduce cash flow volatility in 2009 and 2010, we entered into hedging transactions that effectively fix aluminum prices for part of our sales for these periods.

	At December 31, 2008			At December 31, 2009			Final maturity
	Notional value	Price range	Unrealized gain (loss)	Notional value	Price range	Unrealized gain (loss)	
	(tons)	(US\$ per ton)	(US\$ million)	(tons)	(US\$ per ton)	(US\$ million)	
Puts purchased				120,000	1,900-1,975	8.61	Dec 2010
Forwards sold				120,000	1,910-2,004	(35.61)	Dec 2010
Calls sold				120,000	2,025-2,135	(37.33)	Dec 2010

**Input price risk**

We are exposed to various market risks relating to the volatility of world market prices for the following inputs, among others:

outsourced services, which represented 16.6% of our 2009 cost of goods sold;

materials, which represented 19.8% of our 2009 cost of goods sold;

energy, which represented 15.6% of our 2009 cost of goods sold; and

acquisition of products, which represented 5.5% of our 2009 cost of goods sold.

We may hedge certain input price risks with swap contracts, long-term contracts, embedded derivatives or upstream integration.

*Energy*

As a large consumer of electricity, we are investing in power generation projects and gas exploration to protect against volatility in the price of energy, regulatory uncertainties and the risk of energy shortages. We own hydroelectricity power generation plants in Brazil, Canada and Indonesia, and we currently generate 24% of our worldwide electricity needs from our own hydroelectric power plants.

**Table of Contents**

We are developing hydroelectric and thermal power plants and engaging in natural gas exploration programs in order to increase our energy production and reduce our future exposure to energy price and supply volatility.

*Embedded derivatives – energy purchase*

Our subsidiary Albras has an embedded energy derivative in a 20-year contract, expiring in 2024, with Eletronorte, which provides for an electricity purchase price in *reais* per MWh and requires us to pay a premium if the LME trading price of primary aluminum is in the range of US\$1,450 to US\$2,773 per metric ton.

	At December 31, 2008			At December 31, 2009			Final maturity
	Notional value	Price range	Unrealized gain (loss)	Notional value	Price range	Unrealized gain (loss)	
	(tons)	(US\$ per ton)	(US\$ million)	(tons)	(US\$ per ton)	(US\$ million)	
Calls purchased	200,228	1,450-2,773	1.3	200,228	1,450-2,773	25.8	Dec 2011
Calls sold	200,228	1,450-2,773	(49.6)	200,228	1,450-2,773	(171.7)	Dec 2011

*Protection program of natural gas*

In order to minimize the impact of input price volatility on our costs, we have entered into natural gas derivative trades, usually through the purchase of futures and forward contracts. All positions matured in the fourth quarter of 2009.

	At December 31, 2008			At December 31, 2009			Final maturity
	Quantity	Price range	Unrealized gain (loss)	Quantity	Price range	Unrealized gain (loss)	
	(gigajoules)	(CAD per gigajoule)	(US\$ million)	(gigajoules)	(CAD per gigajoule)	(US\$ million)	
Swaps	1,773,000	7.34-7.97	(2)				Oct 2009

*Bunker oil purchase protection program*

In order to reduce the impact of bunker oil price fluctuation on our freight costs, we have entered into bunker oil derivatives, usually through forward purchases and swaps.

	At December 31, 2008			At December 31, 2009			Final maturity
	Notional value	Price range	Unrealized gain (loss)	Notional value	Price range	Unrealized gain (loss)	
	(tons)	(US\$ per ton)	(US\$ million)	(tons)	(US\$ per ton)	(US\$ million)	

	(US\$ per ton)	(US\$ million)		(US\$ million)	
Forwards purchased		452,000	275-488	44.80	Dec 2010

*Acquisition of products**Nickel purchase protection program*

In order to reduce cash flow volatility and eliminate the mismatch between the pricing of purchased nickel (concentrate, cathode, sinter and other) and the pricing of the final product sold to our customers, we entered into hedging transactions. The items purchased are raw materials utilized to produce refined nickel. The transactions are usually implemented by the sale of nickel forward or future contracts at LME or over-the-counter operations.



**Table of Contents**

	At December 31, 2008			At December 31, 2009			Final maturity
	Quantity	Price range	Unrealized	Quantity	Price range	Unrealized	
			gain (loss) (US\$ million)			gain (loss) (US\$ million)	
(metric tons)	(US\$ per metric ton)		(metric tons)	(US\$ per metric ton)			
Nickel purchase protection program	4,944	9,117-16,900	(6.7)	1,446	9,117-16,900	(2.20)	Mar 2010

*Embedded derivatives – raw material and intermediate products purchase*

Our wholly owned subsidiary Vale Inco has embedded derivatives in purchase agreements for nickel concentrate and raw materials that are linked to nickel and copper future prices.

	At December 31, 2008			At December 31, 2009			Final maturity
	Quantity	Price range	Unrealized	Quantity	Price range	Unrealized	
			gain (loss) (US\$ million)			gain (loss) (US\$ million)	
(metric tons)	(US\$ per metric ton)		(metric tons)	(US\$ per metric ton)			
For customer raw material contracts:							
Nickel forwards		9,686-12,140		440	16,991-18,525	0.2	Apr 2010
Copper forwards	6,213	3,072-4,884	3.9	3,463	6,288-6,982	(1.0)	Apr 2010
For nickel concentrate customer sales:							
Nickel concentrate forwards	3,966	10,045-18,615	18.0				

*Outsourced services**Maritime freight hiring protection program*

In order to reduce the impact of maritime freight price fluctuations, we have entered into freight derivatives, usually through forward purchases.

	At December 31, 2008			At December 31, 2009			Final maturity
	Notional value	Price range	Unrealized	Notional value	Price range	Unrealized	
			gain (loss)			gain (loss)	

	(US\$ (tons) per ton)	(US\$ million)	(tons)	(US\$ per day)	(US\$ million)	
Forwards sold			6,125	29,000-31,900	28.72	Dec 2010

### **Credit risk**

We are exposed to credit risk arising from trade receivables, derivative transactions, payment guarantees and cash investments. The credit risk management process was implemented through a set of governance documents that establish the guidelines for granting counterparty limits and for measuring and controlling credit exposure. The credit risk governance provides a framework for assessing and managing counterparties' credit risk and for maintaining our risk at an acceptable level. The risk management committee analyzes and recommends to the Board of Executive Officers the maximum credit risk exposure to trade receivables and the maximum credit risk exposure to financial institutions that are acceptable at both the counterparty and at the portfolio level.

Credit risk mitigation strategies are designed to hedge our portfolio to avoid concentration issues and, when necessary, to comply with the acceptable risk levels established by the Board of Executive Officers. Speculative credit derivative transactions are not permitted.

Customer credit limits are established through our risk management governance guidelines and monitored according to their credit exposure and their creditworthiness. Customer credit limits are updated at least once a year, or more often if there are significant changes in the marketplace.

**Table of Contents****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, with transfer of risk through insurance and establishment of financial provisions. As a result, the company seeks to have a clear view of its major risks, the best cost-benefit mitigation plans it must invest in, and the controls in place to monitor the impact of operational risk closely and to efficiently allocate capital to reduce it.

**III. SHARE OWNERSHIP AND TRADING****MAJOR SHAREHOLDERS**

Valepar S.A. is Vale's controlling shareholder. The following table sets forth information regarding ownership of Vale shares as of March 31, 2010 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.

	<b>Common shares owned</b>	<b>% of class</b>	<b>Preferred shares owned</b>	<b>% of class</b>
Valepar(1)	1,716,435,045	52.7%	20,340,000	1.0%
BNDESPAR(2)	218,386,481	6.7	69,432,771	3.3
Directors and executive officers as a group	141,307	Less than 1.0%	1,197,075	Less than 1.0%

(1) See the following tables 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 set forth information regarding ownership of Valepar common shares as of March 31, 2010.

	<b>Common shares owned</b>	<b>% of class</b>
<i>Valepar shareholders</i>		
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 & Co. Ltd.(4)	237,328,059	18.24
BNDESPAR(5)	149,787,385	11.51
Total	1,300,905,830	100%

- (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 25,862,068 preferred class C shares of Valepar, which represents 29.25% of the preferred class C shares.
- (2) Eletron owns 32,729 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 16,137,193 preferred class C shares of Valepar, which represents 18.25% of the preferred class C shares. Brumado Holdings Ltda., a subsidiary of Bradespar, owns 7,587,000 preferred class A shares of Valepar, which represents 8.58% of the class.
- (4) Mitsui owns 20,402,587 preferred class C shares of Valepar, which represents 23.08% of the preferred class C shares.
- (5) BNDESPAR owns 18,394,143 preferred class C shares of Valepar, which represents 20.80% of the preferred class C shares.

**Table of Contents**

The table below set forth information regarding ownership of Litel Participações S.A., one of Valepar's shareholders, as of March 31, 2010.

	<b>Common shares owned</b>	<b>% of class</b>
<i>Litel Participações S.A. shareholders(1)</i>		
BB Carteira Ativa	193,740,121	78.40%
Carteira Ativa II	53,387,982	21.60
Previ	19	–
Others	219	–
Directors and executive officers as a group	4	–
Total	247,128,345	100%

(1) Each of BB Carteira Ativa and Carteira Ativa II is a Brazilian investment fund. BB Carteira Ativa is 100% owned by Previ. Carteira Ativa II is 59.36% owned by Funcef, 35.81% owned by Petros and 4.84% 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, ending in 2017. Under this agreement, each of the shareholders of Valepar has the right to veto the transfer by Valepar of any Vale shares it holds. 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 mentioned above 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;

**Table of Contents**

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.

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.



**Table of Contents**

**RELATED PARTY TRANSACTIONS**

We have arm's-length commercial relationships in the ordinary course of our business with Mitsui, a shareholder of Valepar (our controlling shareholder) and with a number of companies that are affiliated with shareholders of Valepar, such as Cemig and Usiminas (in each of which Previ holds an interest), and we have financial relationships with Bradesco, which is controlled by the same controlling group as Bradespar, also a shareholder of Valepar.

BNDES is the parent company of one of our major shareholders, BNDESPAR. We and BNDES, the Brazilian state-owned development bank, 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 (Carajás), as well as proportional participation in any profits earned from the development of such resources. Iron ore and manganese ore deposits already identified at the time we entered into the Mineral Risk Contract (in March 1997) were specifically excluded from the contract. 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. In addition, BNDES has participated in certain of our financing arrangements. For more information on our transactions with BNDES, see *Operating and financial review and prospects Liquidity and capital resources*.

For information regarding investments in affiliated companies and joint ventures and for information regarding transactions with major related parties, see Notes 13 and 24 to our consolidated financial statements.

**DISTRIBUTIONS**

Under our dividend policy, our Board of Executive Officers proposes to our Board of Directors, no later than January 31 of each year, a minimum value, expressed in U.S. dollars, that will be distributed in that year to our shareholders. Distributions may be classified for tax purposes either as dividends or interest on shareholders' equity, and references to dividends should be understood to include all distributions regardless of their tax 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 2010, our Board of Executive Officers has proposed a minimum dividend of US\$2.5 billion. We pay the same amount per share on both common and preferred shares in accordance with our bylaws. The first installment of this dividend of US\$1.250 billion will be paid on April 30, 2010.

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*.

Distributions classified for tax purposes as dividends which are paid to ADR holders and to non-resident shareholders will not be subject to Brazilian withholding tax, except that a distribution from profits generated prior to December 31, 1995 will be subject to Brazilian withholding tax at varying rates. Distributions classified for tax purposes as interest on shareholders' equity which are paid to ADR holders and

**Table of Contents**

to non-resident shareholders are currently subject to Brazilian withholding tax. 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 each year since 2004, part of the distribution was 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 American Depositary Receipts. The depositary charges a fee of up to US\$0.02 per ADS for each distribution. For information on taxation of dividend distributions, see *Additional information Taxation Brazilian tax considerations*.

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.

Year	Payment date	<i>Reais per share</i>			U.S. dollars per share at payment date
		Dividends	Interest on equity	Total	
2003	April 30	0.14		0.14	0.05
	October 31	0.29		0.29	0.10
2004	April 30	0.17		0.17	0.06
	October 29	0.06	0.26	0.32	0.11
2005	April 29	0.28		0.28	0.11
	October 31	0.22	0.17	0.39	0.18
2006	April 28	0.12	0.17	0.29	0.14
	October 31	0.01	0.28	0.29	0.14
2007	April 30	0.22	0.13	0.35	0.17
	October 31	0.01	0.38	0.39	0.22
2008	April 30	0.20	0.24	0.44	0.26
	October 31	0.14	0.51	0.65	0.30
2009	April 30	0.52		0.52	0.24
	October 30		0.49	0.49	0.29
2010	April 30		0.42	0.42	0.24

**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.

**Table of Contents**

Our common ADSs, each representing one common share, are traded on the New York Stock Exchange ( NYSE ), under the ticker symbol VALE. Our preferred ADSs, each representing one preferred share, are traded on the NYSE, under the ticker symbol VALE.P. 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 depository for both the common and the preferred ADSs.

On March 31, 2010, there were 1,486,890,471 ADSs outstanding, 722,042,160 common ADSs and 768,848,311 preferred ADSs, representing 23.0% of our common shares and 37.7% of our preferred shares, or 28.7% of our total share capital.

**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.

	<b>BM&amp;F BOVESPA (Reais per share)</b>				<b>NYSE (US\$ per share)</b>			
	<b>Common share</b>		<b>Preferred share</b>		<b>Common ADS</b>		<b>Preferred ADS</b>	
	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
2005	24.98	16.00	21.75	13.75	11.27	6.40	9.89	5.49
2006	32.50	21.86	27.50	18.55	15.17	9.88	13.13	8.05
2007	65.90	29.40	55.62	25.42	37.75	13.76	31.59	11.83
2008	72.09	22.10	58.70	20.24	43.91	8.80	35.84	7.95
1Q	62.50	45.00	52.50	40.61	37.22	26.57	31.22	23.90
2Q	72.09	55.44	58.70	46.75	43.91	34.44	35.84	28.61
3Q	55.01	33.80	46.04	30.30	34.50	16.70	28.56	15.32
4Q	36.39	22.10	32.70	20.24	18.61	8.80	17.70	7.95
2009	50.30	27.69	43.37	23.89	29.53	11.90	25.66	21.91
1Q	38.75	27.69	32.48	23.89	17.70	11.90	14.70	10.36
2Q	40.00	31.50	33.79	27.05	20.83	13.82	17.70	11.93
3Q	41.77	31.89	37.02	27.75	23.28	15.88	20.73	13.73
4Q	50.30	40.05	43.37	35.67	29.53	22.30	25.66	19.90
1Q 2010								
December 2009	50.28	47.70	43.20	40.90	29.40	27.45	25.33	23.25
January 2010	54.95	48.78	47.25	41.96	31.48	25.79	26.94	22.56
February 2010	52.17	47.16	45.20	40.80	28.82	25.18	24.94	21.91
March 2010	57.45	50.97	49.55	44.65	32.29	28.46	27.76	24.78
April 2010(1)	59.85	56.17	51.34	49.00	34.55	31.93	29.46	27.78

(1) Until April 26, 2010.

**AMERICAN DEPOSITARY SHARES**

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

ADR holders are required to pay the depositary amounts in respect of expenses incurred by the depositary or its agents on behalf of ADR holders, including expenses arising from compliance with applicable law, taxes or other governmental charges, facsimile transmission or conversion of foreign currency into U.S. 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.

**Table of Contents**

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

<b>Depository service</b>	<b>Fee payable by ADR holders</b>
Issuance 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

**Direct and indirect payments by the depository**

The depository reimburses us for certain expenses we incur in connection with the ADR program, subject to a ceiling agreed between us and the depository 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. For the year ended December 31, 2009, such reimbursements totaled US\$9 million.

**PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

In May 2009, our Board of Directors approved the termination of a share buy-back program that was initiated in October 2008. The program contemplated the acquisition of up to 69,944,380 common shares and up to 169,210,249 preferred shares, corresponding respectively to 5.5% and 8.5% of the free float of each class as of the launch date. Upon termination, we had acquired 18,415,859 common shares and 47,284,800 preferred shares, corresponding respectively to 1.5% and 2.4% of the free float of each class as of the launch date, which will be held in treasury until disposal or cancellation. The shares were acquired at an average weighted unit cost of US\$11.60.

The results of our share buy-back program for 2009 are set forth below.

<b>Period</b>	<b>Total number of shares (or units) purchased</b>	<b>Average price paid per share (or units)</b>	<b>Total number of shares (or units) purchased as part of publicly announced plans or programs</b>	<b>Maximum number (or approximate US\$ value) of shares (or units) that may yet be purchased under the program</b>
<i>Common shares</i>				
January 2009	60,000	14.22	60,000	
<i>Preferred shares</i>				
January 2009	771,400	12.18	771,400	
Total	831,400	12.33	831,400	





**Table of Contents**

**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 eleven members and eleven alternates, each of whom serves on behalf of a particular director. Each director (and his or her respective alternate) is elected for a two-year term at a general shareholders meeting, can be re-elected, and is subject to removal at any time.

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.

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: nominating 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, and analyzing and making recommendations with regard to our annual report and financial statements.

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 their respective alternates) were appointed by Valepar, our controlling shareholder, pursuant to Valepar's shareholders agreement. 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

**Table of Contents**

and an alternate. All of our current directors were, except for Mr. Tonoki, elected or re-elected, as the case may be, at our annual shareholders meeting in April 2009. Their terms will expire in 2011.

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

<b>Director(1)</b>	<b>Year first elected</b>	<b>Alternate director(1)</b>	<b>Year first elected</b>
Sérgio Ricardo Silva Rosa (chairman)	2003	Luiz Felix de Freitas	2009
Mário da Silveira Teixeira Júnior (vice-chairman)	2003	João Moisés de Oliveira Rita de Cássia Paz Andrade	2000
José Ricardo Sasseron	2007	Robles	2005
Jorge Luiz Pacheco	2003	Deli Soares Pereira	2009
Sandro Kohler Marcondes	2007	Luiz Augusto Ckless Silva	2009
Renato da Cruz Gomes	2001	Luiz Carlos de Freitas	2007
Ken Abe	2009	Hajime Tonoki(3)	2009
Oscar Augusto de Camargo Filho	2003	Wanderlei Viçoso Fagundes Paulo Sérgio Moreira da Fonseca	2003
Luciano Galvão Coutinho	2007	Raimundo Nonato Alves	2007
Eduardo Fernando Jardim Pinto(2)	2009	Amorim(2)	2009

(1) Appointed by Valepar and approved at the shareholders meeting unless otherwise indicated. One seat on our Board of Directors is currently vacant.

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

(3) Nominated by the Board of Directors in September 2009 to substitute Mr. Hidehiro Takahashi, who resigned. The nomination of Mr. Tonoki was confirmed at the shareholders meeting on January 22, 2010.

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

**Sérgio Ricardo Silva Rosa, 50:** Director of Vale since April 2003; Chairman of our Board of Directors since May 2003; Chief Executive Officer of Caixa de Previdência dos Funcionários do Banco do Brasil ( Previ ) and Litel Participações S.A.; and a member of the Board of Directors and Chief Executive Officer of Valepar.

*Other current director or officer positions:* Member of the Boards of Directors of Brasil Telecom Participações since 2000 and of Sauípe S.A. since 2001.

*Professional experience:* President of Confederação Nacional dos Bancários from June 1994 to May 2000; Alderman of the Municipality of São Paulo from January 1995 to December 1996.

*Academic background:* Degree in Journalism from the Universidade de São Paulo (USP).

**Mário da Silveira Teixeira Júnior, 64:** Director of Vale since April 2003 and Vice-Chairman since May 2003, and Vice-Chairman of the Board of Directors of Valepar S.A.

*Other current director or officer positions:* Member of the Board of Directors of Banco Bradesco since 2002; member of the Board of Directors of Banco Espírito Santo de Investimentos S.A.; member of the Board of Directors

of Bradespar S.A.; and member of the Board of Directors of Bradesco Leasing S.A. Arrendamento Mercantil.

*Professional experience:* Member of the Board of Directors of Banco Bradesco from March 1999 to July 2001; President of Bradespar S.A.; Executive Vice-President, Executive Managing Officer and Department Director at Banco Bradesco S.A. ( Banco Bradesco ); and officer of Bradesco S.A. Corretora de Títulos e Valores Mobiliários from March 1983 to January 1984. Mr. Teixeira was executive vice-president of the National Association of the Investment Banks ( ANBID ); member of the Board of Directors of the Brazilian Association of Publicly-Held Companies ( ABRASCA ); vice-chairman of the Board of Directors of BES Investimento do Brasil Banco de Investimento; and member of the boards of directors of Companhia Paulista de Força e Luz CPFL, Companhia Piratininga de Força e Luz, Companhia Siderúrgica Nacional,

**Table of Contents**

CPFL Energia S.A., CPFL Geração de Energia S.A., Latasa S.A., São Paulo Alparagatas S.A., Tigre S.A. Tubos e Conexões, VBC Energia S.A. and VBC Participações S.A.

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

**José Ricardo Sasseron, 54:** Director of Vale since April 2007 and Officer of Previ.

*Professional experience:* Member of the Conselho de Gestão e Previdência Complementar ( CGPC ) and President of the Associação Nacional dos Participantes de Fundo de Pensão ( ANAPAR ) since 2001; chairman of the Board of Directors of Sauípe S.A from 2005 to 2007; member of the Advisory Board of Previ from 2004 to 2006 and chairman of the fiscal council of Previ from 1996 to 1998.

*Academic background:* Degree in History from the Universidade de São Paulo (USP).

**Jorge Luiz Pacheco, 55:** Director of Vale since April 2003 and Manager of strategic investments at Previ since 2000.

*Other current director or officer positions:* Director of Valepar and Officer of Litel.

*Professional experience:* Worked at Banco do Brasil from 1973 to 2000. Mr. Pacheco has held an officer position in the fiscal council of Companhia Siderúrgica Belgo-Mineira.

*Academic background:* Degree in Economics from Universidade Cândido Mendes, and post-graduate degrees in Finance and Business Management from Instituto Brasileiro de Mercado de Capitais ( IBMEC ) in Rio de Janeiro.

**Sandro Kohler Marcondes, 46:** Director of Vale since April 2007 and Officer of BB Leasing, Banco do Brasil Securities in New York, BB Securities in London, and BB Tur.

*Other current director or officer positions:* Officer of Banco do Brasil since July 2005.

*Professional experience:* Worked in various capacities in Banco do Brasil, both in Brazil and abroad since 1982.

*Academic background:* Bachelor's degree in Business Administration from the Universidade Estadual de Guarapuava and Masters degree from Fundação Getúlio Vargas ( FGV ) in São Paulo.

**Renato da Cruz Gomes, 57:** Director of Vale since April 2001 and Executive Officer and member of the Board of Directors of Valepar.

*Other current director or officer positions:* Executive Officer of Bradespar S.A. since 2000.

*Professional experience:* Mr. Gomes held a variety of positions at BNDES from 1976 to 2000, and served on the boards of directors of Aracruz Celulose S.A., Iochpe Maxion S.A., Bahia Sul Celulose S.A., Globo Cabo S.A. and Latasa.

*Academic background:* Degree in Engineering from Universidade Federal do Rio de Janeiro and graduate degree in Management Development from Sociedade de Desenvolvimento Empresarial (SDE).

**Ken Abe, 62:** Director of Vale since April 2009.

*Other current director or officer positions:* Representative and Executive Vice-President of Mitsui & Co. since June 2008.

## **Table of Contents**

*Professional experience:* Variety of positions at Mitsui & Co., Ltd. since 1970 and member of the Board of Directors of Valepar from October 2003 until April 2006.

*Academic background:* Degree in Economics from Waseda University, Japan.

**Oscar Augusto de Camargo Filho**, 72: Director of Vale since October 2003; Director of Valepar; and Partner of CWH Consultoria Empresarial.

*Professional experience:* Chairman of the Board of Directors of MRS from 1999 to 2003 and Chief Executive Officer and member of the Board of Directors of CAEMI Mineração e Metalurgia S.A. ( CAEMI ), where Mr. Camargo Filho also held various positions from 1973 to 2003. From 1963 to 1973, Mr. Camargo Filho held positions at Motores Perkins S.A., including commercial officer and sales and services manager.

*Academic background:* Law degree from the Universidade de São Paulo (USP).

**Luciano Galvão Coutinho**, 63: Director of Vale since August 2007.

*Other current director or officer positions:* President of BNDES.

*Professional experience:* Partner of LCA Consultores from 1995 until 2007 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 the Universidade de São Paulo, the University of Paris XIII, the University of Texas and the Ortega y Gasset Institute.

*Academic background:* Degree in Economics from the Universidade de São Paulo, where Mr. Coutinho was awarded the Gastão Vidigal prize for best economics student; Master's degree in Economics from the Economic Research Institute of the Universidade de São Paulo and Ph.D. in Economics from Cornell University.

**Eduardo Fernando Jardim Pinto**, 47: Director of Vale since April 2009 and Coordinator of CUTVALE.

*Professional experience:* Member of our Board of Directors from 2005 to 2007 and President of the railroad employees union in the states of Pará, Maranhão and Tocantins. Since 1983, Mr. Jardim Pinto has held several positions at Vale, including as a specialized train conductor.

*Academic background:* Law degree from Faculdade São Luís, Maranhão.

## **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 eleven 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.

The Board of Directors appoints executive officers for two-year terms and may remove them at any time. All of our current executive officers were elected or re-elected, as the case may be, at the Board of

**Table of Contents**

Directors meeting held on May 21, 2009. Their terms will expire in 2011. The following table lists our current executive officers.

	<b>Year of appointment</b>	<b>Position</b>	<b>Age</b>
Roger Agnelli	2001	Chief Executive Officer	50
Fabio de Oliveira Barbosa	2002	Chief Financial Officer	49
José Carlos Martins	2004	Executive Officer (Ferrous Minerals)	60
Eduardo de Salles Bartolomeo	2006	Executive Officer (Logistics, Project Management and Sustainability)	46
Carla Grasso	2001	Executive Officer (Human Resources & Corporate Services)	48
Tito Botelho Martins	2006	Executive Officer (Non-Ferrous Minerals)	47

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

**Roger Agnelli, 50:** Chief Executive Officer of Vale since July 2001.

*Other current director or officer positions:* Member of the Board of Directors of ABB Ltd since 2002 and member of Anadarko's Global Advisory Board since 2009.

*Professional experience:* Chairman of our Board of Directors from May 2000 until July 2001; president and chief executive officer of Bradespar from March 2000 to July 2001; executive director of Banco Bradesco from 1998 until 2000; member of the International Advisory Committee of the NYSE; Vice-President of the center of industries of the state of Rio de Janeiro; member of the Strategic Superior Council of the Federation of Industries of the State of São Paulo ( FIESP ); member of the Private Sector Advisory Council ( CONEX ) of the foreign trade chamber of the presidency of Brazil; member of the International Advisory Investment Council to the president of the Republic of Mozambique; and member of the Economic and Social Development Council ( CDES ), an advisory body to the president of Brazil from 2003 to 2007. Mr. Agnelli was also a member of the boards of directors of Companhia Paulista de Força e Luz, CSN, Latasa S.A., VBC Energia, Brasmotor, Mahle Metal Leve, Rio Grande Energia, Suzano Petroquímica, Serra da Mesa Energia, Duke Energy, Spectra Energy and Petrobras, and has been a director of UGB and vice-president of Brazil's National Association of Investment Banks ( ANBID ).

*Academic background:* Degree in Economics from Fundação Armando Álvares Penteado in São Paulo.

**Carla Grasso, 48:** Executive Officer for Human Resources and Corporate Services of Vale since October 2001.

*Professional experience:* Member of Curator's Council of Fundação Vale and chief of personnel, management and information technology at our corporate center from 1997 to 2001. Previously, Ms. Grasso was chief of personnel, management and information technology officer at our corporate center; chairperson of Brazil's Pension Fund Authority; head of the office of international affairs of the Ministry of Social Welfare of Brazil; head of the department of fiscal policies of the Ministry of Finance; and coordinator of the social and macroeconomic areas in the Office of the President of Brazil. Ms. Grasso has also been a lecturer of economics and advanced mathematics at the Centro Universitário do Distrito Federal and the Universidade Católica de Brasília.

*Academic background:* Degree in Economics from the Universidade de Brasília (UNB); Master's degree in Economic Policies; and executive education programs at INSEAD (France), IMD (Switzerland) and Sloan School of



Management, MIT (United States).

**Eduardo de Salles Bartolomeo**, 46: Executive Officer of Logistics, Projects Management and Sustainability of Vale since January 2007.

*Other current director or officer positions:* Member of the Board of Directors of Log-in since 2007.

**Table of Contents**

*Professional experience:* President of Petroflex from August to December 2006; officer of our logistics operations department between January 2004 and July 2006; manager of corporate planning, plant manager, corporate logistics manager and regional director at Americas Brewery Co. ( AMBEV ) from 1994 to 2003; and head of the steel conversion sector at COSIPA until 1991.

*Academic background:* Degree in Metallurgical Engineering from the Universidade Federal Fluminense and MBA from the Katholieke Universiteit in Leuven, Belgium.

**Fabio de Oliveira Barbosa, 49:** Chief Financial Officer of Vale since May 2002.

*Other current director or officer positions:* Member of the Board of Directors of BM&F Bovespa since 2009 and member of the International Advisory Board of Fundação Dom Cabral.

*Professional experience:* Member of the Board of Directors of Vale from April 2000 to March 2002; secretary of the National Treasury at the Ministry of Finance of Brazil from July 1999 to April 2002; assistant secretary of the National Treasury from 1995 to 1999; advisor to the Executive Board of Directors of the World Bank, Washington D.C., from 1992 to 1995. Previously, Mr. Barbosa was chairman of the Board of Directors of CAEMI, Banco do Estado de São Paulo S.A., and a board member of Banco do Brasil, Caixa Econômica Federal, Companhia Siderúrgica de Tubarão and Telecomunicações de São Paulo ( TELESP ).

*Academic background:* Degree in Economics from the Universidade Federal de Minas Gerais; Master's degree in Economics (all but dissertation), Universidade de Brasília ( UnB ); and executive education programs at INSEAD (France), IMD (Switzerland), Sloan School of Management, MIT (United States), and financial programming and policy at the International Monetary Fund.

**José Carlos Martins, 60:** Executive Officer for Ferrous Minerals of Vale since April 2005.

*Other current director or officer positions:* Member of the Board of Directors of Samarco Mineração S.A.

*Professional experience:* Executive officer of Vale for new business development from April 2004 to March 2005; formerly, president of Rexam in South America for aluminum can production and marketing; president of Latasa from 1999 until Rexam UK bought Latasa in 2003; executive officer for steel production of CSN from 1997 until 1999; and Chief Executive Officer at Aços Villares, where Mr. Martins held several important positions from 1986 until 1996.

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

**Tito Botelho Martins, 47:** Executive Officer for Non-Ferrous Minerals of Vale since 2006; President and Chief Executive Officer of Vale Inco; and Chairman of the boards of directors of MRN, Alunorte and Albras.

*Professional experience:* Executive officer of Vale for corporate affairs and energy; chief executive officer of CAEMI and chairman and chief executive officer of MBR from 2003 to 2006; and managing officer of the corporate finance department of Vale from August 1999 to September 2003. Previously, Mr. Martins was a member of the boards of directors of Fundação Vale do Rio Doce de Seguridade Social ( Valia ), FCA, Samarco Mineração S.A., FERROBAN Ferrovias Bandeirantes S.A., Aço Minas Gerais S.A. ( Açominas ), Gulf Industrial Investment Company ( GIIC ) in Bahrain, Itabasco and Hispanobrás.

*Academic Background:* Degree in Economics from the Universidade Federal de Minas Gerais; Master's degree in management from the Universidade Federal do Rio de Janeiro; and executive education programs at INSEAD (France) and at the Kellogg School of Management of Northwestern University (United States).



## **Table of Contents**

### **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. 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.

### **Fiscal Council**

We have a fiscal council established in accordance with Brazilian law. The primary responsibility of the fiscal council under Brazilian corporate law is 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 any external auditor 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 periodically. 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. It has the power to suspend the payment of compensation to the independent auditors and to resolve 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 the management 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 required by both the SEC and the NYSE listed company audit committee rules to comply with Exchange Act Rule 10A-3, which requires, absent an exemption, 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.

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 27, 2010. The terms of the members of the Fiscal

Council expire at the next annual shareholders meeting following election.

**Table of Contents**

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 comprising at least 10% of the common shares outstanding.

The following table lists the current and alternate members of the Fiscal Council.

<b>Current member</b>	<b>First year of appointment</b>	<b>Alternate</b>	<b>First year of appointment</b>
Nelson Machado(1) Antonio José de Figueiredo Ferreira(2)	2010 2008	Marcus Pereira Aucélio(1) Cícero da Silva(2) Oswaldo Mário Pêgo de Amorim Azevedo(2)	2008 2009 2004
Marcelo Amaral Moraes(2) Aníbal Moreira dos Santos(2)	2004 2005		

(1) Appointed by preferred shareholders.

(2) Appointed by Valepar.

Below is a summary of the business experience, activities and areas of expertise of the members of our Fiscal Council.

**Nelson Machado, 62:** Member of the Fiscal Council since 2010 and Executive Secretary of the Ministry of Finance since 2007.

*Other current director or officer positions:* Member of the Board of Directors of Caixa Econômica Federal ( CAIXA ) and member of the Board of Directors of Brasilprev Seguros e Previdência S.A. ( BRASILPREV ).

*Professional experience:* Minister of Social Security from 2005 to 2007; executive secretary from 2003 to 2005 and interim minister from 2004 to 2005 of the Ministry of Planning, Budget and Management; member of the Board of Directors of Brasilcap Capitalização S.A. ( BRASILCAP ) from 2007 to 2010.

*Academic background:* Ph.D. in Accounting and Controlling from FEA/USP.

**Antonio José de Figueiredo Ferreira, 55:** Member of the Fiscal Council since April 2008.

*Professional experience:* Chairman of our accounting committee from May 2005 until April 2008. Internal auditing chief of Previ from 1996 to May 2007. Mr. Ferreira worked for Banco do Brasil for 32 years, where he held positions in the audit and information technology areas.

*Academic background:* Degree in Mechanical Engineering from the Universidade Estadual do Rio de Janeiro; Law degree from the Universidade Federal do Rio de Janeiro; MBA in internal auditing at the Universidade de São Paulo (USP); MBA in Finance and Corporate Law at Fundação Getúlio Vargas (FGV) in Rio de Janeiro; and certificate from the executive education program in Management and Private Pension Programs from the Wharton School of the University of Pennsylvania (United States).

**Marcelo Amaral Moraes, 42:** Member of the Fiscal Council since 2004 and Director for specialized funds of Grupo Stratus.

*Professional experience:* Investment manager at Bradespar for six years; 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 S.A. in 2004; alternate member of our Board of Directors in 2003.

*Academic background:* Degree in Economics from the Universidade Federal do Rio de Janeiro and an MBA from the Universidade Federal do Rio de Janeiro/COPPEAD.

**Table of Contents**

**Aníbal Moreira dos Santos**, 71: Member of the Fiscal Council since 2005 and of the Fiscal Council of Log-In Logística Intermodal S.A. since April 2009.

*Professional experience:* From 1998 until his retirement in 2003, 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; member of the Fiscal Council of CADAM S.A. from 1999 to 2003; and an alternate member of the Board of Directors of MBR and EBM from 1998 to 2003; chief accounting officer of CAEMI from 1983 to 2003.

*Academic background:* Degree in Accounting from Fundação Getúlio Vargas, Rio de Janeiro.

**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, the members of our Board of Directors are then responsible for distributing such aggregate compensation in compliance with our bylaws among the directors and executive officers, in the latter case, at the recommendation of the Chief Executive Officer. The Executive Development Committee of our Board of Directors 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, 2009, we paid US\$19 million in aggregate to the executive officers, of which US\$7 million was fixed compensation and US\$12 million was variable compensation and benefits in kind granted, and US\$1 million in aggregate to the members of our Board of Directors for services in all capacities, all of which was fixed compensation. The amounts accrued to provide pension, retirement or similar benefits for our executive officers was US\$0.6 million. There are no similar benefits for the members of our Board of Directors.

As of March 31, 2010, the total number of common shares owned by our directors and executive officers was 141,307, and the total number of preferred shares owned by our directors and executive officers was 1,197,075. 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\$413,000 to members of the Fiscal Council in 2009. 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\$135,000 to members of our advisory committees in 2009. 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 functions.





**Table of Contents****EMPLOYEES**

The following table sets forth the number of our employees by category as of the dates indicated.

	<b>2007</b>	<b>At December 31, 2008</b>	<b>2009</b>
Ferrous minerals	21,700	23,859	24,176
Logistics services	11,679	13,049	13,455
Non-ferrous minerals	20,955	22,902	19,728
Administrative	2,709	2,680	2,677
<b>Total</b>	<b>57,043</b>	<b>62,490</b>	<b>60,036</b>

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 Australian, Brazilian, Canadian, Indonesian, New Caledonian and U.K. operations.

Some of our Canadian nickel operations have been facing strikes since mid-2009. Unionized employees at our operations in Sudbury and Port Colborne, in the province of Ontario, and at Voisey Bay, in the province of Newfoundland and Labrador, went on strike in July and August 2009, respectively, after rejecting our settlement offer for a new three-year collective bargaining agreement. Our offer aims to provide the right incentives for increasing labor productivity and enhancing the long-term competitiveness of these operations and their capacity to continue generating value. On March 31, 2009, members of USW Local 2020-005, which represents office, technical and professional employees, ratified a new three-year collective agreement with us. This agreement includes increases to salaries in each of the three years, a defined contribution pension plan for new employees and the introduction of an annual incentive plan that supports the achievement of strategic objectives and rewards performance and various other improvements to collective agreement language.

**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 Inco, in periodic negotiations with unions. In November 2009, Vale reached a two-year agreement with the Brazilian unions, which is valid until November 2011. A salary increase of 7% was implemented in November 2009 for our employees in Brazil as part of a two-year agreement reached in 2009. The provisions of Vale's collective bargaining agreements with its unions also apply to Vale's non-unionized employees. Vale Inco establishes wages and benefits for its unionized employees through collective agreements. For non-unionized employees, Vale Inco 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 Fundação Vale do Rio Doce de Seguridade Social (Valia). Sponsored by Vale and such subsidiaries,

Valia is a closed, nonprofit, complementary social security foundation with financial and administrative autonomy.

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 of our subsidiaries Albras and Alunorte participate in different

## **Table of Contents**

pension plans maintained by Bradesco Vida e Previdência S.A. This plan is closed to new participants and will not be sponsored by Albras and Alunorte in the future. Since April 2010, Albras and Alunorte employees are eligible for ValiaPrevi, another plan managed by Valia.

Our wholly owned subsidiary Vale Inco sponsors defined benefit pension plans principally in Canada, the United States, the United Kingdom and Indonesia. Each of the jurisdictions in which these plans is offered has legislation which, among other statutory requirements, cover minimum contributions to be made to these plans to meet their potential liabilities as calculated in accordance with such legislation. Effective January 1, 2009 the defined benefit plan for non-unionized staff employees in Canada was closed to new participants. A defined contribution plan was introduced for new employees effective July 1, 2009, and existing employees will have the opportunity to elect to move from the defined benefit to the defined contribution plan effective January 1, 2010. Vale Inco's subsidiary, Vale Inco Newfoundland and Labrador Limited, has a defined contribution pension plan. In addition, Vale Inco provides supplemental retirement benefits arrangements for eligible employees.

### **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 also 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 are eligible to participate in a bonus program tied to share ownership. Under the program, an employee may elect to invest part of his bonus in Vale shares. If the employee continues to be employed by us and to hold all the shares, after three years the employee will receive an additional bonus payment sufficient to purchase for his account, in the open market, a number of additional shares equal to the number of shares the employee purchased under the program. In 2010 and 2009, 1,200 employees elected to participate in the program.

## **V. ADDITIONAL INFORMATION**

### **LEGAL PROCEEDINGS**

We and our subsidiaries are defendants in numerous legal actions in the normal course of business, including civil, administrative, tax, social security and labor proceedings. See Note 20 to our consolidated financial statements.

#### **Praia Mole suit**

We were a defendant in a public civil action seeking to annul the concession agreement through which we and certain other defendants operate the Praia Mole maritime terminal in the Brazilian state of Espírito Santo. This case was decided in our favor in November 2007, but the plaintiff filed an appeal with the federal circuit court in April 2008, which is still pending.

#### **Itabira suits**

We are a defendant in two separate actions brought by the municipality of Itabira, in the Brazilian state of Minas Gerais. In one of the actions, filed in August 1996, the municipality of Itabira alleges that our Itabira iron ore mining operations have caused environmental and social damages and claims damages with respect to the 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



## **Table of Contents**

adjusted from the date of the claim, amount to R\$2.178 billion (US\$1.251 billion). In the other action, the municipality of Itabira is claiming 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 R\$2.522 billion (US\$1.448 billion). We believe these suits are without merit.

### **CFEM-related proceedings**

We are currently a defendant in a series of administrative and judicial proceedings brought by the National Mineral Production Department (Departamento Nacional de Produção Mineral), or DNPM, an agency of the Ministry of Mines and Energy of the Brazilian government. The most significant of these proceedings was brought against us in March 2006, alleging that we have failed to pay the full amount of a mining royalty, known as the CFEM, on revenues generated by our iron ore and manganese activities. (For details about the CFEM, see *Additional information Regulatory matters Royalties and other taxes on mining activities*.) We believe that the DNPM's allegations are without merit. The aggregate amount claimed in the administrative and judicial proceedings is R\$4.7 billion (US\$2.7 billion).

We are a defendant in a judicial proceeding brought in 2002 by the Municipality of Mariana, alleging that we owe CFEM on our pelletization activities. We do not believe pelletization activities are subject to CFEM.

We were also involved in litigation with the DNPM regarding the applicable CFEM rate for certain potash products. We have reached an agreement with DNPM to settle this claim.

### **Tax litigation**

We are engaged in litigation with respect to Article 74 of the Brazilian Provisional Measure 2,158-34/2001 ( Article 74 of the Provisional Measure ), a tax regulation requiring payment of income tax in Brazil on net income from foreign subsidiaries. In 2003, we initiated a legal proceeding challenging the applicability of such regulation based on the following arguments: (i) Article 74 of the Provisional Measure disregards double taxation treaties between Brazil and the countries where some of our subsidiaries are based; (ii) the Brazilian Tax Code prohibits the establishment of conditions and timing of any tax assessment by means of a regulation such as Article 74 of the Provisional Measure; (iii) even if Article 74 of the Provisional Measure is valid, exchange gain and loss must be excluded from the net income of our foreign subsidiaries in the calculation of taxes owed (in accordance with new Brazilian accounting principles and IFRS); and (iv) the constitutional principle prohibiting retroactive application of tax laws would be violated if this regulation were applied to net income generated before December 2001. We did not obtain a favorable decision on the merits of the case, but we did obtain an injunction suspending our obligation to pay the disputed amounts. We appealed from the lower court decision in July 2005, and the injunction remains in effect until the resolution of this appeal. The appeals court's decision on the merits is suspended until final resolution of a parallel lawsuit filed by the Brazilian Industry Association challenging the constitutionality of Article 74 of the Provisional Measure.

Meanwhile, the tax authorities filed two new administrative proceedings, bringing our total to four, claiming payment of R\$25.567 billion (US\$14.694 billion) from us, of which R\$13.153 billion (US\$7.559 billion) represents interest and penalties for non-payment of taxes and R\$12.414 billion (US\$7.134 billion) represents unpaid income tax on the net income from our foreign subsidiaries. We have filed our answer to these proceedings. We believe the suits are without merit and are vigorously contesting them. We have not made any provisions for these claims.

### **Gold forward contracts**

In 1988 and 1989, we entered into gold forward contracts with various Brazilian private pension funds. Under the terms of these contracts, settlement was permitted by either physical delivery or cash payment. In

## **Table of Contents**

May 1989, however, the Brazilian government, through the Brazilian central bank, passed a law prohibiting settlement by delivery, and Vale was consequently obligated to settle in cash. During these years, Brazil experienced severe inflation, and beginning in 2005, some of the pension funds sued Vale, claiming that the inflation adjustment provided for in the contracts did not adequately compensate them for monetary losses arising from the government's measures to control inflation during this period. There are 11 such suits. We have prevailed in two cases in the lower court, and the amounts claimed in those cases and the remaining cases are not material. We have lost in the lower courts in four cases, and we are pursuing appeals in those cases. The five remaining cases are still pending decision from the lower courts (*fase probatória*). We had provisions for most of this amount at December 31, 2009.

## **MEMORANDUM AND ARTICLES OF ASSOCIATION**

### **Company objectives and purposes**

Our corporate purpose is defined by our bylaws to include:

the exploitation 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 exploitation of own or unrelated-party rail traffic;

the building and operation of our own or unrelated-party maritime terminals, and the exploitation of nautical activities for the provision of support within the harbor;

the provision of logistics services integrated with cargo transport, comprising generation, storage, transshipment, distribution and delivery within the context of a multimodal transport system;

the production, processing, transport, industrialization and commerce of all and any source and form of energy, also involving activities of production, generation, transmission, distribution and commerce of its products, derivatives and sub products;

the carrying-on, in Brazil or abroad, of other activities that may be of direct or indirect consequence for the achievement of its corporate purpose, including research, industrialization, purchase and sale, importation and exportation, the exploitation, industrialization and commerce of forest resources and the provision of services of any kind whatsoever; and

constituting or participating in any fashion in other companies, consortia or associations directly or indirectly related to its 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.

## **Table of Contents**

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 comprising at least 10% of the voting shares outstanding may also elect one member of the Fiscal Council and an alternate.

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 our company;

any disposal or winding up of activities in any of the following parts of our iron ore mining integrated systems:

mineral deposits, ore deposits, mines;

railways; or

ports and maritime terminals;

any change in the bylaws relating to the rights accorded to the classes of capital stock issued by us; and

any change in the bylaws relating to the rights accorded 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

## **Table of Contents**

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.

Our calculation of net profits and allocations to reserves for any fiscal year are determined on the basis of financial statements prepared in accordance with Brazilian corporate law. Our consolidated financial statements have been prepared in accordance with U.S. GAAP 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.

### **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 depletion 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. Since the first step of our privatization in 1997, we 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.

### **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

**Table of Contents**

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.

**Mandatorily convertible notes**

In 2009, our wholly owned subsidiary Vale Capital II issued mandatorily convertible notes in two series, both due June 15, 2012. The series VALE-2012 notes (US\$293 million principal amount) are mandatorily convertible into ADSs representing an aggregate maximum of 18,415,859 common shares. The series VALE.P-2012 notes (US\$649 million principal amount) are mandatorily convertible into ADSs representing an aggregate maximum of 47,284,800 preferred shares.

In 2007, our wholly owned subsidiary Vale Capital Limited issued mandatorily convertible notes in two series, both due June 15, 2010. The series RIO notes (US\$1.296 billion principal amount) are mandatorily convertible into ADSs representing an aggregate maximum of 56,582,040 common shares. The series RIO P notes (US\$584 million principal amount) are mandatorily convertible into ADSs representing an aggregate maximum of 30,295,456 preferred shares.

The mandatorily convertible notes of Vale Capital Limited and Vale Capital II can convert before maturity under specified circumstances. The conversion rate for all series will depend on the market price of the ADSs on the conversion date. Under the indentures governing the notes, additional remuneration is due to each noteholder in an amount in U.S. dollars equal to any cash distribution net of any applicable withholding tax and fees paid by the Depository of our ADSs to the holder of one ADS, multiplied by the number of ADSs that would be received by the noteholder upon conversion of the notes at the conversion rate specified in the applicable indenture.

**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 that they may not vote on the election of members of the Board of Directors, except in the event of dividend arrearages, 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 voting 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,

## **Table of Contents**

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**

A general shareholders meeting convenes each year to decide all matters relating to our corporate purposes and to pass such resolutions as they deem necessary for our protection and well being.

Pursuant to Brazilian corporate law, shareholders voting at a general shareholders meeting have the power, among other powers, to:

- amend the bylaws;
- 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 concordata.

All shareholders meetings, including the annual shareholders meeting, are convened by publishing, no fewer than 15 days prior to the scheduled meeting date and no fewer than three times, a notice 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 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 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 except for the eight-days prior notice, 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

## **Table of Contents**

of action described below, as well as, in the case of clause (a) and clause (b), 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 shares, other than to the extent permitted by the bylaws;

changing a priority, preference, right, privilege or condition of redemption or amortization of any class of preferred shares or creating any class of non-voting preferred shares that has a priority, preference, right, condition or redemption or amortization superior to an existing class of shares, such as the preferred shares;

reducing the mandatory dividend;

changing the corporate purposes;

merging us with another company or consolidating or splitting us;

dissolving or liquidating us;

participating in a centralized group of companies as defined under Brazilian corporate law; 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 by the vice-chairman of our Board of Directors. In the case of temporary absence or impediment 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 an attorney-in-fact appointed not more than one year before the meeting, who must be a shareholder, a company officer or a lawyer. For a public company, such as us, the attorney-in-fact may also be 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 by shareholders representing at least 50% of the voting shares:

to create a new class of preferred shares or to disproportionately increase an existing class of preferred shares relative to the other classes of shares (unless such actions are provided for or authorized by the bylaws);

to modify a preference, privilege or condition of redemption or amortization conferred on one or more classes of preferred shares, or to create a new class with greater privileges than the existing classes of preferred shares;

to reduce the mandatory distribution of dividends;

to change our corporate purposes;

to merge us with another company, consolidate or split us;

## **Table of Contents**

- (6) to transfer all of our shares to another company in order to make us a wholly owned subsidiary of such company, a stock merger;
- (7) to approve the acquisition of control of another company at a price which exceeds certain limits set forth in Brazilian corporate law;
- (5) to approve our participation in a centralized group of companies as defined under Brazilian corporate law; or
- (6) in the event that the entity resulting from (a) a merger, (b) a stock merger as described in clause (6) 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 the changes mentioned in items (1) and (2) above may require us to redeem their shares. The right of redemption mentioned in items (5), (6) and (8) above 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, in the case of items (1) and (2) above, 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.

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, 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, subject to the limit on the number of shares that may be issued with the approval of the Board without any additional shareholder approval. 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.

## **Table of Contents**

### **Form and transfer**

Our preferred shares and common shares are in book-entry form registered in the name of each shareholder or its nominee. 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.

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 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.

### **EXCHANGE CONTROLS AND OTHER LIMITATIONS AFFECTING SECURITY HOLDERS**

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 custodian for the preferred shares or common shares represented by ADSs, or holders who have exchanged ADSs for preferred shares or common shares, from converting dividends, distributions or the proceeds from any sale of preferred shares or common shares, as the case may be, into U.S. dollars and remitting such U.S. dollars 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 could adversely affect holders of ADRs.

Under Resolution No. 2,689/2000, 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:

- appoint at least one representative in Brazil, with powers to perform actions relating to its investment,
- complete the appropriate foreign investor registration form,
- register as a foreign investor with the CVM, and
- register its foreign investment with the Central Bank.

Securities and other financial assets held by foreign investors pursuant to Resolution No. 2,689/2000 must be registered or maintained in deposit accounts or under the custody of an entity duly licensed by the Central Bank or the CVM. In addition, securities trading is restricted to transactions carried out on stock

## **Table of Contents**

exchanges or through organized over-the-counter markets licensed by the CVM, except for subscription, bonification, conversion of debentures into shares, securities indexes, purchase and sale of investment funds quotas and, if permitted by the CVM, going-private transactions, canceling or suspension of trading. Moreover, the offshore transfer or assignment of the 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 National Monetary Council 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 free of Brazilian foreign investment controls and holders of ADSs who are not resident in a tax haven jurisdiction (*i.e.*, a country or location that does not impose taxes on income or where the maximum income tax rate is lower than 20%, or where the legislation imposes restrictions on disclosure of the shareholding composition or the ownership of the investment) 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. 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 for preferred shares or common shares, the holder may continue to rely on the custodian's electronic registration for only five business days after the exchange. After that, the holder must seek to obtain its own electronic registration with the Central Bank under Law No. 4,131/1962 or Resolution No. 2,689/2000. Thereafter, unless the holder has registered its investment with the Central Bank, 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.

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 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 and remitting such U.S. 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 American Depositary Receipts 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.

## **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 or ADSs. 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 or ADSs.

Holders of preferred shares, common shares, or ADSs should consult their own tax advisors to discuss the tax consequences of the purchase, ownership and disposition of preferred shares, common shares or ADSs, 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. 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.

## **Table of Contents**

### **Brazilian tax considerations**

The following discussion summarizes the principal Brazilian tax consequences of the acquisition, ownership and disposition of preferred shares, common shares or ADSs 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, each Non-Brazilian Holder should consult his or her own tax advisor concerning the Brazilian tax consequences of an investment in preferred shares, common shares, or ADSs.

#### ***Shareholder distributions***

Brazilian corporations, such as us, classify for tax purposes distributions to shareholders as either dividends or interest on shareholders equity.

*Dividends.* Amounts distributed as dividends, including distributions in kind, will generally not be subject to income tax withholding if the distribution is paid by us from profits of periods beginning on or after January 1, 1996 (1) to the depositary in respect of the preferred shares or common shares underlying the ADSs or (2) to a Non-Brazilian Holder in respect of preferred shares or common shares. 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.

*Interest on shareholders equity.* Amounts distributed as interest on shareholders equity are generally subject to income tax withholding at the rate of 15%, except if:

the beneficiary is exempt from tax in Brazil, in which case the distribution is free of Brazilian tax,

the beneficiary is located in a Tax Haven Jurisdiction (as defined below) (a Tax Haven Holder ), in which case the applicable income tax withholding rate is 25%, or

the beneficiary is resident in Japan, in which case the applicable income tax withholding rate is 12.5%.

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 the TJLP, as determined by the Central Bank of Brazil from time to time. 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 the provision of social contribution on net profits but before taking into account such payment of interest and the provision of corporate income tax) for the period in respect of which the payment is made, or (2) 50% of the sum of retained earnings and profit reserves as of the date of the beginning of the fiscal year in respect of which the payment is made. Payments of interest on shareholders equity are deductible for corporate income tax and social contribution on net profit purposes, to the extent of the limits described above. Therefore, the benefit to us, as opposed to making a distribution classified as a dividend payment, is a reduction in our corporate taxes charge equivalent to 34% of such amount.

*Taxation of capital gains.* Taxation of Non-Brazilian Holders for capital gains depends on the status of the holder as either:

not resident or domiciled in a Tax Haven Jurisdiction (as defined below) and registered with the Central Bank of Brazil and the CVM to invest in Brazil in accordance with Resolution No. 2,689, or a holder of ADSs; or

any other Non-Brazilian Holder whose investment is not registered with the Central Bank and Non-Brazilian Holders resident in a Tax Haven Jurisdiction (*i.e.*, a jurisdiction that does not impose

**Table of Contents**

income tax or where the maximum income tax rate is lower than 20% or where internal legislation imposes restrictions on the disclosure of share or investment ownership).

Investors identified in item (1) are subject to favorable tax treatment, as described below.

According to Law No. 10,833, dated December 29, 2003, 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 where or with whom the transaction is carried out.

There is some uncertainty as to whether ADSs qualify as assets located in Brazil for purposes of Law No. 10,833/03. Arguably, ADSs do not constitute assets located in Brazil and therefore the gains realized by a Non-Brazilian Holder on the disposition of ADSs to another Non-Brazilian resident should not be subject to tax in Brazil. However, we cannot assure you that the Brazilian courts would 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. Consequently, gains on a disposition of ADSs 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 may be subject to Brazilian income tax if the acquisition cost of the preferred shares or common shares is lower than the average price of such shares, which is calculated as either:

- (i) 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
- (ii) 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 difference between the acquisition cost and the average price of the preferred shares or common shares calculated as described above will be considered to be a capital gain subject to taxation. There are grounds to sustain that such taxation is not applicable with respect to investors registered under the rules of Resolution No. 2,689/2000, provided these are not Tax Haven Holders.

The withdrawal of ADSs in exchange for preferred shares or common shares is not subject to Brazilian income tax, assuming compliance with applicable regulations regarding the registration of the investment with the Brazilian Central Bank.

For purposes 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 its investment with the Central Bank, and/or

how the disposition is carried out, as described below.

The gain realized as a result of a transaction on a Brazilian stock, future and commodities 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 shares sold.

## **Table of Contents**

Capital gains realized by a Non-Brazilian Holder on a sale or disposition of preferred shares or common shares carried out on a Brazilian stock exchange (which includes the transactions carried out on the organized over-the-counter market) are:

exempt from income tax when the Non-Brazilian Holder (i) has registered its investment in Brazil with the Central Bank in accordance with Resolution No. 2,689/2000 (a 2,689 holder ) and (ii) is not a Tax Haven Holder; or

in all other cases, subject to income tax at a 15% rate. In these cases, a withholding income tax at a rate of 0.005% of the sale value is levied on the transaction and can be offset with the eventual income tax due on the capital gain.

Any other gains assessed on a sale or disposition of preferred shares or common shares that is not carried out on a Brazilian stock exchange are subject to income tax at a 15% rate, except for gains realized by Tax Haven Holders, which are subject to income tax at a 25% rate.

With respect to transactions conducted on the Brazilian non-organized over-the-counter market, with brokerage, 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, or ADSs or a capital reduction by a Brazilian corporation, the positive difference between the amount received by the Non-Brazilian Holder and the acquisition cost of the preferred shares, common shares or ADSs redeemed is treated as capital gain derived from the sale or exchange of shares not carried out on a Brazilian stock exchange market and is therefore generally subject to income tax at the rate of 15%, while the 25% rate applies to Tax Haven Holders.

Any exercise of preemptive rights relating to the preferred shares or common shares will not be subject to Brazilian taxation. Any gains realized by a Non-Brazilian Holder on the disposition of preemptive 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.

### ***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%.

Effective as of October 20, 2009, the inflow of resources into Brazil related to investments carried out in the Brazilian financial and capital markets by non-Brazilian holders is subject to the IOF/Exchange at a rate of 2%.

The outflow of resources from Brazil related to investments carried out by non-Brazilian holders in the Brazilian financial and capital markets is currently subject to IOF/Exchange at a zero percent rate. In any case, the Brazilian Executive Branch may increase such rates at any time, up to 25%, with no retroactive effect.

*Transactions involving bonds and securities.* Brazilian law imposes a tax on transactions involving bonds and securities, or an IOF/Bonds Tax, including those carried out on a Brazilian stock exchange. The rate of IOF Bonds Tax applicable to transactions involving BDRs is currently zero. However, the Brazilian government may increase such rate at any time up to 1.5% of the transaction amount per day, but the tax cannot be applied retroactively. Shares

traded on the Brazilian stock exchange that back depositary receipts traded abroad are subject to IOF at a rate of 1.5% starting November 19, 2009.

## **Table of Contents**

*Other Brazilian taxes.* There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of preferred shares, common shares or ADSs 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.

### **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,
- 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.

## **Table of Contents**

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 and are:

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 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.

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, prior to January 1, 2011 with respect to the ADSs will be subject to taxation at a maximum rate of 15% 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 2008 or 2009 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 2010 taxable year.

**Table of Contents**

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 maximum rate of taxation of 15%), 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 prior to January 1, 2011 generally is subject to taxation at a maximum rate of 15%. Your ability to use capital losses to offset income is subject to limitations.

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 Internal Revenue Service 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 Internal Revenue Service.

**Table of Contents**

**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, 2009. 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, 2009 based on the criteria established in "Internal Control - Integrated Framework" 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, 2009. The effectiveness of our internal control over financial reporting as of December 31, 2009 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, 2009 that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

**Table of Contents****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 domestic practice and the NYSE corporate governance rules.

<b>Section</b>	<b>NYSE corporate governance rule for U.S. domestic issuers</b>	<b>Our approach</b>
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 directors 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.	Our non-management directors do not meet at regularly scheduled executive sessions without management.
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. All but two of the members of the Board of Directors are nominated by Valepar. 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. It has three members, two of whom are directors. According to its charter, this committee is responsible for: <ul style="list-style-type: none"> <li>evaluating and recommending improvements to the effectiveness of our corporate governance practices and the functioning of the Board of Directors;</li> <li>recommending improvements to our code of ethical conduct and management system in order to avoid conflicts of interest between us and our</li> </ul>

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 our 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.



**Table of Contents**

<b>Section</b>	<b>NYSE corporate governance rule for U.S. domestic issuers</b>	<b>Our approach</b>
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.	<p>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. This committee has three members, all of whom are directors. This committee is responsible for:</p> <ul style="list-style-type: none"> <li>reporting on general human resources policies;</li> <li>analyzing and reporting on the adequacy of compensation levels for our executive officers;</li> <li>proposing and updating guidelines for evaluating the performance of our executive officers; and</li> <li>reporting on policies relating to health and safety.</li> </ul>
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.	<p>In lieu of appointing an audit committee composed of independent members of the Board of Directors, we have established a permanent <i>conselho fiscal</i>, 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). The Fiscal Council currently has four 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:</p> <ul style="list-style-type: none"> <li>establishing procedures for the receipt, retention and treatment of complaints related to accounting,</li> </ul>

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 suspend the payment of compensation to the independent auditors; and

resolving 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.

**Table of Contents**

<b>Section</b>	<b>NYSE corporate governance rule for U.S. domestic issuers</b>	<b>Our approach</b>
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. We also have a code of ethics that applies specifically to employees in the corporate finance, investor relations and accounting departments.
303A.12	<p>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.</p> <p>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.</p> <p>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.</p>	We are subject to these requirements.

**CODE OF ETHICS**

We have adopted a code of ethical conduct that applies to all Board members, executive officers and employees, including the chief executive officer, the chief financial officer and the principal accounting officer. We have posted this code of ethical conduct on our Web site, at: <http://www.vale.com> (under English Version/Investors/Corporate Governance/Code of Ethics). Copies of our code of ethical 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 code of ethical conduct since its adoption.

**PRINCIPAL ACCOUNTANT FEES AND SERVICES**

PricewaterhouseCoopers Auditores Independentes billed the following fees to us for professional services in 2008 and 2009.

	<b>Year ended</b>	
	<b>December 31,</b>	
	<b>2008</b>	<b>2009</b>
	<b>(US\$ thousand)</b>	
Audit fees	8,327	8,036
Audit-related fees	972	229
Tax fees	512	278
All other fees	51	11
Total fees	9,862	8,554

**Table of Contents**

**Audit fees** are the aggregate fees billed by PricewaterhouseCoopers for the audit of our annual financial statements, for 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 billed fees, which are 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**. In 2009 and 2008, **Audit-related fees** consisted primarily of fees for services related to due diligence and special reviews. **Tax fees** relate primarily to the review of annual tax returns and review of accuracy of the tax computation procedures with respect to income tax and sales taxes.

**INFORMATION FILED WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION**

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. We also file financial statements and other periodic reports with the CVM and the French Securities and Exchange Commission, the Aurtorité des Marchés Financiers, or AMF.

**EXHIBITS**

Exhibit Number	
1	Bylaws of Vale S.A., as amended on May 22, 2009
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	Consent of Mr. Colin Coxhead
15.3	Consent of SRK Consulting
15.4	Consent of MB Mining Consultants
15.5	Consent of Snowden Mining Industry Consultants Pty Ltd
15.6	Consent of J.T. Boyd

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.



**Table of Contents**

**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 ductibility and improving its high temperature resistance. On average, austenitic stainless steels usually contain 8-10% nickel. 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.
Austenitic stainless steel ratio	The ratio of nickel-based stainless steels (austenitic steels) relative to all stainless steels produced.
A\$	Australian dollars.
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.
BOF	The vast majority of steel manufactured in the world is produced using the basic oxygen furnace ( BOF ). Basic oxygen steelmaking is a method of primary steelmaking in which carbon-rich molten pig iron is made into steel. High purity oxygen is blown through the molten bath to lower carbon, silicon, manganese, and phosphorous content of the iron, while various fluxes are used to reduce the sulfur and phosphorous levels.
CAD	Canadian dollars.

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, and varnishes.



**Table of Contents**

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.
Concentration	Physical, chemical or biological process to increase the grade of the metal or mineral of interest.
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.
DR	Direct reduction. Process that removes oxygen from iron ore by using natural gas or coal. The resulting product has an iron grade of 90-92%.
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.
EAF	The electric arc furnace ( EAF ) is the principle furnace type for the electric production of steel. The primary application of the EAF is for the re-melting of steel scrap; however, EAFs can be charged with limited amounts of iron scrap, pig iron and direct reduced iron.
Electrowon copper cathode	Refined copper cathode is a metallic product produced by an electrochemical process in which copper is recovered by dissolving copper anode in an electrolyte and plating it 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.
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.

Ferritic stainless steel

Steel that contains significant amount of chromium, but does not contain sufficient nickel and/or manganese to stabilize the austenite microstructure.

Ferrous alloys

Ferrous alloys 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 ferrous alloys are those of manganese, silicon and chromium.

**Table of Contents**

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.
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.
Hematitinha	A lump ore originated from our Southern System with the coarsest particle size in the range of 6.35 mm to 19 mm in diameter, varying from 75 to 90% between different mines and ores, that is only sold in the Brazilian domestic market.
HBI	Hot briquetted iron. Direct reduced iron that has been processed into briquettes. Because DRI may spontaneously combust during transportation, HBI is preferred when the metallic material must be stored or moved.
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.
Kaolin	A fine white aluminum silicate clay derived from rock composed chiefly of feldspar, which is used as a coating agent, filler, extender and absorbent in the paper, paint, ceramics and other industries.
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 manganate. 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.

**Table of Contents**

Mineral deposit(s) or mineralized material(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.
MK copper concentrate	MK copper concentrate, or MK chalcocite copper concentrate, is an intermediate copper product. The smelting process of combined nickel-copper concentrate produces a nickel-copper matte product, which is separated into two streams of intermediate products, including MK chalcocite copper concentrate, for further processing and refining. MK chalcocite copper concentrate, which contains 70-75% copper, is the feedstock material for copper smelter, producing copper anodes.
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 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 and 10-25% if produced from electric furnaces, with iron accounting for most of the balance. Nickel pig iron can also contain chrome, manganese, and impurities such as phosphorus, sulfur and carbon.
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.

Palladium

A silver-white metal that is ductile and malleable, used primarily in automobile-emissions control devices, jewelry, electrical and chemical applications.

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.

150

---

**Table of Contents**

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).
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.
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 in jewelry, laboratory equipment, electrical contacts, dentistry, automobile-emissions control devices, flat panel TVs and hard disk drives.
Platinum group metals ( PGMs )	Consist of platinum, palladium, rhodium, ruthenium, osmium and iridium, of which osmium has no industrial application and no economic value, while platinum and palladium have the greatest economic value.
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.
Pulverized coal injection ( PCI )	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.

*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.



**Table of Contents**

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.
Run-of-mine ( ROM )	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.
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.
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\$	United States dollars.



**Table of Contents**

**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/ Roger Agnelli

Name: Roger Agnelli

Title: Chief Executive Officer

By:

/s/ Fabio de Oliveira Barbosa

Name: Fabio de Oliveira Barbosa

Title: Chief Financial Officer

Date: April 29, 2010

**Table of Contents**

**Vale S.A.**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

<u>Report of Independent Registered Public Accounting Firm</u>	F-2
<u>Management's Report on Internal Control Over Financial Reporting</u>	F-4
<u>Consolidated Balance Sheets as of December 31, 2009 and 2008</u>	F-5
<u>Consolidated Statements of Income for the years ended December 31, 2009, 2008 and 2007</u>	F-7
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2009, 2008 and 2007</u>	F-8
<u>Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2009, 2008 and 2007</u>	F-9
<u>Consolidated Statements of Comprehensive Income (deficit) for the years ended December 31, 2009, 2008 and 2007</u>	F-10
<u>Notes to the Consolidated Financial Statements</u>	F-11

**Table of Contents**

**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, of comprehensive income, of cash flows and of changes in stockholders' equity present fairly, in all material respects, the financial position of Vale S.A. (formerly Companhia Vale do Rio Doce) and its subsidiaries (the Company) at December 31, 2009 and 2008, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2009 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control - Integrated Framework* 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.

**Table of Contents**

Vale S.A.

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.

As discussed in Note 2(a) to the consolidated financial statements, the Company changed its method of accounting for minority interest (now termed non controlling interests) effective January 1, 2009 and, retrospectively, adjusted the financial statements as of December 31, 2008 and 2007 and for the years then ended.

PricewaterhouseCoopers  
Auditores Independentes

Rio de Janeiro, Brazil  
February 10, 2010

**Table of Contents**

**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, 2009 based on the criteria established in Internal Control – Integrated Framework 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, 2009.

The effectiveness of the company's internal control over financial reporting as of December 31, 2009 has been audited by PricewaterhouseCoopers Auditores Independentes, an independent registered public accounting firm, as stated in their report which appears herein.

February 10, 2010

Roger Agnelli  
Chief Executive Officer

Fabio de Oliveira Barbosa  
Chief Financial Officer

**Table of Contents****Consolidated Balance Sheets**

Expressed in millions of United States dollars

	<b>2009</b>	<b>As of December 31 2008</b>
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	7,293	10,331
Short-term investments	3,747	2,308
Accounts receivable		
Related parties	79	137
Unrelated parties	3,041	3,067
Loans and advances to related parties	107	53
Inventories	3,196	3,896
Deferred income tax	852	583
Unrealized gains on derivative instruments	105	-
Advances to suppliers	498	405
Recoverable taxes	1,511	1,993
Others	865	465
	<b>21,294</b>	<b>23,238</b>
<b>Non-current assets</b>		
<b>Property, plant and equipment, net</b>	<b>67,637</b>	<b>48,454</b>
<b>Intangible assets</b>	<b>1,173</b>	<b>875</b>
<b>Investments in affiliated companies, joint ventures and others</b>	<b>4,585</b>	<b>2,408</b>
Other assets		
Goodwill on acquisition of subsidiaries	2,313	1,898
Loans and advances		
Related parties	36	-
Unrelated parties	158	77
Prepaid pension cost	1,335	622
Prepaid expenses	235	223
Judicial deposits	1,143	1,141
Advances to suppliers - energy	511	408
Recoverable taxes	817	394
Unrealized gains on derivative instruments	865	93
Others	177	161
	<b>7,590</b>	<b>5,017</b>
<b>TOTAL</b>	<b>102,279</b>	<b>79,992</b>





**Table of Contents**

**Consolidated Balance Sheets**  
**Expressed in millions of United States dollars**  
**(Except number of shares)**

	<b>(Continued)</b>	
	<b>As of December 31</b>	
	<b>2009</b>	<b>2008</b>
<b>Liabilities and stockholders equity</b>		
<b>Current liabilities</b>		
Suppliers	2,309	2,261
Payroll and related charges	864	591
Current portion of long-term debt	2,933	633
Short-term debt	30	-
Loans from related parties	19	77
Provision for income taxes	173	502
Taxes payable and royalties	124	55
Employees postretirement benefits	144	102
Railway sub-concession agreement payable	285	400
Unrealized losses on derivative instruments	129	-
Provisions for asset retirement obligations	89	48
Minimum mandatory dividends payable	1,464	2,068
Other	618	500
	<b>9,181</b>	<b>7,237</b>
<b>Non-current liabilities</b>		
Employees postretirement benefits	1,970	1,485
Long-term debt	19,898	17,535
Provisions for contingencies (Note 20(b))	1,763	1,685
Unrealized losses on derivative instruments	9	634
Deferred income tax	5,755	4,005
Provisions for asset retirement obligations	1,027	839
Debentures	752	379
Other	1,427	1,146
	<b>32,601</b>	<b>27,708</b>
<b>Redeemable noncontrolling interest (Note 4(b))</b>	<b>731</b>	<b>599</b>
<b>Commitments and contingencies (Note 20)</b>		
Stockholders equity		
Preferred class A stock - 7,200,000,000 no-par-value shares authorized and 2,108,579,618 (2008 - 2,108,579,618) issued	9,727	9,727
Common stock - 3,600,000,000 no-par-value shares authorized and 3,256,724,482 (2008 - 3,256,724,482) issued	15,262	15,262

Treasury stock - 77,581,904 (2008 - 76,854,304) preferred and 74,997,899 (2008 - 74,937,899) common shares	(1,150)	(1,141)
Additional paid-in capital	411	393
Mandatorily convertible notes - common shares	1,578	1,288
Mandatorily convertible notes - preferred shares	1,225	581
Other cumulative comprehensive loss	(1,808)	(11,510)
Undistributed retained earnings	28,508	18,340
Unappropriated retained earnings	3,182	9,616
<b>Total Company stockholders equity</b>	<b>56,935</b>	<b>42,556</b>
<b>Noncontrolling interests</b>	<b>2,831</b>	<b>1,892</b>
<b>Total stockholders equity</b>	<b>59,766</b>	<b>44,448</b>
<b>TOTAL</b>	<b>102,279</b>	<b>79,992</b>

The accompanying notes are an integral part of these consolidated financial statements.

**Table of Contents****Consolidated Statements of Income**  
**Expressed in millions of United States dollars****(Except per share amounts)**

		<b>Year ended December 31,</b>	
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Operating revenues, net of discounts, returns and allowances</b>			
Sales of ores and metals	19,915	32,779	28,441
Aluminum products	2,050	3,042	2,722
Revenues from logistic services	1,104	1,607	1,525
Other products and services	870	1,081	427
	<b>23,939</b>	<b>38,509</b>	<b>33,115</b>
Taxes on revenues	(628)	(1,083)	(873)
<b>Net operating revenues</b>	<b>23,311</b>	<b>37,426</b>	<b>32,242</b>
<b>Operating costs and expenses</b>			
Cost of ores and metals sold	(10,026)	(14,055)	(13,628)
Cost of aluminum products	(2,087)	(2,267)	(1,705)
Cost of logistic services	(779)	(930)	(853)
Other	(729)	(389)	(277)
	<b>(13,621)</b>	<b>(17,641)</b>	<b>(16,463)</b>
Selling, general and administrative expenses	(1,130)	(1,748)	(1,245)
Research and development expenses	(981)	(1,085)	(733)
Impairment of goodwill	-	(950)	-
Other	(1,522)	(1,254)	(607)
	<b>(17,254)</b>	<b>(22,678)</b>	<b>(19,048)</b>
<b>Operating income</b>	<b>6,057</b>	<b>14,748</b>	<b>13,194</b>
<b>Non-operating income (expenses)</b>			
Financial income	381	602	295
Financial expenses	(1,558)	(1,765)	(2,517)
Gains (losses) on derivatives, net	1,528	(812)	931
Foreign exchange and indexation gains (losses), net	675	364	2,553
Gain (loss) on sale of assets	40	80	777
	<b>1,066</b>	<b>(1,531)</b>	<b>2,039</b>
<b>Income before income taxes and equity results</b>	<b>7,123</b>	<b>13,217</b>	<b>15,233</b>

Income taxes			
Current	(2,084)	(1,338)	(3,901)
Deferred	(16)	803	700
	<b>(2,100)</b>	<b>(535)</b>	<b>(3,201)</b>
Equity in results of affiliates, joint ventures and other investments	433	794	595
Net income	<b>5,456</b>	<b>13,476</b>	<b>12,627</b>
Net income attributable to noncontrolling interests	107	258	802
<b>Net income attributable to the Company's stockholders</b>	<b>5,349</b>	<b>13,218</b>	<b>11,825</b>
Basic and diluted earnings per share attributable to Company's stockholders			
Earnings per preferred share	0.97	2.58	2.41
Earnings per common share	0.97	2.58	2.41
Earnings per preferred share linked to mandatorily convertible notes(*)	1.71	4.09	3.30
Earnings per common share linked to mandatorily convertible notes(*)	2.21	4.29	3.51

(\*) Basic earnings per share only, as dilution assumes conversion

The accompanying notes are an integral part of these consolidated financial statements.

**Table of Contents****Consolidated Statements of Cash Flows**  
**Expressed in millions of United States dollars**

	<b>Year ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Cash flows from operating activities:</b>			
<b>Net income</b>	5,456	13,476	12,627
<b>Adjustments to reconcile net income to cash from operations:</b>			
Depreciation, depletion and amortization	2,722	2,807	2,186
Dividends received	386	513	394
Equity in results of affiliates, joint ventures and other investments	(433)	(794)	(595)
Deferred income taxes	16	(803)	(700)
Impairment of goodwill	-	950	-
Loss on disposal of property, plant and equipment	293	376	168
(Gain)/Loss on sale of investments	(40)	(80)	(777)
Foreign exchange and indexation losses (gains), net	(1,095)	451	(2,827)
Unrealized derivative losses (gains), net	(1,382)	809	(917)
Unrealized interest (income) expense, net	(25)	116	102
Others	20	(3)	115
<b>Decrease (increase) in assets:</b>			
Accounts receivable	616	(466)	235
Inventories	530	(467)	(343)
Recoverable taxes	108	(263)	-
Others	(455)	21	(292)
<b>Increase (decrease) in liabilities:</b>			
Suppliers	121	703	998
Payroll and related charges	159	1	170
Income taxes	(234)	(140)	393
Others	373	(93)	75
<b>Net cash provided by operating activities</b>	<b>7,136</b>	<b>17,114</b>	<b>11,012</b>
<b>Cash flows from investing activities:</b>			
Short term investments	(1,439)	(2,308)	-
Loans and advances receivable			
Related parties			
Loan proceeds	(181)	(37)	(33)
Repayments	7	58	10
Others	(25)	(15)	1
Judicial deposits	(132)	(133)	(125)
Investments	(1,947)	(128)	(324)
Additions to, property, plant and equipment	(8,096)	(8,972)	(6,651)
	606	134	1,042

Proceeds from disposal of investments/property, plant and equipment			
Acquisition of subsidiaries, net of cash acquired	(1,952)	-	(2,926)
<b>Net cash used in investing activities</b>	<b>(13,159)</b>	<b>(11,401)</b>	<b>(9,006)</b>
<b>Cash flows from financing activities:</b>			
Short-term debt, additions	1,285	1,076	4,483
Short-term debt, repayments	(1,254)	(1,311)	(5,040)
Loans			
Related parties			
Loan proceeds	16	54	259
Repayments	(373)	(20)	(273)
Issuances of long-term debt			
Third parties	3,104	1,890	7,212
Repayments of long-term debt			
Third parties	(307)	(1,130)	(11,130)
Treasury stock	(9)	(752)	-
Mandatorily convertible notes	934	-	1,869
Capital increase	-	12,190	-
Dividends and interest attributed to Company's stockholders	(2,724)	(2,850)	(1,875)
Dividends and interest attributed to noncontrolling interest	(47)	(143)	(714)
<b>Net cash provided by (used in) financing activities</b>	<b>625</b>	<b>9,004</b>	<b>(5,209)</b>
Increase (decrease) in cash and cash equivalents	(5,398)	14,717	(3,203)
Effect of exchange rate changes on cash and cash equivalents	2,360	(5,432)	(199)
Cash and cash equivalents, beginning of period	10,331	1,046	4,448
<b>Cash and cash equivalents, end of period</b>	<b>7,293</b>	<b>10,331</b>	<b>1,046</b>
<b>Cash paid during the period for:</b>			
Interest on short-term debt	(1)	(11)	(49)
Interest on long-term debt	(1,113)	(1,255)	(1,289)
Income tax	(1,331)	(2,867)	(3,284)
<b>Non-cash transactions</b>			
Interest capitalized	266	230	78

The accompanying notes are an integral part of these consolidated financial statements.

**Table of Contents****Consolidated Statements of Changes in Stockholders' Equity**  
**Expressed in millions of United States dollars****(Except number of shares)**

		<b>Year ended December 31,</b>	
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Preferred class A stock (including twelve special shares)</b>			
Beginning of the period	9,727	4,953	4,702
Capital increase	-	4,774	-
Transfer from undistributed retained earnings	-	-	251
<b>End of the period</b>	<b>9,727</b>	<b>9,727</b>	<b>4,953</b>
<b>Common stock</b>			
Beginning of the period	15,262	7,742	3,806
Capital increase	-	7,520	-
Transfer from undistributed retained earnings	-	-	3,936
<b>End of the period</b>	<b>15,262</b>	<b>15,262</b>	<b>7,742</b>
<b>Treasury stock</b>			
Beginning of the period	(1,141)	(389)	(389)
Acquisitions	(9)	(752)	-
<b>End of the period</b>	<b>(1,150)</b>	<b>(1,141)</b>	<b>(389)</b>
<b>Additional paid-in capital</b>			
Beginning of the period	393	498	498
Change in the period	18	(105)	-
<b>End of the period</b>	<b>411</b>	<b>393</b>	<b>498</b>
<b>Mandatorily convertible notes - common shares</b>			
Beginning of the period	1,288	1,288	1,288
Change in the period	290	-	-
<b>End of the period</b>	<b>1,578</b>	<b>1,288</b>	<b>1,288</b>
<b>Mandatorily convertible notes - preferred shares</b>			
Beginning of the period	581	581	581
Change in the period	644	-	-
<b>End of the period</b>	<b>1,225</b>	<b>581</b>	<b>581</b>



**Other cumulative comprehensive income (deficit)****Cumulative translation adjustments**

Beginning of the period	(11,493)	1,340	(1,628)
Change in the period	9,721	(12,833)	2,968
<b>End of the period</b>	<b>(1,772)</b>	<b>(11,493)</b>	<b>1,340</b>

**Unrealized gain (loss) - available-for-sale securities, net of tax**

Beginning of the period	17	211	271
Change in the period	(17)	(194)	(60)
<b>End of the period</b>	<b>-</b>	<b>17</b>	<b>211</b>

**Surplus (deficit) accrued pension plan**

Beginning of the period	(34)	75	353
Change in the period	(4)	(109)	(278)
<b>End of the period</b>	<b>(38)</b>	<b>(34)</b>	<b>75</b>

**Cash flow hedge**

Beginning of the period	-	29	-
Change in the period	2	(29)	29
<b>End of the period</b>	<b>2</b>	<b>-</b>	<b>29</b>

**Total other cumulative comprehensive income (deficit)**

	<b>(1,808)</b>	<b>(11,510)</b>	<b>1,655</b>
--	----------------	-----------------	--------------

**Undistributed retained earnings**

Beginning of the period	18,340	15,317	9,555
Transfer from/to unappropriated retained earnings	10,168	3,023	9,949
Capitalized earnings	-	-	(4,187)
<b>End of the period</b>	<b>28,508</b>	<b>18,340</b>	<b>15,317</b>

**Unappropriated retained earnings**

Beginning of the period	9,616	1,631	2,505
Net income attributable to the stockholders Company	5,349	13,218	11,825
Interest on mandatorily convertible debt			
Preferred class A stock	(58)	(46)	(22)
Common stock	(93)	(96)	(45)

**Dividends and interest attributed to stockholders equity**

Preferred class A stock	(570)	(806)	(1,049)
Common stock	(894)	(1,262)	(1,634)
Appropriation from/to undistributed retained earnings	(10,168)	(3,023)	(9,949)

<b>End of the period</b>	<b>3,182</b>	<b>9,616</b>	<b>1,631</b>
--------------------------	--------------	--------------	--------------

<b>Total Company stockholders equity</b>	<b>56,935</b>	<b>42,556</b>	<b>33,276</b>
--	---------------	---------------	---------------

**Noncontrolling interests**

Beginning of the period	1,892	2,180	2,465
Disposals and (acquisitions) of noncontrolling interests	83	-	(817)
Cumulative translation adjustments	823	(445)	333
Cash flow hedge	(18)	(21)	21
Net income attributable to noncontrolling interests	107	258	802
Dividends and interest attributable to noncontrolling interests	(56)	(137)	(700)
Capitalization of stockholders advances	-	57	76
<b>End of the period</b>	<b>2,831</b>	<b>1,892</b>	<b>2,180</b>
<b>Total stockholders equity</b>	<b>59,766</b>	<b>44,448</b>	<b>35,456</b>

**Number of shares:**

Preferred class A stock (including twelve special shares)	2,108,579,618	2,108,579,618	1,919,516,400
Common stock	3,256,724,482	3,256,724,482	2,999,797,716
Buy-backs			
Beginning of the period	(151,792,203)	(86,923,184)	(86,927,072)
Acquisitions	(831,400)	(64,869,259)	-
Sales	43,800	240	3,888
End of the period	<b>(152,579,803)</b>	<b>(151,792,203)</b>	<b>(86,923,184)</b>
	<b>5,212,724,297</b>	<b>5,213,511,897</b>	<b>4,832,390,932</b>

The accompanying notes are an integral part of these consolidated financial statements.

**Table of Contents****Consolidated Statements of Comprehensive Income (deficit)**

Expressed in millions of United States dollars

	<b>2009</b>	<b>Year ended December 31,</b>	
		<b>2008</b>	<b>2007</b>
<b>Comprehensive income (deficit) is comprised as follows:</b>			
<b>Company's stockholders:</b>			
Net income attributable to Company's stockholders	5,349	13,218	11,825
Cumulative translation adjustments	9,721	(12,833)	2,968
<b>Unrealized gain (loss) - available-for-sale securities</b>			
Gross balance as of the period/year end	(47)	(230)	(123)
Tax (expense) benefit	30	36	63
	<b>(17)</b>	<b>(194)</b>	<b>(60)</b>
<b>Surplus (deficit) accrued pension plan</b>			
Gross balance as of the period/year end	10	(194)	(410)
Tax (expense) benefit	(14)	85	132
	<b>(4)</b>	<b>(109)</b>	<b>(278)</b>
<b>Cash flow hedge</b>			
Gross balance as of the period/year end	11	(29)	29
Tax (expense) benefit	(9)	-	-
	<b>2</b>	<b>(29)</b>	<b>29</b>
<b>Total comprehensive income (deficit) attributable to Company's stockholders</b>	<b>15,051</b>	<b>53</b>	<b>14,484</b>
<b>Noncontrolling interests:</b>			
Net income attributable to noncontrolling interests	107	258	802
Cumulative translation adjustments	823	(445)	333
Cash flow hedge	(18)	(21)	21
<b>Total comprehensive income (deficit) attributable to Noncontrolling interests</b>	<b>912</b>	<b>(208)</b>	<b>1,156</b>
<b>Total comprehensive income (deficit)</b>	<b>15,963</b>	<b>(155)</b>	<b>15,640</b>

The accompanying notes are an integral part of these consolidated financial statements.



**Table of Contents****Notes to the Consolidated Financial Statements**

Expressed in millions of United States dollars, unless otherwise stated

**1 The Company and its operations**

Vale S.A., formerly Companhia Vale do Rio Doce, ( Vale , the Company or we ) is a limited liability company incorporated in Brazil. Operations are carried out through Vale and our subsidiary companies, joint ventures and affiliates, and mainly consist of mining, non-ferrous metal production, logistics and steel activities.

At December 31, 2009, our principal consolidated operating subsidiaries are the following:

<b>Subsidiary</b>	<b>% ownership</b>	<b>% voting capital</b>	<b>head office location</b>	<b>Principal activity</b>
Alumina do Norte do Brasil S.A. - Alunorte	57.03	59.02	Brazil	Alumina
Alumínio Brasileiro S.A. - Albras	51.00	51.00	Brazil	Aluminum
CADAM S.A	61.48	100.00	Brazil	Kaolin
CVRD Overseas Ltd	100.00	100.00	Cayman Islands	Trading
Vale Colombia Ltd	100.00	100.00	Colombia	Coal
Ferrovia Centro-Atlântica S. A	99.99	99.99	Brazil	Logistic
Ferrovia Norte Sul S.A	100.00	100.00	Brazil	Logistic
Mineração Corumbá Reunidas S.A.	100.00	100.00	Brazil	Iron ore
Pará Pigmentos S.A.	86.17	85.57	Brazil	Kaolin
PT International Nickel Indonesia Tbk	59.09	59.09	Indonesia	Nickel
Vale Manganése Norway	100.00	100.00	Norway	Ferroalloys Manganese and
Vale Manganês S.A.	100.00	100.00	Brazil	Ferroalloys
Vale Manganése France	100.00	100.00	France	Ferroalloys
Vale Australia Pty Ltd.	100.00	100.00	Australia	Coal
Vale Inco Limited	100.00	100.00	Canada	Nickel
Vale International S.A	100.00	100.00	Switzerland	Trading

**2 Basis of consolidation**

All majority-owned subsidiaries in which we have both share and management control are consolidated. All significant intercompany accounts and transactions are eliminated. Our variable interest entities in which we are the primary beneficiary are consolidated. Investments in unconsolidated affiliates and joint ventures are accounted for under the equity method (Note 13).

We evaluate the carrying value of our equity accounted investments in relation to publicly quoted market prices when available. If the quoted market price is below book value, and such decline is considered other than temporary, we write-down our equity investments to quoted market value.

We define joint ventures as businesses in which we and a small group of other partners each participate actively in the overall entity management, based on a stockholders agreement. We define affiliates as businesses in which we participate as a minority stockholder but with significant influence over the operating and financial policies of the investee.

Our participation in hydroelectric projects is made via consortium contracts under which we have undivided interests in the assets and are liable for our proportionate share of liabilities and expenses, which are based on our proportionate share of power output. We do not have joint liability for any obligations. No separate legal or tax status is granted to consortia under Brazilian law. Accordingly, we recognize our proportionate share of costs and our undivided interest in assets relating to hydroelectric projects (Note 12).

**Table of Contents**

**3 Summary of significant accounting policies**

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates are used for, but not limited to, the selection of useful lives of property, plant and equipment, impairment, provisions necessary for contingent liabilities, fair values assigned to assets and liabilities acquired in business combinations, income tax valuation allowances, employee post retirement benefits and other similar evaluations. Actual results could differ from those estimated.

**a) Basis of presentation**

We have prepared our consolidated financial statements in accordance with United States generally accepted accounting principles ( US GAAP ), which differ in certain respects from the accounting practices adopted in Brazil ( Brazilian GAAP ) which are the basis for our statutory financial statements.

These financial statements reflect the retrospective adoption of the Noncontrolling Interests in Consolidated Financial Statements Standard, as of December 31, 2008 and the three years then ended. The noncontrolling interest standard, which clarifies that a noncontrolling interest in a subsidiary is an ownership interest in the consolidated entity that should be reported as equity in the consolidated financial statements, as shown in the consolidated statements of changes in stockholders' equity and consolidated statements of comprehensive income (deficit). Noncontrolling interests that could be redeemed upon the occurrence of certain events outside the Company's control have been classified as redeemable noncontrolling interest using the mezzanine presentation on the balance sheet between liabilities and stockholders' equity, retroactively to all periods presented.

Since December 2007, significant modifications have been made to Brazilian GAAP as part of a convergence project with International Financial Reporting Standards (IFRS) and as from 2010 full year financial statements the convergence will be completed and therefore the IFRS will be the accounting practice adopted in Brazil. The Company does not expect to discontinue the US GAAP reporting during 2010.

The Brazilian Real is the parent Company's functional currency. We have selected the US dollar as our reporting currency.

All assets and liabilities have been translated to US dollars at the closing rate of exchange at each balance sheet date (or, if unavailable, the first available exchange rate). All statement of income accounts have been translated to US dollars at the average exchange rates prevailing during the respective periods. Capital accounts are recorded at historical exchange rates. Translation gains and losses are recorded in the Cumulative Translation Adjustments account ( CTA ) in stockholders' equity.

The results of operations and financial position of our entities that have a functional currency other than the US dollar, have been translated into US dollars and adjustments to translate those statements into US dollars are recorded in the CTA in stockholders' equity.

The exchange rates used to translate the assets and liabilities of the Brazilian operations at December 31, 2009 and 2008, were R\$1.7412 and R\$2.3370, respectively.

The net transaction gain (loss) included in our statement of income ( Foreign exchange and indexation gains (losses), net ) was US\$665, US\$(1,011) and US\$1,639 in the years ended December 31, 2009, 2008 and 2007, respectively.

The Company has performed an evaluation of subsequent events through February 10, 2010 which is the date the financial statements were issued.

F-12

---



**Table of Contents**

**b) Cash equivalents and short-term investments**

Cash flows from overnight investments and fundings are reported net. Short-term investments that have a ready market and original maturities of 90 days or less are classified as Cash equivalents . The remaining investments, with, between 91- to 360-day maturities are stated at fair value and presented as Short-term investments .

**c) Long-term**

Assets and liabilities that are realizable or due more than 12 months after the balance sheet date are classified as long-term.

**d) Inventories**

Inventories are recorded at the average cost of purchase or production, reduced to market value (net realizable value less a reasonable margin) when lower. Stockpiled inventories are accounted for as processed when they are removed from the mine. The cost of finished goods comprises depreciation and all direct costs necessary to convert stockpiled inventories into finished goods.

We classify proven and probable reserve quantities attributable to stockpiled inventories as inventories. These reserve quantities are not included in the total proven and probable reserve quantities used in the units of production, depreciation, depletion and amortization calculations.

We periodically assess our inventories to identify obsolete or slow-moving inventories, and if needed we recognize definitive allowances for them.

**e) Removal of waste materials to access mineral deposits**

Stripping costs (the costs associated with the removal of overburdened and other waste materials) incurred during the development of a mine, before production commences, are capitalized as part of the depreciable cost of developing the property. Such costs are subsequently amortized over the useful life of the mine based on proven and probable reserves.

Post-production stripping costs are included in the cost of the inventory produced (that is extracted), at each mine individually during the period that the stripping costs are incurred.

**f) Property, plant and equipment and intangible assets**

Property, plant and equipment are recorded as cost, including interest cost incurred during the construction of major new facilities. We compute depreciation on the straight-line method at annual average rates which take into consideration the useful lives of the assets, as follows: 3.73% for railroads, 1.5% for buildings, 4.23% for installations and 7.73% for other equipment. Expenditures for maintenance and repairs are charged to operating costs and expenses as incurred.

We capitalize the costs of developing major new ore bodies or expanding the capacity of operating mines and amortize these to operations on the unit-of-production method based on the total probable and proven quantity of ore to be recovered. Exploration costs are expensed. Once the economic viability of mining activities is established,

subsequent development costs are capitalized.

Separately acquired intangible assets are shown at historical cost. Intangible assets acquired in a business combination are recognized at fair value at the acquisition date. All our intangible assets have definite useful lives and are carried at cost less accumulated amortization, which is calculated using the straight-line method over their estimated useful lives.

F-13

---

**Table of Contents**

**g) Business combinations**

We adopt business combinations to record acquisitions of interests in other companies. This purchase method , requires that we reasonably determine the fair value of the identifiable tangible and intangible assets and liabilities of acquired companies and segregate goodwill as an intangible asset.

We assign goodwill to reporting units and test each reporting unit s goodwill for impairment at least annually, and whenever circumstance indicating that recognized goodwill may not be fully recovered are identified. We perform the annual goodwill impairment tests during the last quarter of the year.

Goodwill is reviewed for impairment utilizing a two step process. In the first step, we compare a reporting unit s fair value with its carrying amount to identify any potential goodwill impairment loss. If the carrying amount of a reporting unit exceeds the unit s fair value, based on a discounted cash flow analysis, we carry out the second step of the impairment test, measuring and recording the amount, if any, of the unit s goodwill impairment loss.

**h) Impairment of long-lived assets**

All long-lived assets, are tested to determine if they are recoverable from operating earnings on an undiscounted cash flow basis over their useful lives whenever events or changes in circumstance indicate that the carrying value may not be recoverable.

When we determine that the carrying value of long-lived assets and definite-life intangible assets may not be recoverable, we measure any impairment loss based on a projected discounted cash flow method using a discount rate determined to be commensurate with the risk inherent in our current business model.

**i) Available-for-sale equity securities**

Equity securities classified as available-for-sale are recorded pursuant to accounting for certain investments in debt and equity securities. Accordingly, we classify unrealized holding gains and losses, net of taxes, as a separate component of stockholders equity until realized.

**j) Compensated absences**

The liability for future compensation for employee vacations is fully accrued as earned.

**k) Derivatives and hedging activities**

We apply accounting for derivative financial instruments and hedging activities, as amended. This standard requires that we recognize all derivative financial instruments as either assets or liabilities on our balance sheet and measure such instruments at fair value. Changes in the fair value of derivatives are recorded in each period in current earnings or in other comprehensive income, in the latter case depending on whether a transaction is designated as an effective hedge and has been effective during the period.

**l) Asset retirement obligations**

Our retirement obligations consist primarily of estimated closure costs, the initial measurement of which is recognized as a liability discounted to present value and subsequently accreted through earnings. An asset retirement cost equal to the initial liability is capitalized as part of the related asset's carrying value and depreciated over the asset's useful life.

**m) Revenues and expenses**

Revenues are recognized when title is transferred to the customer or services are rendered. Revenue from exported products is recognized when such products are loaded on board the ship. Revenue from products sold in the domestic market is recognized when delivery is made to the customer. Revenue from logistic services is recognized when the service order has been fulfilled. Expenses and costs are recognized on the accrual basis.

**Table of Contents**

**n) Income taxes**

The deferred tax effects of tax loss carryforwards and temporary differences are recognized pursuant to accounting for income taxes. A valuation allowance is made when we believe that it is more likely than not that tax assets will not be fully recovered in the future.

**o) Earnings per share**

Earnings per share are computed by dividing net income by the weighted average number of common and preferred shares outstanding during the period.

**p) Interest attributed to stockholders' equity (dividend)**

Brazilian corporations are 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 long-term interest rate (TJLP) determined by the Brazilian Central Bank.

Also, such interest may not exceed 50% of net income for the year nor 50% of retained earnings plus revenue reserves as determined by Brazilian GAAP.

As the notional interest charge is tax deductible in Brazil, the benefit to us, as opposed to making a dividend payment, is a reduction in our income tax charge. 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 17). 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.

**q) Pension and other post retirement benefits**

We sponsor private pensions and other post retirement benefits for our employees which are actuarially determined and recognized as an asset or liability or both depending on the funded or unfunded status of each plan in accordance with employees' accounting for defined benefit pension and other post retirement plans. The cost of our defined benefit and prior service costs or credits that arise during the period and are not components of net periodic benefit costs are recorded in other cumulative comprehensive income (deficit).

**4 Accounting pronouncements**

**a) Newly issued accounting pronouncements**

Accounting Standards Update (ASU) number 2010-06 Fair Value Measurements and Disclosures (Topic 820): Improving Disclosures about Fair Value Measurements. This update provides amendments to Subtopic 820-10 and are expected to provide more robust disclosures about (1) the different classes of assets and liabilities measured at fair value, (2) the valuation techniques and inputs used, (3) the activity in Level 3 fair value measurements, and (4) the transfers between Levels 1, 2, and 3. The Company will adopt this update in 2010 and does not expect relevant impacts on fair value information currently disclosed.

In June 2009, the Financial Accounting Standards Board ( FASB ) issued an amendment to Interpretation No. 46(R) on the accounting and disclosure requirements for the consolidation of variable interest entities ( VIEs ). Subsequently, in December 2009, the Accounting Standards Update (ASU) number 2009-17 Amendments to FASB Interpretation No. 46(R) was issued. The amendments replace the quantitative-based risks and rewards calculation, for determining which reporting entity has a controlling financial interest in a VIE, with a qualitative analysis when determining whether or not it must consolidate a VIE. The newly required approach is focused on identifying which reporting entity has the power to direct the activities of a variable interest entity that most significantly impact the entity's economic performance and (1) the obligation to absorb losses of the entity or (2) the right to receive benefits from the entity. The amendments also require an enterprise to continuously reassess whether it must consolidate a VIE. Additionally, the amendments eliminated the scope exception on qualifying special-purpose entities ( QSPE ) and require enhanced disclosures about: involvement

**Table of Contents**

with VIEs, significant changes in risk exposures, impacts on the financial statements, and, significant judgments and assumptions used to determine whether or not to consolidate a VIE. The Company will adopt these amendments in 2010. We are currently assessing the potential impacts of this pronouncement and do not expect major changes to the reported financial information.

In June 2009, the FASB issued an amendment to the accounting and disclosure requirements for transfers of financial assets. Subsequently, in December 2009, the Accounting Standards Update (ASU) number 2009-16 Accounting for Transfers of Financial Assets an amendment of FASB Statement No. 140 was issued. The amendments improve financial reporting requiring greater transparency and additional disclosures for transfers of financial assets and the entity's continuing involvement with them and also change the requirements for derecognizing financial assets. In addition, the amendments eliminate the exceptions for QSPE from the consolidation guidance and the exception that permitted sale accounting for certain mortgage securitizations when a transferor has not surrendered control over the transferred financial assets. The Company will adopt the amendments in 2010 and do not expect major effect to its financial statements.

Accounting Standards Update (ASU) number 2009-08 Earning per share issued by the FASB provides additional guidance related to calculation of earnings per share. This guidance amends ASC 260.

The Company understands that the other recently issued accounting pronouncements, that are not effective as of and for the year ended December 31, 2009, are not expected to be relevant for its consolidated financial statements.

**b) Accounting standards adopted in 2009**

Accounting Standards Update (ASU) number 2009-05 Fair value measurements and disclosures issued by the FASB provides additional guidance related to address the lack of observable market information to measure the fair value of a liability. This guidance amends ASC 820. It is effective after the issuance. The Company already adopts these statements.

In June 2009, the FASB issued the FASB Accounting Standards Codification (Codification). The Codification became the single source for all authoritative GAAP recognized by the FASB to be applied for financial statements issued for periods ending after September 15, 2009. The Codification does not change GAAP and does not have an affect on our financial position, results of operations or liquidity.

In June 2009, we adopted a newly issued accounting standard for accounting and disclosures of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. In particular, this statement sets forth (1) the period after the balance sheet date during which management of a reporting entity should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements; (2) the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements; and (3) the disclosures that an entity should make about events or transactions that occurred after the balance sheet date. The standard is effective for interim or annual periods ending after June 15, 2009. The Company already adopts this statement.

In June 2009, we adopted a newly issued accounting standard for fair value of financial instruments which requires disclosures about fair value of financial instruments for interim reporting periods of publicly traded companies as well as in annual financial statements. This standard also requires these disclosures in summarized financial information at interim reporting periods. This standard shall be effective for interim reporting periods ending after June 15, 2009, and

we have not opted for early adoption of this standard for the three-month period ended March 31, 2009. The application of this standard will expand the Company's disclosures regarding the use of fair value in interim periods. The required information is disclosed in Note 22 (d).

In January 2009, we adopted a newly issued accounting standard regarding disclosure of derivative instruments and hedging activities. As such, entities must now provide qualitative disclosure about objectives and strategies for using derivatives, quantitative disclosures about fair value amounts of and gain and losses on derivative instruments and disclosures about credit-risk related contingent features in derivative agreements on a quarterly basis regarding how and why the entity uses derivatives, how derivatives and related hedged items are accounted for under the new standard and how derivatives and related hedged items affect the entity's financial position,



**Table of Contents**

performance and cash flows. The required information is disclosed in Note 25. In addition, unrealized gains or losses on derivatives, previously reported net on balance sheet are presented gross as assets and liabilities. Comparative information for 2008 has been reclassified.

In January 2009, we adopted a newly issued accounting standard for noncontrolling interests. This new accounting standard clarifies that a noncontrolling interest in a subsidiary is an ownership interest in the consolidated entity that should be reported as equity in the consolidated financial statements and consolidated statements of changes in stockholders' equity. Noncontrolling interests that could be redeemed upon the occurrence of certain events outside the Company's control have been classified as redeemable noncontrolling interest using the mezzanine presentation on the balance sheet between liabilities and stockholders' equity, retroactive to all periods presented.

In January 2009, we adopted a newly issued accounting standard that applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008.

**5 Major acquisitions and disposals****a) Mineração Corumbá Reunidas S.A.**

In September 2009, we acquired from Rio Tinto Plc, Mineração Corumbá Reunidas S.A. (MCR). MCR is the owner of an iron ore mining operation with high iron content and a strategic importance to our product portfolio, adding a substantial volume of lump ore to our reserves.

The purchase price allocation for Mineração Corumbá Reunidas S.A. is as follows:

	<b>Valuation</b>
Total disbursements(*)	814
Cash acquired	(12)
<b>Purchase price</b>	<b>802</b>
Book value of assets acquired and liabilities assumed, net of cash acquired	(240)
Adjustment to fair value of inventory	(84)
Adjustment to fair value of property, plant and equipment	(754)
Adjustment to fair value of intangible assets	(14)
Deferred taxes on the above adjustments	290
<b>Total fair value adjustment</b>	<b>(562)</b>

(\*) Including the payment related to working capital adjustment

The acquired business contributed revenues of US\$24 and net profit of US\$(16) for the period from October 1, 2009 to December 31, 2009. If the acquisition had occurred on January 1, 2009, our revenue would have been US\$52, and profit before tax would have been US\$(88). These amounts have been calculated using the Company's accounting policies and by adjusting the results of the subsidiary to reflect the additional depreciation and amortization that would have been charged assuming the fair value adjustments to property, plant and equipment and intangibles assets applied from January 1, 2009.

**b) Diamond Coal Ltd**

In March 2009, we acquired 100% of Diamond Coal Ltd that owns coal assets in Colombia for US\$300, from Cement Argos. Cash payment was made during the quarter ending June 30, 2009.

The primary reason for the acquisition was that the coal assets are an important part of our growth strategy. Therefore, Vale is seeking to build a coal asset platform in Colombia, as it is the world's third largest exporter of high-quality thermal coal, given its low level of sulfur and high calorific value.

F-17

---

**Table of Contents**

The purchase price allocation for Diamond Coal Ltd. is as follows:

	<b>Valuation</b>
Total disbursements	300
Adjustment to fair value of property, plant and equipment	(280)
Deferred taxes on above adjustments	92
<b>Total adjustment</b>	<b>(188)</b>

**c) Green Mineral Resources**

In February 2009, we acquired Green Mineral Resources that owns the Regina Project (Canada) and Colorado Project (Argentina) which are in development stage, from Rio Tinto, for US\$850.

The acquisition of potash assets is aligned with Vale's strategy to become a large producer of fertilizers to benefit from the exposure to rising global consumption. The purchase price allocation for Green Mineral Resources is as follows:

	<b>Valuation</b>
Total disbursements	857
Cash acquired	(7)
<b>Purchase price</b>	<b>850</b>
Book value of assets acquired and liabilities assumed, net of cash acquired	(97)
Adjustment to fair value of property, plant and equipment	(1,159)
Deferred taxes on above adjustments	406
<b>Total adjustment</b>	<b>(753)</b>

**d) Other transactions**

In September 2009, we concluded an agreement with ThyssenKrupp Steel AG signed in July, to increase our stake in ThyssenKrupp CSA Siderúrgica do Atlântico Ltda. (CSA) to 26.87%, through a capital subscription of US\$1,424.

In April 2009, we concluded the sale of all common shares we held in, Usiminas Siderúrgicas de Minas Gerais S.A. Usiminas, for US\$273 generating a gain of US\$153.

In March 2009, we acquired 50% of the joint venture with African Rainbow Minerals Limited of Teal Minerals Incorporated for US\$60.

In February 2008, we sold our interest in Jubilee Mines N.L. (held through Vale Inco), representing 4.83% of its common shares, for US\$134 generating a gain of US\$80.

## **6 Income taxes**

Income taxes in Brazil comprise federal income tax and social contribution, which is an additional federal tax. The statutory composite enacted tax rate applicable in the periods presented is 34%. In other countries where we have operations, the applicable tax rates vary from 1.67% to 40%.

We analyze the potential tax impact associated with undistributed earnings by each of our subsidiaries. For those subsidiaries in which the undistributed earnings would be taxable when remitted to the parent company, but we meet the criteria in paragraph 12 of APB 23, no deferred tax is recognized.

**Table of Contents**

The amount reported as income tax expense in our consolidated financial statements is reconciled to the statutory rates as follows:

	<b>Year ended December 31,</b>								
	<b>2009</b>	<b>2008</b>		<b>2007</b>			<b>2006</b>		
	<b>Brazil</b>	<b>Foreign</b>	<b>Total</b>	<b>Brazil</b>	<b>Foreign</b>	<b>Total</b>	<b>Brazil</b>	<b>Foreign</b>	<b>Total</b>
Income before income taxes, equity results and noncontrolling interests	<b>10,024</b>	<b>(2,901)</b>	<b>7,123</b>	2,434	10,783	13,217	7,769	7,464	15,233
Exchange variation (not taxable) or not deductible	-	<b>5,162</b>	<b>5,162</b>	-	(2,887)	(2,887)	-	853	853
	<b>10,024</b>	<b>2,261</b>	<b>12,285</b>	<b>2,434</b>	<b>7,896</b>	<b>10,330</b>	<b>7,769</b>	<b>8,317</b>	<b>16,086</b>
Tax at Brazilian composite rate	(3,408)	(769)	(4,177)	(828)	(2,685)	(3,513)	(2,641)	(2,828)	(5,469)
Adjustments to derive effective tax rate:									
Tax benefit on interest attributed to stockholders	502	-	502	692	-	692	474	-	474
Difference on tax rates of foreign income	-	1,079	1,079	-	1,728	1,728	-	1,729	1,729
Tax incentives	148	-	148	53	-	53	173	-	173
Other non-taxable, income/non deductible expenses	100	248	348	287	218	505	80	(188)	(108)
<b>Income taxes per consolidated statements of income</b>	<b>(2,658)</b>	<b>558</b>	<b>(2,100)</b>	<b>204</b>	<b>(739)</b>	<b>(535)</b>	<b>(1,914)</b>	<b>(1,287)</b>	<b>(3,201)</b>

Vale and some related companies in Brazil were granted with a tax incentive that provides for a partial reduction of the income tax due related to certain regional operations of iron ore, railroad, manganese, copper, bauxite, alumina, aluminum, kaolin and potash. The tax benefit is calculated based on taxable profit adjusted by the tax incentive (so-called exploration profit) taking into consideration the operational profit of the projects that benefit from the tax incentive during a fixed period. In general, such tax incentives expire in 2018. Part of the northern railroad and iron ore operations have been granted with tax incentives for a period of 10 years starting as from 2009. The tax savings must be registered in a special capital (profit) reserve in the net equity of the entity that benefits from the tax incentive and cannot be distributed as dividends to the stockholders.

We are also allowed to reinvest part of the tax savings in the acquisition of new equipment to be used in the operations that enjoy the tax benefit subject to subsequent approval from the Brazilian regulatory agencies Superintendência de Desenvolvimento da Amazônia SUDAM and Superintendência de Desenvolvimento do Nordeste SUDENE. When the reinvestment is approved, the corresponding tax benefit must also be accounted in a special profit reserve and is also subject to the same restrictions with respect to future dividend distributions to the stockholders.

We also have income tax incentives related to our Goro project under development in New Caledonia (The Goro Project). These incentives include an income tax holiday during the construction phase of the project and throughout a 15-year period commencing in the first year in which commercial production, as defined by the applicable legislation, is achieved followed by a five-year, 50% income tax holiday. The Goro Project also qualifies for certain exemptions from indirect taxes such as import duties during the construction phase and throughout the commercial life of the project. Certain of these tax benefits, including the income tax holiday, are subject to an earlier phase out should the project achieve a specified cumulative rate of return. We are subject to a branch profit tax commencing in the first year in which commercial production is achieved, as defined by the applicable legislation. To date, we have not recorded any taxable income for New Caledonian tax purposes. The benefits of this legislation are expected to apply with respect to taxes payable once the Goro Project is in operation. We obtained tax incentives for its projects in Mozambique, Oman and Malaysia, that will become effective when those projects start their commercial operation.

We are subject to examination by the tax authorities for up to five years regarding our operations in Brazil, up to ten years for Indonesia, and up to seven years for Canada for income taxes.

Brazilian tax loss carryforwards have no expiration date, though offset is restricted to 30% of annual taxable income.

On January 1, 2007, Company adopted the provisions Accounting for Uncertainty in Income Taxes.

**Table of Contents**

The reconciliation of the beginning and ending amounts is as follows: (see note 20(b)) tax related actions).

	<b>2009</b>	<b>Year ended December 31,</b>	
		<b>2008</b>	<b>2007</b>
<b>Beginning and end of the period</b>	<b>657</b>	<b>1,046</b>	<b>663</b>
Increase resulting from tax positions taken	47	103	264
Decrease resulting from tax positions taken	(474)	(261)	(47)
Changes in tax legislation	-	2	29
Cumulative translation adjustments	166	(233)	137
<b>End of the period</b>	<b>396</b>	<b>657</b>	<b>1,046</b>

There has been write-off of values provisioned referring to discussion about compensation for taxes losses and negative basis of social contribution above 30% due to withdrawal of the action and therefore the extinction of process with release of funds deposited in escrow in favor of the Brazilian Unit.

Recognized deferred income tax assets and liabilities are composed as follows:

	<b>2009</b>	<b>As of December 31 2008</b>
<b>Current deferred tax assets</b>		
Accrued expenses deductible only when disbursed	<b>852</b>	<b>583</b>
 <b>Long-term deferred tax assets and liabilities</b>		
<b>Assets</b>		
Employee postretirement benefits provision	384	171
Tax loss carryforwards	324	119
Other temporary differences	842	548
Asset retirement obligation	259	207
	<b>1,809</b>	<b>1,045</b>
<b>Liabilities</b>		
Unrealized tax indexation effects	(154)	(108)
Property, plant and equipment	(79)	(47)
Prepaid retirement benefit	(435)	(199)
Fair value adjustments in business combinations	(5,929)	(4,446)
Social contribution	(758)	-
Other temporary differences	(103)	(128)

	<b>(7,458)</b>	<b>(4,928)</b>
<b>Valuation allowance</b>		
Beginning balance	(122)	(104)
Translation adjustments	(25)	18
Change in allowance	41	(36)
<b>Ending balance</b>	<b>(106)</b>	<b>(122)</b>
<b>Net long-term deferred tax liabilities</b>	<b>(5,755)</b>	<b>(4,005)</b>

## 7 Cash and cash equivalents

	<b>2009</b>	<b>As of December 31 2008</b>
Cash	728	767
Short-term investments	6,565	9,564
	<b>7,293</b>	<b>10,331</b>

All the above mentioned short-term investments are made through the use of low risk fixed income securities, in a way that: the ones denominated in Brazilian reais are concentrated in investments indexed to the CDI, and the ones denominated in US dollars are mainly time deposits, with the original due date less than three-months.



**Table of Contents****8 Short-term investments**

	<b>2009</b>	<b>As of December 31 2008</b>
Time deposit	3,747	2,308

Represent low risk investments with original due date over three-month.

**9 Account receivable**

	<b>2009</b>	<b>As of December 31 2008</b>
<b>Customers</b>		
Denominated in Brazilian Reais	885	461
Denominated in other currencies, mainly US dollars	2,362	2,828
	<b>3,247</b>	<b>3,289</b>
Allowance for doubtful accounts	(127)	(85)
<b>Total</b>	<b>3,120</b>	<b>3,204</b>

Accounts receivable from customers in the steel industry represent 51.1% of receivables at December 31, 2009.

No single customer accounted for more than 10% of total revenues.

Additional allowances for doubtful accounts charged to the statement of income as expenses in 2009 and 2008 totaled US\$48 and US\$9, respectively. We wrote-off US\$8 in 2009 and US\$ nil in 2008.

**10 Inventories**

	<b>2009</b>	<b>As of December 31 2008</b>
<b>Finished products</b>		

Nickel (co-products and by-products)	1,083	1,514
Iron ore and pellets	677	728
Manganese and ferroalloys	164	199
Aluminum products	135	150
Kaolin	42	40
Copper concentrate	35	26
Coal	51	43
Others	51	80
Spare parts and maintenance supplies	958	1,116
	<b>3,196</b>	<b>3,896</b>

In 2009, there were no adjustments to reduce inventories to the market value. In 2008 we recorded an adjustment to reduce nickel inventory, in an amount of US\$77.

**Table of Contents****11 Recoverable taxes**

	<b>2009</b>	<b>As of December 31 2008</b>
Income tax	908	1,646
Value-added tax - ICMS	290	258
PIS and COFINS	1,052	380
Others	78	103
<b>Total</b>	<b>2,328</b>	<b>2,387</b>
Current	1,511	1,993
Non-current	817	394
	<b>2,328</b>	<b>2,387</b>

**12 Property, plant and equipment and intangible assets****By type of assets:**

	<b>As of December 31, 2009</b>			<b>As of December 31, 2008</b>		
	<b>Cost</b>	<b>Accumulated Depreciation</b>	<b>Net</b>	<b>Cost</b>	<b>Accumulated Depreciation</b>	<b>Net</b>
Land	284	-	284	182	-	182
Buildings	4,324	1,143	3,181	3,742	905	2,837
Installations	14,063	4,160	9,903	9,990	2,748	7,242
Equipment	7,499	2,380	5,119	5,391	1,626	3,765
Railroads	6,685	2,016	4,669	5,830	1,358	4,472
Mine development costs	20,205	2,957	17,248	15,976	2,062	13,914
Others	10,418	3,123	7,295	4,974	1,639	3,335
	<b>63,478</b>	<b>15,779</b>	<b>47,699</b>	<b>46,085</b>	<b>10,338</b>	<b>35,747</b>
Construction in progress	19,938	-	19,938	12,707	-	12,707
<b>Total</b>	<b>83,416</b>	<b>15,779</b>	<b>67,637</b>	<b>58,792</b>	<b>10,338</b>	<b>48,454</b>

Losses on disposal of property, plant and equipment totaled US\$293, US\$376 and US\$168 in 2009, 2008 and 2007, respectively. Mainly relate to losses on sales of ships and trucks, locomotives and other equipment, which were replaced in the normal course of business.

Assets given in guarantee of judicial processes totaled US\$222 as of December 31, 2009.

### **Hydroelectric assets**

We participate in several jointly-owned hydroelectric plants, already in operation or under construction, in which we record our undivided interest in these assets as property, plant and equipment.

At December 31, 2009 the cost of hydroelectric plants in service totaled US\$1,382 (December 31, 2008 US\$1,162) and the related depreciation in the year was US\$372 (December 31, 2008 US\$304). The cost of hydroelectric plant under construction at December 31, 2009 totaled US\$521 (December 31, 2008 US\$206). Income and operating expenses for such plants were not material.

### **Intangibles**

All of the intangible assets recognized in our financial statements were acquired from third parties, either directly or through a business combination and have definite useful lives from 6 to 30 years.

At December 31, 2009 the intangible assets totaled US\$1,173 (December 31, 2008 - US\$875), and comprised of rights granted by the government North-South Railroad of US\$924 and off take-agreements of US\$239.

**Table of Contents****13 Investments in affiliated companies and joint ventures**

	Participation in capital (%) Voting Total		December 31, 2009		Investments		Equity in earnings (losses) of investee adjustments			Dividends Received		
			Net equity	Net income (loss) of the period	2009	2008	Year ended December 31,			2009	Year ended December 31,	
							2009	2008	2007		2008	2007
<b>Iron</b>												
Companhia Sul-Brasileira de Pelotização SABRASCOS(1)	51.11	51.00	260	(25)	132	110	(12)	84	12	20	-	-
Companhia Española-Brasileira de Pelotização SABRASCOS(1)	51.00	50.89	164	(23)	83	73	(12)	59	9	-	6	10
Companhia Sul-Brasileira de Pelotização SABRASCOS(1)	50.00	50.00	118	(34)	59	55	(17)	44	19	-	13	20
Companhia Sul-Brasileira de Pelotização SABRASCOS(1)	51.00	50.90	177	23	90	58	12	34	10	-	-	8
Minas da Serra Sul-Brasileira SA MSG	50.00	50.00	61	3	31	21	2	1	3	-	-	-
AMARCO Mineração SA	50.00	50.00	1,224	598	673	412	299	315	242	190	300	150
Novo Vale Mineração SA BAOVALE	50.00	50.00	61	1	30	26	(3)	6	6	-	-	-
Zhuohai YPM Pellet Co.,Ltd ZHUHAI	25.00	25.00	51	12	13	13	3	7	-	-	-	-
					<b>1,111</b>	<b>768</b>	<b>272</b>	<b>550</b>	<b>301</b>	<b>210</b>	<b>319</b>	<b>190</b>
<b>Logistic</b>												
LOG-IN Logística Intermodal SA	31.33	31.33	374	5	125	94	2	20	8	3	3	-

Edgar Filing: Vale S.A. - Form 20-F

RS Logística SA	37.86	41.50	1,126	340	468	326	141	113	117	124	34	5
					<b>593</b>	<b>420</b>	<b>143</b>	<b>133</b>	<b>125</b>	<b>127</b>	<b>37</b>	<b>5</b>
<b>Buildings</b>												
<b>Steel</b>												
California Steel Industries Inc CSI	50.00	50.00	300	(21)	150	160	(10)	11	(1)	-	13	1
<b>HYSSSENKRUPP</b>												
SA Companhia Siderúrgica(5)	26.87	26.87	7,971	(6)	2,049	443	(6)	-	-	-	-	-
Minas Siderúrgicas Minas Gerais SA SIMINAS(4)	-	-	-	-	-	164	8	18	31	7	18	3
	-	-	-	-	<b>2,199</b>	<b>767</b>	<b>(8)</b>	<b>29</b>	<b>30</b>	<b>7</b>	<b>31</b>	<b>4</b>
<b>auxite</b>												
Mineração Rio do Norte SA MRN	40.00	40.00	356	(24)	143	140	(10)	62	84	42	99	6
					<b>143</b>	<b>140</b>	<b>(10)</b>	<b>62</b>	<b>84</b>	<b>42</b>	<b>99</b>	<b>6</b>
<b>Coal</b>												
Shenmen Longyu Resources Co Ltd	25.00	25.00	999	295	250	176	74	79	46	-	27	4
Shandong Yankuang International Company Ltd	25.00	25.00	(27)	(71)	(7)	11	(18)	(17)	-	-	-	-
					<b>243</b>	<b>187</b>	<b>56</b>	<b>62</b>	<b>46</b>	-	<b>27</b>	<b>4</b>
<b>Copper</b>												
Global Minerals Incorporated(3)	50.00	50.00	160	(34)	80	-	(18)	-	-	-	-	-
					<b>80</b>	-	<b>(18)</b>	-	-	-	-	-
<b>Nickel</b>												
Placer Dome Resources Inc (cost US\$24) available-for-sale	-	-	-	-	8	2	-	-	-	-	-	-
Placer Dome Nickel Ltd available-for-sale	-	-	-	-	-	8	-	-	-	-	-	-
Placer Dome Minerals available for sale	-	-	-	-	-	9	-	-	-	-	-	-
Placer Dome Nickel Corp	-	-	-	-	13	21	-	-	-	-	-	-
Placer Dome Resources	-	-	-	-	-	-	-	(38)	-	-	-	-
Placer Dome Resources available for sale	-	-	-	-	9	13	-	4	9	-	-	-
	-	-	-	-	<b>30</b>	<b>53</b>	-	<b>(34)</b>	<b>9</b>	-	-	-
<b>Other affiliates and joint ventures</b>												
Placer Dome Soluções em Energia	51.00	51.00	194	-	<b>99</b>	<b>42</b>	-	-	-	-	-	-

hers	-	-	-	-	<b>87</b>	<b>31</b>	<b>(2)</b>	<b>(8)</b>	-	-	-	
					<b>186</b>	<b>73</b>	<b>(2)</b>	<b>(8)</b>	-	-	-	
					<b>2,881</b>	<b>1,220</b>	<b>18</b>	<b>111</b>	<b>169</b>	<b>49</b>	<b>157</b>	<b>14</b>
total					<b>4,585</b>	<b>2,408</b>	<b>433</b>	<b>794</b>	<b>595</b>	<b>386</b>	<b>513</b>	<b>39</b>

(1) Although Vale held a majority of the voting interest of investees accounted for under the equity method, existing veto rights held by noncontrolling shareholders under shareholder agreements preclude consolidation;

(2) Investment includes goodwill of US\$62 in December, 2009 and US\$46 in December, 2008;

(3) Acquired in March, 2009 (Note 5 (d));

(4) Classified as available-for-sale until investment was sold in April, 2009. Equity refers to dividends received;

(5) See Note 5 (d).

**Table of Contents****14 Impairment of goodwill and long-lived assets**

As described in note 3(g), we test goodwill and long-lived assets for impairment when events or changes in circumstances indicate that they might be impaired. For impairment test purposes goodwill is allocated to reporting units, and are tested at least annually.

No impairment charges were recognized in 2009 as a result of the annual goodwill impairment tests performed. In 2008, an impairment charge, related to nickel operations was recorded in operating results in the amount of US\$950.

Management determined cash flows based on approved financial budgets. Gross margin projections were based on past performance and management's expectations of market developments. Information about sales prices are consistent with the forecasts included in industry reports, considering quoted prices when available and when appropriate. The discount rates used reflect specific risks relating to the relevant assets in each reporting unit, depending on their composition and location.

Recognition of additional goodwill impairment charges in the future would depend on several estimates including market conditions, recent actual results and management's forecasts. This information shall be obtained at the time when our assessment is to be updated. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

There were no goodwill movements in 2009, except for the cumulative translation adjustments.

**15 Short-term debt**

Short-term borrowings outstanding on December 31, 2009 are from commercial banks for export financing denominated in US dollars, with average annual interest rates of 2.02%.

**16 Long-term debt**

	<b>Current liabilities</b>		<b>Long-term liabilities</b>	
	<b>2009</b>	<b>2008</b>	<b>2009</b>	<b>2008</b>
<b>Foreign debt</b>				
Loans and financing denominated in the following currencies:				
US dollars	1,543	210	4,332	5,905
Others	29	23	411	167
Fixed Rate Notes - US dollar denominated	-	-	8,481	6,510
Debt securities - export sales(*) - US dollar denominated	150	55	-	149
Perpetual notes	-	-	78	83
Accrued charges	198	217	-	-
	<b>1,920</b>	<b>505</b>	<b>13,302</b>	<b>12,814</b>
<b>Brazilian debt</b>				
Brazilian Reais indexed to Long-term Interest Rate - TJLP/CDI and General Price Index-Market (IGPM)				
	62	33	3,433	1,990



Edgar Filing: Vale S.A. - Form 20-F

Basket of currencies	1	1	3	4
Non-convertible debentures	861	-	2,592	2,562
US dollars denominated	-	-	568	165
Accrued charges	89	94	-	-
	<b>1,013</b>	<b>128</b>	<b>6,596</b>	<b>4,721</b>
<b>Total</b>	<b>2,933</b>	<b>633</b>	<b>19,898</b>	<b>17,535</b>

(\*) Secured by receivables from future export sales. Redeemed in January, 2010.

F-24

---

**Table of Contents**

The long-term portion at December 31, 2009 falls due as follows:

2011	2,623
2012	1,209
2013	3,250
2014	925
2015 and thereafter	11,518
No due date (Perpetual notes and non-convertible debentures)	373
	<b>19,898</b>

At December 31, 2009 annual interest rates on long-term debt were as follows:

Up to 3%	6,696
5.1% to 7%	8,148
7.1% to 9%	5,735
9.1% to 11%	978
Over 11%(*)	1,192
Variable (Perpetual notes)	82
	<b>22,831</b>

(\*) Includes non-convertible debentures and other Brazilian Real denominated debt that bear interest at the Brazilian Interbank Certificate of Deposit (CDI) and Brazilian Government Long-term Interest Rates (TJLP) plus a spread. For these operations we have entered into derivative transactions to mitigate our exposure to the floating rate debt denominated in Brazilian Real, totaling US\$6,675 of which US\$3,949 has original interest rate between 7.1% and 9% per year the remaining amount has original interest rate above 9% per year. The average cost after taking into account the derivative transactions is 4.47% per year.

Vale has non-convertible debentures in Brazilian Reais denominated as follow:

Non Convertible Debentures	Quantity as of December 31, 2009		Maturity	Interest	Balance	
	Issued	Outstanding			2009	2008
1st Series	150,000	150,000	November 20, 2010	101.75% CDI	869	651
2nd Series	400,000	400,000	November 20, 2013	100% CDI + 0.25%	2,318	1,736
Tranche B	5	5	No due date		295	209

	6.5% p.a + IGP-DI	
	<b>3,482</b>	<b>2,596</b>
Short-term portion	861	-
Long-term portion	2,592	2,562
Accrued charges	29	34
	<b>3,482</b>	<b>2,596</b>

The indexation indices/rates applied to our debt were as follows (unaudited):

	<b>Year ended December 31,</b>	
	<b>2009</b>	<b>2008</b>
TJLP - Long-Term Interest Rate (effective rate)	6.2	6.3
IGP-M - General Price Index - Market	(1.7)	9.8
Appreciation (devaluation) of Real against US dollar	34.2	(24.2)

In November, 2009, Vale issued US\$1 billion of 30-year notes through its wholly-owned subsidiary Vale Overseas, fully and unconditionally guaranteed by Vale. These notes will mature in November 2039 and will bear a coupon of 6.875% per year, payable semi-annually, at a price of 98.564% of the principal amount.

In September, 2009, Vale issued US\$1 billion of 10-year notes through its wholly-owned subsidiary Vale Overseas, fully and unconditionally guaranteed by Vale. These notes will mature in September 2019 and will bear a coupon of 5.625% per year, payable semi-annually, at a price of 99.232% of the principal amount.

In January 2008 we entered into a trade finance agreement with a Brazilian bank in the amount of US\$1,147 with final maturity in 2018.

**Table of Contents****Credit Lines**

In November, 2009, Vale has signed a US\$300 export facility agreement, through its subsidiary PT International Nickel Indonesia Tbk (PTI), with Japanese financial institutions using credit insurance provided by Nippon Export and Investment Insurance – NEXI, to finance the construction of the Karebbe hydroelectric power plant on the Larona river, island of Sulawesi, Indonesia. Through December 31, 2009, PT International had drawn down US\$150 this facility.

During 2008, we entered into agreements with Banco Nacional de Desenvolvimento Econômico e Social – BNDES, (the Brazilian National Development Bank) in the amount of US\$4 billion and with Japanese financing agencies in the amount of US\$5 billion, of which US\$3 billion with Japan Bank for International Cooperation – JBIC and US\$2 billion with Nippon Export and Investment Insurance – NEXI related to future lines of credit to finance mining, logistics and power generation projects as part of our investment program for 2008-2012. Through December 31, 2009, Vale had drawn down US\$892 of the committed credit facility with BNDES.

Additionally, we have revolving credit lines available under which amounts can be drawn down and repaid at the option of the borrower. At December 31, 2009, the total amount available under revolving credit lines was US\$1,900, of which US\$1,150 was granted to Vale International and the balance to Vale Inco. As of December 31, 2009, neither Vale International nor Vale Inco had drawn any amounts under these facilities, but US\$115 of letters of credit were issued and remained outstanding pursuant to Vale Inco's facility.

**Guarantee**

On December 31, 2009, US\$753 (December 31, 2008 – US\$556) of the total aggregate outstanding debt were secured, being US\$152 (December 31, 2008 – US\$204) guaranteed by receivables from future export sales of CVRD Overseas Ltd., US\$34 (December 31, 2008 – US\$57) guaranteed by the Brazilian Federal Government and US\$567 (December 31, 2008 – US\$295) guaranteed by other receivables. The remaining outstanding debt in the amount of US\$22,078 (December 31, 2008 – US\$17,612) was unsecured.

Our principal covenants require us to maintain certain ratios, such as debt to EBITDA and interest coverage. We have not identified any events of default as of December 31, 2009.

**17 Stockholders' equity**

Each holder of common and preferred class A stock is entitled to one vote for each share on all matters brought before stockholders' meetings, except for the election of the Board of Directors, which is restricted to the holders of common stock. The Brazilian Government holds twelve preferred special shares which confer permanent veto rights over certain matters.

Both common and preferred stockholders are entitled to receive a mandatory minimum dividend of 25% of annual adjusted net income under Brazilian GAAP, once declared at the annual stockholders' meeting. In the case of preferred stockholders, this dividend cannot be less than 6% of the preferred capital as stated in the statutory accounting records or, if greater, 3% of the Brazilian GAAP equity value per share.

In October 2009 the Board of Directors approved the payment of the second tranche of the minimum dividend, and an amount of additional dividends to be distributed, totaling US\$1,500, corresponding to US\$0.28775711 per common or

preferred share in circulation.

In April 2009, we paid US\$1,250 as a first installment of the dividend to stockholders. The distribution was made in the form of dividends.

In July 2008, we issued 80,079,223 common ADS, 176,847,543 common shares, 63,506,751 preferred ADS and 100,896,048 preferred shares through a global equity offering. Our capital increased by US\$11,666, upon subscription of preferred stock of US\$4,146 corresponding to 164,402,799 shares and common stock of US\$7,520 corresponding to 256,926,766 shares. In August, 2008, we issued an additional 24,660,419 preferred shares, representing an increase of US\$628. After the closing of the operation, our capital stock increased by US\$12,294 in 2008; the transaction costs of US\$105 were recorded as a reduction of the additional paid-in capital account.

F-26

---

**Table of Contents**

Vale issued mandatory convertible notes, as follows:

	<b>Date</b>		<b>Value</b>		
	<b>Emission</b>	<b>Expiration</b>	<b>Gross</b>	<b>Net of charges</b>	<b>Coupon</b>
Tranches Rio and Rio P	June/2007	June/2010	1,880	1,869	5.50% p.a.
Tranches Vale and Vale P - 2012	July/2009	June/2012	942	934	6.75% p.a.

The notes pay a coupon quarterly and are entitled to an additional remuneration equivalent to the cash distribution paid to ADS holders. These notes were classified as a capital instrument, mainly due to the fact that neither the Company nor the holders have the option to settle the operation, whether fully or partially, with cash, and the conversion is mandatory; consequently, they were recognized as a specific component of shareholders' equity, net of financial charges.

The funds linked to future mandatory conversion, net of charges are equivalent to the maximum of common shares and preferred shares, as follows. All the shares are currently held in treasury.

	<b>Maximum amount of action</b>		<b>Value</b>	
	<b>Common</b>	<b>Preferred</b>	<b>Common</b>	<b>Preferred</b>
Tranches Rio and Rio P	56,582,040	30,295,456	1,296	584
Tranches Vale and Vale P - 2012	18,415,859	47,284,800	293	649

On October 30, 2009, we paid additional interest to holders of the mandatorily convertible notes of series RIO and series RIO P, equal to the US dollar equivalent of R\$0.857161 and R\$1.017334 per notes, respectively, and to the holders of the mandatorily convertible notes of series VALE-2012 and VALE.P-2012, equal to the US dollar equivalent of R\$1.236080 and R\$1.429662 per notes, respectively.

In April 2009 we paid to holders of the mandatorily convertible notes of series RIO and series RIO P, the US dollar equivalent of US\$0.490922 and US\$0.582658, respectively.

Brazilian law permits the payment of cash dividends only from retained earnings as stated in BR GAAP statutory records and such payments are made in Brazilian Reais. Pursuant to the Company's statutory books, undistributed retained earnings at December 31, 2009, totaled US\$26,150, comprising the unrealized income and expansion reserves, which could be freely transferred to retained earnings and paid as dividends, if approved by the stockholders, after deducting the minimum annual mandatory dividend.

No withholding tax is payable on distribution of profits earned except for distributions in the form of interest attributed to stockholders' equity (Note 3 (p)).

**Table of Contents**

Brazilian laws and our bylaws require that certain appropriations be made from retained earnings to reserve accounts on an annual basis, all determined in accordance with amounts stated in the statutory accounting records, as detailed below:

	<b>Year ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Undistributed retained earnings</b>			
<b>Unrealized income reserve</b>			
Beginning of the period	45	73	57
Transfer from (to) retained earnings	(6)	(28)	16
<b>End of the period</b>	<b>39</b>	<b>45</b>	<b>73</b>
<b>Expansion reserve</b>			
Beginning of the period	16,809	13,881	8,485
Transfer to capital stock	-	-	(3,776)
Transfer from (to) retained earnings	9,302	2,928	9,172
<b>End of the period</b>	<b>26,111</b>	<b>16,809</b>	<b>13,881</b>
<b>Legal reserve</b>			
Beginning of the period	1,448	1,310	970
Transfer to capital stock	-	-	(370)
Transfer from (to) retained earnings	790	138	710
<b>End of the period</b>	<b>2,238</b>	<b>1,448</b>	<b>1,310</b>
<b>Fiscal incentive investment reserve</b>			
Beginning of the period	38	53	43
Transfer to capital stock	-	-	(41)
Transfer from (to) retained earnings	82	(15)	51
<b>End of the period</b>	<b>120</b>	<b>38</b>	<b>53</b>
<b>Total undistributed retained earnings</b>	<b>28,508</b>	<b>18,340</b>	<b>15,317</b>

The purpose and basis of appropriation to such reserves is described below:

**Unrealized income reserve** this represents principally our share of the earnings of affiliates and joint ventures, not yet received in the form of cash dividends.

**Expansion reserve** this is a general reserve for expansion of our activities.

**Legal reserve** this reserve is a requirement for all Brazilian corporations and represents the appropriation of 5% of annual net income up to a limit of 20% of capital stock all determined under Brazilian GAAP.

**Fiscal incentive investment reserve** this reserve results from an option to designate a portion of income tax otherwise payable for investment in government approved projects and is recorded in the year following that in which the taxable income was earned. As from 2000, this reserve basically contemplates income tax incentives (Note 6).



**Table of Contents****Basic and diluted earnings per share**

Basic and diluted earnings per share amounts have been calculated as follows:

	<b>Year ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Net income attributable to Company's stockholders</b>	<b>5,349</b>	<b>13,218</b>	<b>11,825</b>
<b>Interest attributed to preferred convertible notes</b>	(58)	(46)	(16)
<b>Interest attributed to common convertible notes</b>	(93)	(96)	(37)
<b>Net income for the period adjusted</b>	<b>5,198</b>	<b>13,076</b>	<b>11,772</b>
<b>Basic and diluted earnings per share</b>			
Income available to preferred stockholders	1,967	5,027	4,552
Income available to common stockholders	3,083	7,823	7,092
Income available to convertible notes linked to preferred shares	75	78	45
Income available to convertible notes linked to common shares	73	148	83
Weighted average number of shares outstanding (thousands of shares) - preferred shares	2,030,700	1,946,454	1,889,171
Weighted average number of shares outstanding (thousands of shares) - common shares	3,181,706	3,028,817	2,943,216
Treasury preferred shares linked to mandatorily convertible notes	77,580	30,295	18,478
Treasury common shares linked to mandatorily convertible notes	74,998	56,582	34,510
<b>Total</b>	<b>5,364,984</b>	<b>5,062,148</b>	<b>4,885,375</b>
Earnings per preferred share	0.97	2.58	2.41
Earnings per common share	0.97	2.58	2.41
Earnings per convertible notes linked to preferred share(*)	1.71	4.09	3.30
Earnings per convertible notes linked to common share(*)	2.21	4.29	3.51

(\*) Basic earnings per share only, as dilution assumes conversion

If the conversion of the convertible notes had been included in the calculation of diluted earnings per share they would have generated the following dilutive effect as shown below:

	<b>Year ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Income available to preferred stockholders	2,100	5,151	4,613
Income available to common stockholders	3,249	8,067	7,212
Weighted average number of shares outstanding (thousands of shares) - preferred shares	2,108,280	1,976,749	1,907,649
	3,256,704	3,085,399	2,977,726

Weighted average number of shares outstanding (thousands of shares) - common shares

Earnings per preferred share	1.00	2.61	2.42
Earnings per common share	1.00	2.61	2.42

## 18 Pension plans

Since 1973 we sponsor a supplementary social security plan with characteristics of a defined benefit plan (the Old Plan ) covering substantially all Brazilian employees, with benefits calculated based on years of service, age, contribution salary and supplementary social security benefits. This plan is administered by Fundação Vale do Rio Doce de Seguridade Social VALIA and was funded by monthly contributions made by us and our employees, calculated based on periodic actuarial appraisals.

In May 2000, we implemented a new supplementary social security plan with characteristics of defined contribution, which complements the earnings of programmed retirements. The plan offers benefits to cover death, physical invalidity, and sickness, with defined benefit characteristics. Brazilian employees could opt to migrate to the New Plan (a Benefit Mix Plan Vale Mais) which was taken up by over 98% of our employees. The Old Plan will continue in existence, covering almost exclusively retired participants and their beneficiaries.

**Table of Contents**

Additionally we provide supplementary payments to a specific group of former Brazilian employees, in addition to the regular benefits from Valia. The plan provides postretirement health care, dental and pharmaceutical benefits.

Upon the acquisition of Inco, we assumed benefits through defined benefit pension plans that cover essentially all its employees and post retirement benefits other than pensions that also provide certain health care and life insurance benefits for retired employees.

The following information details the status of the defined benefit elements of all plans in accordance with employers disclosure about pensions and other post retirement benefits and employers accounting for defined benefit pension and other postretirement plans, as amended.

We use a measurement date of December 31 for our pension and post retirement benefit plans.

**a) Change in benefit obligation**

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
<b>Benefit obligation at beginning of year</b>	2,424	3,031	1,069	3,178	4,436	1,671
Service cost	11	43	17	11	60	25
Interest cost	313	249	88	309	245	85
Plan amendment	-	-	-	-	16	-
Benefits paid	(226)	(279)	(65)	(283)	(291)	(70)
Effect of exchange rate changes	843	555	187	(779)	(775)	(272)
Actuarial loss (gain)	296	324	135	(12)	(660)	(370)
<b>Benefit obligation at end of year</b>	<b>3,661</b>	<b>3,923</b>	<b>1,431</b>	<b>2,424</b>	<b>3,031</b>	<b>1,069</b>

**b) Change in plan assets**

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Fair value of plan assets at beginning of year	3,043	2,507	9	4,187	3,762	10
Actual return on plan assets	1,121	402	1	57	(603)	1

Employer contributions	40	155	65	41	272	70
Benefits paid	(226)	(279)	(65)	(283)	(291)	(70)
Effect of exchange rate changes	1,018	444	1	(959)	(633)	(2)
<b>Fair value of plan assets at end of year</b>	<b>4,996</b>	<b>3,229</b>	<b>11</b>	<b>3,043</b>	<b>2,507</b>	<b>9</b>

Plan assets at December 31, 2009 included US\$587 (US\$188 at December 31, 2008) and US\$69 (US\$53 at December 31, 2008) of portfolio investments in our own shares and debentures, respectively, and US\$64 (US\$44 at December 31, 2008) of shares of related parties. They also included US\$3,261 of Brazilian Federal Government securities (US\$2,472 at December 31, 2008) and US\$391 of Canada Federal Government securities (US\$347 at December 31, 2008).

### c) Funded Status and Financial Position

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Other assets	1,335	-	-	619	-	3
Current liabilities	-	62	82	-	38	64
Non-current liabilities	-	632	1,338	-	486	999
<b>Funded status</b>	<b>1,335</b>	<b>694</b>	<b>1,420</b>	<b>619</b>	<b>524</b>	<b>1,060</b>

**Table of Contents****d) Assumptions used (nominal terms)**

	<b>Brazil</b>					
	<b>As of December 31</b>					
	<b>2009</b>			<b>2008</b>		
	<b>Overfunded pension plans</b>	<b>Underfunded pension plans</b>	<b>Underfunded other benefits</b>	<b>Overfunded pension plans</b>	<b>Underfunded pension plans</b>	<b>Underfunded other benefits</b>
Discount rate	11.08% p.a.	11.08% p.a.	11.08% p.a.	11.28% p.a.	11.28% p.a.	11.28% p.a.
Expected return on plan assets	12.00% p.a.	11.50% p.a.	-	12.22% p.a.	13.00% p.a.	-
Rate of compensation increase - up to 47 years	7.64% p.a.	7.64% p.a.	-	7.12% p.a.	-	-
Rate of compensation increase - over 47 years	4.50% p.a.	4.50% p.a.	-	4.00% p.a.	-	-
Inflation	4.50% p.a.	4.50% p.a.	4.50% p.a.	4.00% p.a.	4.00% p.a.	4.00% p.a.
Health care cost trend rate	-	-	7.63% p.a.	-	-	7.12% p.a.
	<b>Foreign</b>					
	<b>As of December 31</b>					
	<b>2009</b>			<b>2008</b>		
	<b>Underfunded pension plans</b>	<b>Underfunded other benefits</b>	<b>Underfunded pension plans</b>	<b>Underfunded pension plans</b>	<b>Underfunded other benefits</b>	<b>Underfunded other benefits</b>
Discount rate	6.21% p.a.	6.20% p.a.	5.58% p.a.	7.32% p.a.	7.32% p.a.	7.32% p.a.
Expected return on plan assets	7.00% p.a.	6.23% p.a.	6.99% p.a.	7.35% p.a.	7.35% p.a.	7.35% p.a.
Rate of compensation increase - up to 47 years	4.11% p.a.	3.58% p.a.	4.12% p.a.	3.58% p.a.	3.58% p.a.	3.58% p.a.
Rate of compensation increase - over 47 years	4.11% p.a.	3.58% p.a.	4.12% p.a.	3.58% p.a.	3.58% p.a.	3.58% p.a.
Inflation	2.00% p.a.	2.00% p.a.	2.00% p.a.	2.00% p.a.	2.00% p.a.	2.00% p.a.
Health care cost trend rate	-	6.04% p.a.	-	6.19% p.a.	6.19% p.a.	6.19% p.a.

Expected returns for all plans assets are generated within the framework of a long term macroeconomic scenario provided by Tendencias Consultoria and an ALM - Asset Liability Modelling study prepared by Mercer Consulting.

## e) Pension costs

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Service cost - benefits earned during the year	11	43	17	11	60	25
Interest cost on projected benefit obligation	313	255	88	309	245	85
Expected return on assets	(431)	(202)	(1)	(515)	(253)	(5)
Amortizations and (gain) / loss	14	3	(19)	15	-	-
Net deferral	-	14	(14)	(5)	11	(2)
<b>Net periodic pension cost (credit)</b>	<b>(93)</b>	<b>113</b>	<b>71</b>	<b>(185)</b>	<b>63</b>	<b>103</b>

## f) Accumulated benefit obligation

	2009			2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Accumulated benefit obligation	3,645	3,826	1,431	2,415	2,955	1,069
Projected benefit obligation	3,661	3,923	1,431	2,424	3,031	1,069
Fair value of plan assets	(4,996)	(3,229)	(11)	(3,043)	(2,507)	(9)

## g) Impact of 1% variation in assumed health care cost trend rate

	2009		1% increase 2008		1% decrease 2008	
	Overfunded pension plans	Underfunded pension plans	Underfunded pension plans	Overfunded pension plans	Underfunded pension plans	Underfunded pension plans
Accumulated postretirement benefit obligation (APBO)		199	134	(163)	(110)	
Interest and service costs		18	18	(14)	(14)	

**Table of Contents****h) Other Cumulative Comprehensive Income (Deficit)**

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Net transition (obligation) / asset	2	-	-	(16)	-	-
Net actuarial (loss) / gain	79	(338)	301	(240)	(206)	402
Effect of exchange rate changes	(91)	(7)	(4)	(18)	10	3
Deferred income tax	3	111	(94)	94	83	(146)
<b>Amounts recognized in other cumulative comprehensive income (deficit)</b>	<b>(7)</b>	<b>(234)</b>	<b>203</b>	<b>(180)</b>	<b>(113)</b>	<b>259</b>

**i) Change in Other Cumulative Comprehensive Income (Deficit)**

	2009			As of December 31 2008		
	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits	Overfunded pension plans	Underfunded pension plans	Underfunded other benefits
Net transition (obligation) / asset not yet recognized in NPPC at beginning of the year	(12)	-	-	(31)	-	-
Net actuarial (loss) / gain not yet recognized in NPPC at beginning of the year	(261)	(196)	406	94	(41)	95
Deferred income tax at beginning of the year	93	83	(147)	(21)	14	(35)
<b>Effect of initial recognition of cumulative comprehensive Income (deficit)</b>	<b>(180)</b>	<b>(113)</b>	<b>259</b>	<b>42</b>	<b>(27)</b>	<b>60</b>
Amortization of net transition (obligation) / asset	14	-	-	15	-	-

Amortization of net actuarial (loss) / gain	-	5	(19)	(6)	-	-
Total net actuarial (loss) / gain arising during the year	340	(112)	(142)	(328)	(165)	307
Effect of exchange rate changes	(91)	(42)	52	(18)	10	3
Deferred income tax	(90)	28	53	115	69	(111)
<b>Total recognized in other cumulative comprehensive income (deficit)</b>	<b>(7)</b>	<b>(234)</b>	<b>203</b>	<b>(180)</b>	<b>(113)</b>	<b>259</b>

## j) Plan assets

### Brazilian Plans

The Investment Policy Statements of pension plans sponsored for Brazilian employees are based on a long term macroeconomic scenario and expected returns built by Tendências Consultoria and an ALM – Asset Liability Modeling study prepared by Mercer Consulting. An Investment Policy Statement was established for each obligation by following results of this strategic asset allocation study (ALM) in 2009.

Plans asset allocations comply with pension funds local regulation issued by CMN – Conselho Monetário Nacional (Resolução CMN 3792/09). We are allowed to invest in six different asset classes, defined as segments by the law, as follows: Fixed Income, Equity, Structured Investments (Alternative Investments and Infra-Structure Projects), International Investments, Real Estate and Loans to Participants.

The Investment Policy Statements are approved by the Board, the Executive Directors and two Investments Committees. The internal and external portfolio managers are allowed to exercise the investment discretion under the limitations imposed by the Board and the Investment Committees.

The pension fund has a risk management process with established policies that intend to identify measure and control all kinds of risks faced by our plans, such as: market, liquidity, credit, operational, systemic and legal.

### Foreign plans

The strategy for each of the pension plans sponsored by Vale Inco is based upon a combination of local practices and the specific characteristics of the pension plans in each country, including the structure of the liabilities, the risk versus reward trade-off between different asset classes and the liquidity required to meet benefit payments.



**Table of Contents****Overfunded pension plans****Brazilian Plans**

The Defined Benefit Plan (the Old Plan) has the majority of its assets allocated in fixed income, mainly in Brazilian government bonds (like TIPS) and corporate long term inflation linked bonds with the objective to reduce the asset-liability volatility. The target is 55% of the total assets. This LDI (Liability Driven Investments) strategy, when considered together with Loans to Participants segment, aims to hedge plan's liabilities against inflation risk and volatility. Other segments or asset classes have their targets, as follows: Equity 28%; Structured Investments 5%; International Investments 2%; Real estate 6% and Loans to Participants 4%. Structured Investments segment has invested only in Private Equity Funds in an amount of US\$87 and US\$67 at the end of December 31, 2009 and 2008, respectively.

The Investment Policy has the objective to achieve the adequate diversification, current income and long term capital growth through the combination of all asset classes described above to fulfill its obligations with the adequate level of risk. This plan has an average nominal return of 21.3% p.a. in dollars terms in the last 10 years.

The Vale Mais Plan (the New Plan) has obligations with characteristics of defined benefit and defined contribution plans, as mentioned. The majority of its investments is in fixed income. It was also implemented a LDI (Liability Driven Investments) strategy to reduce asset-liability volatility of the defined benefits plan's component by using inflation linked bonds (like TIPS). The target allocation is 60% in fixed income. Other segments or asset classes have their targets, as follows: Equity 24%; Structured Investments 2%; International Investments 2%; Real estate 3% and Loans to Participants 10%. Structured Investments segment has invested only in Private Equity Funds in an amount of US\$10 and US\$5 at the end of December 31, 2009 and 2008, respectively.

The Defined Contribution Vale Mais component offers three options of asset classes mix that can be chosen by participants. The options are: Fixed Income 100%; 80% Fixed Income and 20% Equities and 65% Fixed Income and 35% Equities. Equity option is an indexed-fund that has the Bovespa Index as a benchmark.

The Investment Policy Statement has the objective to achieve the adequate diversification, current income and long term capital growth through the combination of all asset classes described above to fulfill its obligations and targets with the adequate level of risk. This plan has an average nominal return of 20% p.a. in dollars terms in the last 10 years.

**- Fair value measurements by category - Overfunded Plans**

Asset by category	Total	Level 1	2009			As of December 31 2008		
			Level 2	Level 3	Total	Level 1	Level 2	Level 3
Cash and cash equivalents	1	1	-	-	1	1	-	-
Accounts Receivable	16	16	-	-	-	-	-	-
Equity securities - liquid	1,303	1,303	-	-	461	461	-	-
Equity securities - non-liquid	64	-	64	-	120	-	120	-
	143	-	143	-	151	-	151	-

Debt securities - Corporate bonds								
Debt securities - Financial Institutions	226	-	226	-	147	-	147	-
Debt securities - Government bonds	1,744	1,744	-	-	1,109	1,109	-	-
Investment funds - Fixed Income	2,037	2,037	-	-	1,361	1,361	-	-
Investment funds - Equity	577	577	-	-	220	220	-	-
Investment funds - Private Equity	97	-	-	97	71	-	-	71
Real estate	249	-	-	249	156	-	-	156
Loans to Participants	282	-	-	282	229	-	-	229
<b>Total</b>	<b>6,739</b>	<b>5,678</b>	<b>433</b>	<b>628</b>	<b>4,026</b>	<b>3,152</b>	<b>418</b>	<b>456</b>
Funds not related to risk plans	(1,743)				(983)			
Fair value of plan assets at end of year	<b>4,996</b>				<b>3,043</b>			

**Table of Contents****- Fair value measurements using significant unobservable inputs Level 3**

				As of December 31			2008	
	2009	2009		2009	2009			
	Private Equity Funds	Real State	Loans to Participants	Total	Private Equity Funds	Real State	Loans to Participants	Total
<b>Beginning of the year</b>	72	156	229	457	77	183	198	458
Actual return on plan assets	30	21	42	93	5	24	34	63
Assets sold during the year	(57)	(11)	(112)	(180)	(17)	(6)	-	(23)
Assets purchased, sales and settlements	28	29	45	102	25	-	45	70
Cumulative translations adjustment	24	54	78	156	(18)	(45)	(48)	(111)
<b>End of the year</b>	<b>97</b>	<b>249</b>	<b>282</b>	<b>628</b>	<b>72</b>	<b>156</b>	<b>229</b>	<b>457</b>

The return target for private equity assets in 2010 is 10.20%. The target allocation is 5%, ranging between 2% and 10%. These investments have a longer investment horizon and low liquidity that aim to profit from economic growth, especially in the infra-structure sector of the Brazilian economy. Usually non-liquid assets fair value is established considering: acquisition cost or book value. Some private equity funds may, alternatively, apply the following methodologies: discounted cash flows analysis or analysis based on multiples.

The return target for loans to participants in 2010 is 11,90%. The fair value pricing of these assets includes provisions for non-paid loans, according to the local pension fund regulation.

The return target for real estate assets in 2010 is 9,90%. Fair value for these assets is considered book value. The pension fund hires companies specialized in real estate valuation that do not act in the market as brokers. All valuation techniques follow the local regulation.

## **Underfunded pension plans**

### **Brazilian Obligation**

This obligation has an exclusive allocation in fixed income. It was also used a LDI (Liability Driven Investments) strategy for this plan. Most of the resources were invested in long term government and corporate inflation linked bonds with the objective to minimize asset-liability volatility and reduce inflation risk.

The Investment Policy Statement has the objective to achieve the adequate diversification, current income and long term capital growth through the combination of all asset classes described above to fulfill its obligations with the adequate level of risk. This obligation has an average nominal return of 22.8% p.a. in dollars terms in the last 8 years.

### **Foreign plans**

For all pension plans except PT Inco, this has resulted in a target asset allocation of 60% in equity investments and 40% in fixed income investments, with all securities being traded in the public markets. Fixed income investments are in domestic bonds for each plan's market and involve a mixture of government and corporate bonds. Equity investments are primarily global in nature and involve a mixture of large, mid and small capitalization companies with a modest explicit investment in domestic equities for each plan. The Canadian plans also use a currency hedging strategy (each developed currency's exposure is 50% hedged) due to the large exposure to foreign securities. For PT Inco, the target allocation is 20% equity investment and the remainder in fixed income, with the vast majority of these investments being made within the domestic market.

**Table of Contents****- Fair value measurements by category - Underfunded Pension Plans**

Asset by category	2009			As of December 31 2008		
	Total	Level 1	Level 2	Total	Level 1	Level 2
Cash and cash equivalents	33	12	21	36	14	22
Equity securities - liquid	1,347	1,347	-	-	-	-
Equity securities - non-liquid	-	-	-	836	836	-
Debt securities - Corporate bonds	12	-	12	-	-	-
Debt securities - Financial Institutions	19	-	19	10	1	9
Debt securities - Government bonds	445	50	395	13	-	13
Investment funds - Fixed Income	988	287	701	391	41	350
Investment funds - Equity	409	87	322	839	179	660
Investment funds - Private Equity	-	-	-	404	62	342
<b>Total</b>	<b>3,253</b>	<b>1,783</b>	<b>1,470</b>	<b>2,529</b>	<b>1,133</b>	<b>1,396</b>
Funds not related to risk plans	(24)			(22)		
Fair value of plan assets at end of year	<b>3,229</b>			<b>2,507</b>		

**Underfunded other benefits****- Fair value measurements by category - Other Benefits**

Asset by category	2009		As of December 31 2008	
	Total	Level 1	Total	Level 1
Cash	11	11	9	9
<b>Total</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>9</b>

**k) Cash flows contributions**

Employer contributions expected for 2010 are US\$240.

**l) Estimated future benefit payments**

The benefit payments, which reflect future service, are expected to be made as follows:

	<b>As of December 31, 2009</b>			
	<b>Overfunded pension plans</b>	<b>Underfunded pension plans</b>	<b>Underfunded other benefits</b>	<b>Total</b>
2010	277	311	82	670
2011	280	313	87	680
2012	282	311	91	684
2013	284	308	94	686
2014	285	302	97	684
2015 and thereafter	1,434	1,454	479	3,367

### **19 Long-term incentive compensation plan**

Since 2008, a long-term incentive compensation plan, was implemented.

Under the terms of the plan, the participants, restricted to certain executives, may elect to allocate part of their annual bonus to the plan. The allocation is applied to purchase preferred shares of Vale, through a predefined financial institution, at market conditions and with no benefit provided by Vale.

The shares purchased by each executive are unrestricted and may, at the participant's discretion, be sold at any time. However, the shares must be held for a three-year period and the executive must be continually employed by Vale during that period. The participant then becomes entitled to receive from Vale a cash payment equivalent to the total amount of shares held, based on their market rates. The total shares linked to the plan at December 31, 2009 and 2008, were 1,809,117 and 711,005, respectively.

**Table of Contents**

Additionally, as a long-term incentive certain eligible executives have the opportunity to receive at the end of the three-year cycle a certain number of shares at market rates, based on an evaluation of their career and performance factors measured as an indicator of total return to stockholders.

We account for the compensation cost provided to our executives under this long-term incentive compensation plan, following the requirements Accounting for Stock-Based Compensation. Liabilities are measured at each reporting date at fair value, based on market rates. Compensation costs incurred are recognized, over the defined three-year vesting period. At December 31, 2009 and 2008, we recognized a liability of US\$72 and US\$7, respectively, through the Statement of Income.

**20 Commitments and contingencies**

**a)** In connection with a tax-advantaged lease financing arrangement sponsored by the French Government, we provided certain guarantees on behalf of Vale Inco New Caledônia (VINC) pursuant to which we guaranteed payments due from VINC of up to a maximum amount of US\$100 ( Maximum Amount ) in connection with an indemnity. We also provided an additional guarantee covering the payments due from VINC of (a) amounts exceeding the Maximum Amount in connection with the indemnity and (b) certain other amounts payable by VINC under a lease agreement covering certain assets.

During the second quarter two new bank guarantees totaling US\$62 ( 43 ) were established by us on behalf of VINC in favour of the South Province of New Caledonia in order to guarantee the performance of VINC with respect to certain environmental obligations in relation to the metallurgical plant and the Kwe West residue storage facility.

Sumic Nickel Netherlands B.V., a 21% stockholder of VINC, has a put option to sell us 25%, 50%, or 100% of the shares they own of VINC. The put option can be exercised if the defined cost of the nickel-cobalt development project exceeds a value agreed between the shareholders at project rates and an agreement cannot be reached on how to proceed with the project.

We provided a guarantee covering certain termination payments due from VINC to the supplier under an electricity supply agreement ( ESA ) entered into in October 2004 for the VINC project. The amount of the termination payments guaranteed depends upon a number of factors, including whether any termination of the ESA is a result of a default by VINC and the date on which an early termination of the ESA were to occur. If VINC defaults under the ESA prior to the anticipated start date for supply of electricity to the project, the termination payment, which currently is at its maximum, would be US\$209 ( 145 ). Once the supply of electricity under the ESA to the project begins, the guaranteed amounts will decrease over the life of the ESA.

In February 2009, we and our subsidiary, Vale Inco Newfoundland and Labrador Limited ( VINL ), entered into a fourth amendment to the Voisey s Bay Development agreement with the Government of Newfoundland and Labrador, Canada, that permitted VINL to ship up to 55,000 metric tons of nickel concentrate from the Voisey s Bay area mines. As part of the agreement, VINL agreed to provide the Government of Newfoundland and Labrador financial assurance in the form of letters of credit each in the amount of Canadian US\$17 (CAD\$16) for each shipment of nickel concentrate shipped out of the province from January 1, 2009 to August 31, 2009. The amount of this financial assurance was Canadian US\$118 (CAD\$112) based on seven shipments of nickel concentrate and as of December 31, 2009, US\$65 (CAD\$62) remains outstanding.

As of December 31, 2009, there was an additional US\$154 of letters of credit issued and outstanding as US\$47 in additional bank guarantees. These are associated with environmental reclamation and other operating associated items such as insurance, electricity commitments and import and export duties.

**b)** We and our subsidiaries are defendants in numerous legal actions in the normal course of business. Based on the advice of our legal counsel, management believes that the amounts recognized are sufficient to cover probable losses in connection with such actions.

F-36

---



**Table of Contents**

The provision for contingencies and the related judicial deposits are composed as follows:

	<b>2009</b>		<b>2008</b>
	<b>Provision for contingencies</b>	<b>Judicial deposits</b>	<b>Provision for contingencies Judicial deposits</b>
Labor and social security claims	657	657	458 378
Civil claims	582	307	386 242
Tax - related actions	489	175	828 518
Others	35	4	13 3
	<b>1,763</b>	<b>1,143</b>	<b>1,685</b> <b>1,141</b>

Labor and social security related actions principally comprise claims by Brazilian employees and former employees for (i) payment of time spent traveling from their residence to the work-place, (ii) additional health and safety related payments and (iii) various other matters, often in connection with disputes about the amount of indemnities paid upon dismissal and the one-third extra holiday pay.

Civil actions principally related to claims made against us by contractors in Brazil in connection with losses alleged to have been incurred by them as a result of various past Government economic plans during which full inflation indexation of contracts was not permitted, as well, as for accidents and land appropriation disputes.

Tax tax-related actions principally comprise challenges initiated by us, on certain taxes on revenues and uncertain tax positions. We continue to vigorously pursue our interests in all the above actions but recognize that we probably will incur some losses in the final instance, for which we have made provisions.

Judicial deposits are made by us following the court requirements, in order to be entitled to either initiate or continue a legal action. These amounts are released to us, upon receipt of a final favorable outcome from the legal action; in the case of an unfavorable outcome, the deposits are transferred to the prevailing party.

Contingencies settled during the years ended December 31, 2009, 2008 and 2007, totaled US\$236, US\$148 and US\$331, respectively. Provisions recognized in the years ended December 31, 2009, 2008 and 2007, totaled US\$294, US\$213 and US\$364, respectively, classified as other operating expenses.

In addition to the contingencies for which we have made provisions we are defendants in claims where in our opinion, and based on the advice of our legal counsel, the likelihood of loss is possible but not probable, in the total amount of US\$4,190 at December 31, 2009, and for which no provision has been made (December 31, 2008 US\$2,476).

c) At the time of our privatization in 1997, the Company issued debentures to its then-existing stockholders, including the Brazilian Government. The terms of the debentures, were set to ensure that the pre-privatization stockholders, including the Brazilian Government would participate in possible future financial benefits that could be obtained from exploiting certain mineral resources.

A total of 388,559,056 debentures were issued at a par value of R\$0.01 (one cent), whose value will be restated in accordance with the variation in the General Market Price Index (IGP-M), as set forth in the Issue Deed.

The debentures holders have the right to receive premiums, paid semiannually, equivalent to a percentage of net revenues from specific mine resources as set forth in the indenture.

In September and April 2009 we paid remuneration on these debentures of US\$4 and US\$3, respectively. During 2009, we paid a total of US\$7.

**d)** We are committed under a take-or-pay agreement to purchase approximately 30,425 thousand metric tons of bauxite from Mineração Rio do Norte S.A. MRN at a formula driven price, calculated based on the current London Metal Exchange LME quotation for aluminum. Based on a market price of US\$28.71 per metric ton as of

**Table of Contents**

December 31, 2009, this arrangement represented the following total commitment per metric ton as of December 31, 2009:

2010	195
2011	166
2012	169
2013	172
2014	172
	<b>874</b>

**e) Description of Leasing Arrangements**

Part of our railroad operations include leased facilities. The 30-year lease, renewable for a further 30 years, expires in August, 2026 and is classified as an operating lease. At the end of the lease term, we are required to return the concession and the lease assets. In most cases, management expects that in the normal course of business, leases will be renewed.

The following is a schedule by year of future minimum rental payments required under the railroad operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2009.

Year ended December 31	
2010	80
2011	80
2012	80
2013	80
2014 thereafter	1,018
<b>Total minimum payments required</b>	<b>1,338</b>

The total expenses of operating leases for the years ended December 31, 2009, 2008 and 2007 was US\$80, US\$53 and US\$62, respectively.

During 2008, we entered into operating lease agreements with our joint ventures Nibrasco, Itabrasco and Kobrasco, under which we leased four pellet plants. The lease terms are from 5 to 30 years.

The following is a schedule by year of future minimum rental payments required under the pellet plants operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2009:

Year ended December 31	
2010	114
Table of Contents	363

2011	114
2012	114
2013	114
2014 thereafter	1,313
<b>Total</b>	<b>1,769</b>

The total expenses of operating leases for the years ended December 31, 2009 and 2008 was US\$114 and US\$49, respectively.

**f) Assets retirement obligations**

We use various judgments and assumptions when measuring our asset retirement obligations.

Changes in circumstances, law or technology may affect our estimates and we periodically review the amounts accrued and adjust them as necessary. Our accruals do not reflect unasserted claims because we are currently not aware of any such issues. Also the amounts provided are not reduced by any potential recoveries under cost sharing, insurance or indemnification arrangements because such recoveries are considered uncertain.

**Table of Contents**

The changes in the provisions for asset retirement obligations are as follows:

		<b>Year ended December 31,</b>	
	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b>Beginning of period</b>	<b>887</b>	<b>975</b>	<b>676</b>
Accretion expense	75	164	84
Liabilities settled in the current period	(46)	(7)	(15)
Revisions in estimated cash flows	(23)	(47)	83
Cumulative translation adjustment	223	(198)	147
<b>End of period</b>	<b>1,116</b>	<b>887</b>	<b>975</b>
Current liabilities	89	48	64
Non-current liabilities	1,027	839	911
<b>Total</b>	<b>1,116</b>	<b>887</b>	<b>975</b>

**21 Other expenses**

The line Other operating expenses totaled US\$1,522 in 2009 (US\$1,254 in 2008). The expenses of approximately US\$880 related to idle capacity and stoppage of operations during the downturn period in the economy is the most significant item recorded in 2009.

**22 Fair value disclosure of financial assets and liabilities**

The Financial Accounting Standards Board, through Accounting Standards Codification and Accounting Standards Updates, define fair value, set out a framework for measuring fair value, which refers to valuation concepts and practices and require certain disclosures about fair value measurements.

**a) Measurements**

The pronouncements define fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. In determining fair value, the Company uses various methods including market, income and cost approaches. Based on these approaches, the Company often utilizes certain assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and or the risks inherent in the inputs to the valuation technique.

These inputs can be readily observable, market corroborated, or generally unobservable inputs. The Company utilizes techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Under this

standard, those inputs used to measure the fair value are required to be classified on three levels. Based on the characteristics of the inputs used in valuation techniques the Company is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value are classified and disclosed as follows:

**Level 1** Unadjusted quoted prices on an active, liquid and visible market for identical assets or liabilities that are accessible at the measurement date;

**Level 2** Quoted prices for identical or similar assets or liabilities on active markets, inputs other than quoted prices that are observable, either directly or indirectly, for the term of the asset or liability;

**Level 3** Assets and liabilities, which quoted prices, do not exist, or those prices or valuation techniques are supported by little or no market activity, unobservable or illiquid. At this point fair market valuation becomes highly subjective.

**Table of Contents****b) Measurements on a recurring basis**

The description of the valuation methodologies used for recurring assets and liabilities measured at fair value in the Company's Consolidated Balance Sheet at December 31, 2009 and 2008 are summarized below:

**Available-for-sale securities**

They are securities that are not classified either as held-for-trading or as held-to-maturity for strategic reasons and have readily available market prices. We evaluate the carrying value of some of our investments in relation to publicly quoted market prices when available. When there is no market value, we use inputs other than quoted prices.

**Derivatives**

The market approach is used for the swaps to estimate the fair value discounting their cash flows using the interest rate of the currency they are denominated. Also for the commodities contracts, since the fair value is computed by using forward curves for each commodities.

**Other Financial Liabilities**

Comprise stockholder's debentures, which have their fair value measured by the market approach method, and their reference price is available on the secondary market.

The tables below present the balances of assets and liabilities measured at fair value on a recurring basis as follows:

	<b>As of December 31, 2009</b>			
	<b>Carry amount</b>	<b>Fair value</b>	<b>Level 1</b>	<b>Level 2</b>
Available-for-sale securities	17	17	17	-
Unrealized gain on derivatives	832	832	-	832
Other financial liabilities	(750)	(750)	-	(750)

	<b>As of December 31, 2008</b>			
	<b>Carry amount</b>	<b>Fair value</b>	<b>Level 1</b>	<b>Level 2</b>
Available-for-sale securities	639	639	196	443
Unrealized losses on derivatives	(539)	(539)	-	(539)
Other financial liabilities	(380)	(380)	-	(380)

**c) Measurements on a non-recurring basis**

The Company also has assets under certain conditions that are subject to measurement at fair value on a non-recurring basis. These assets include goodwill and intangible assets. During the year ended December 31, 2009 we have not recognized any additional impairment losses for those items.

**d) Financial Instruments****Long-term debt**

The valuation method used to estimate the fair value of our debt is the market approach for the contracts that are quoted on the secondary market, such as bonds and debentures. The fair value of both fixed and floating rate debt is determined by discounting future cash flows of LIBOR and Vale's bond curves (income approach).

**Time deposits**

The method used is the income approach, through the prices available on the active market. The fair value is close to the carrying amount due to the short-term maturities of the instruments.

F-40

---



**Table of Contents**

Our long-term debt is reported at amortized cost, and the income of time deposits is accrued monthly according to the contract rate, however its estimated fair value measurement is disclosed as follows:

	<b>As of December 31, 2009</b>			
	<b>Carry amount</b>	<b>Fair value</b>	<b>Level 1</b>	<b>Level 2</b>
Time deposits	3,747	3,747	-	3,747
Long-term debt (less interests)(*)	(22,544)	(23,344)	(12,424)	(10,920)
(*) Less accrued charges US\$287				

	<b>As of December 31, 2008</b>			
	<b>Carry amount</b>	<b>Fair value</b>	<b>Level 1</b>	<b>Level 2</b>
Time deposits	2,308	2,308	-	2,308
Long-term debt (less interests)(*)	(17,857)	(16,635)	(7,833)	(8,802)
(*) Less accrued charges US\$311				

**23 Segment and geographical information**

We adopt disclosures about segments of an enterprise and related information with respect to the information we present about our operating segments. The standard introduced a management approach concept for reporting segment information, whereby such information is required to be reported on the basis that the chief decision-maker uses internally for evaluating segment performance and deciding how to allocate resources to segments. We analyze our segment information on an aggregated and disaggregated basis as follows:

**Ferrous products** comprises iron ore mining and pellet production, as well as our Brazilian Northern and Southern transportation systems, including railroads, ports and terminals, as they pertain to mining operations. Manganese mining and ferroalloys are also included in this segment.

**Non-ferrous** comprises the production of non-ferrous minerals, including nickel (co-products and by-products), potash, kaolin, copper and aluminum - comprises aluminum trading activities, alumina refining and aluminum metal smelting and investments in joint ventures and affiliates engaged in bauxite mining.

**Logistics** comprises our transportation systems as they pertain to the operation of our ships, ports and railroads for third-party cargos.

**Others** comprises our investments in joint ventures and affiliates engaged in other businesses.

Information presented to senior management with respect to the performance of each segment is generally derived directly from the accounting records maintained in accordance with accounting practices adopted in Brazil together with certain minor inter-segment allocations.

**Table of Contents**

Consolidated net income and principal assets are reconciled as follows:

**Results by segment before eliminations (aggregated)**

2009						2008				
Logistic	Others	Elimination	Consolidated	Ferrous	(* Non ferrous)	Logistic	Others	Elimination	Consolidated	Ferrous
67	562	(12,152)	20,284	33,369	13,668	51	588	(15,842)	31,834	21,126
1,101	389	(762)	3,655	4,342	1,341	1,640	234	(882)	6,675	3,865
(876)	(916)	12,914	(14,179)	(24,143)	(9,786)	(1,097)	(617)	16,724	(18,919)	(16,882)
(57)	(479)	-	(981)	(338)	(380)	(101)	(266)	-	(1,085)	(175)
(126)	(67)	-	(2,722)	(1,021)	(1,623)	(128)	(35)	-	(2,807)	(917)
-	-	-	-	-	(950)	-	-	-	(950)	-
<b>109</b>	<b>(511)</b>	<b>-</b>	<b>6,057</b>	<b>12,209</b>	<b>2,270</b>	<b>365</b>	<b>(96)</b>	<b>-</b>	<b>14,748</b>	<b>7,017</b>
8	711	(2,789)	381	3,048	798	10	1	(3,255)	602	2,514
(17)	(736)	2,789	(1,558)	(3,479)	(1,490)	(15)	(36)	3,255	(1,765)	(4,008)
-	-	-	1,528	(719)	(93)	-	-	-	(812)	854
(11)	68	-	675	767	(265)	(32)	(106)	-	364	2,302
-	61	-	40	-	80	-	-	-	80	-
142	31	-	433	543	24	133	94	-	794	301
(11)	4	-	(2,100)	130	(697)	23	9	-	(535)	(1,959)
-	(3)	-	(107)	(8)	(256)	-	6	-	(258)	(31)
<b>220</b>	<b>(375)</b>	<b>-</b>	<b>5,349</b>	<b>12,491</b>	<b>371</b>	<b>484</b>	<b>(128)</b>	<b>-</b>	<b>13,218</b>	<b>6,990</b>
4	57	(596)	1,252	1,805	2,215	1	-	(1,201)	2,820	1,449
-	41	(62)	832	648	2,201	1	9	(392)	2,467	432
-	43	(4,726)	4,036	11,215	4,132	26	9	(5,933)	9,449	6,823
-	33	(707)	531	1,904	394	-	154	(952)	1,500	827
-	200	(1,116)	2,412	4,516	1,893	1	245	(1,918)	4,737	2,131
63	65	(4,022)	9,003	9,743	887	21	4	(3,949)	6,706	7,570

Edgar Filing: Vale S.A. - Form 20-F

-	123	(923)	2,218	3,538	1,946	1	167	(1,497)	4,155	1,894
<b>67</b>	<b>562</b>	<b>(12,152)</b>	<b>20,284</b>	<b>33,369</b>	<b>13,668</b>	<b>51</b>	<b>588</b>	<b>(15,842)</b>	<b>31,834</b>	<b>21,126</b>
1,101	389	(762)	3,655	4,342	1,341	1,640	234	(882)	6,675	3,865
<b>1,168</b>	<b>951</b>	<b>(12,914)</b>	<b>23,939</b>	<b>37,711</b>	<b>15,009</b>	<b>1,691</b>	<b>822</b>	<b>(16,724)</b>	<b>38,509</b>	<b>24,991</b>

F-42

---

**Table of Contents****Operating segment after eliminations (disaggregated)**

As of and for the year ended Dec

		Revenue				Value added tax		Net revenues		Cost and expenses		Depreciation, depletion and amortization		Operation income		Property, plant and equipment, net and intangible assets		Addition to property, plant and equipment and intangible	
Foreign	Domestic	Total				Net	and	Net	amortization	income	intangible assets	and	intangible						
11,797	1,034	12,831	(172)	12,659	(4,957)	7,702	(1,043)	6,659	21,736	3,361									
1,015	337	1,352	(92)	1,260	(1,165)	95	(76)	19	947	84									
118	27	145	(2)	143	(103)	40	(9)	31	25	4									
190	182	372	(45)	327	(278)	49	(15)	34	261	112									
45	-	45	-	45	(63)	(18)	-	(18)	144	48									
<b>13,165</b>	<b>1,580</b>	<b>14,745</b>	<b>(311)</b>	<b>14,434</b>	<b>(6,566)</b>	<b>7,868</b>	<b>(1,143)</b>	<b>6,725</b>	<b>23,113</b>	<b>3,609</b>									
3,937	10	3,947	-	3,947	(3,292)	655	(1,016)	(361)	24,206	1,464									
-	413	413	(17)	396	(187)	209	(29)	180	159	-									
138	35	173	(9)	164	(146)	18	(34)	(16)	190	53									
597	85	682	(19)	663	(462)	201	(72)	129	4,127	558									
1,869	181	2,050	(37)	2,013	(1,969)	44	(235)	(191)	4,663	143									
<b>6,541</b>	<b>724</b>	<b>7,265</b>	<b>(82)</b>	<b>7,183</b>	<b>(6,056)</b>	<b>1,127</b>	<b>(1,386)</b>	<b>(259)</b>	<b>33,345</b>	<b>2,218</b>									
-	838	838	(137)	701	(539)	162	(97)	65	1,979	96									
-	264	264	(38)	226	(161)	65	(29)	36	1,441	106									
2	-	2	-	2	(9)	(7)	-	(7)	1,104	738									
<b>2</b>	<b>1,102</b>	<b>1,104</b>	<b>(175)</b>	<b>929</b>	<b>(709)</b>	<b>220</b>	<b>(126)</b>	<b>94</b>	<b>4,524</b>	<b>940</b>									
576	249	825	(60)	765	(1,201)	(436)	(67)	(503)	7,828	1,329									
<b>20,284</b>	<b>3,655</b>	<b>23,939</b>	<b>(628)</b>	<b>23,311</b>	<b>(14,532)</b>	<b>8,779</b>	<b>(2,722)</b>	<b>6,057</b>	<b>68,810</b>	<b>8,096</b>									

(\* Includes nickel co-products and by-products (copper, precious metals, cobalt and others).

F-43

---

Table of Contents

## Operating segment after eliminations (disaggregated)

As of and for the year end

## Revenue

Foreign	Domestic	Total	Value added tax	Net revenues	Cost and expenses	Net	Depreciation, depletion and Impairment of	Operation goodwill	income	Property, plant and equipment, net and intangible assets	in
15,102	2,673	17,775	(364)	17,411	(6,547)	10,864	(876)	-	9,988	14,595	
3,481	820	4,301	(189)	4,112	(2,394)	1,718	(112)	-	1,606	645	
221	45	266	(15)	251	(77)	174	(5)	-	169	18	
704	507	1,211	(128)	1,083	(457)	626	(22)	-	604	166	
146	-	146	-	146	(67)	79	(3)	-	76	144	
<b>19,654</b>	<b>4,045</b>	<b>23,699</b>	<b>(696)</b>	<b>23,003</b>	<b>(9,542)</b>	<b>13,461</b>	<b>(1,018)</b>	<b>-</b>	<b>12,443</b>	<b>15,568</b>	
7,785	44	7,829	-	7,829	(4,425)	3,404	(1,323)	(950)	1,131	21,729	
-	295	295	(16)	279	(120)	159	(19)	-	140	159	
167	42	209	(9)	200	(213)	(13)	(32)	-	(45)	199	
787	106	893	(22)	871	(683)	188	(77)	-	111	3,543	
2,681	361	3,042	(66)	2,976	(2,288)	688	(172)	-	516	3,831	
<b>11,420</b>	<b>848</b>	<b>12,268</b>	<b>(113)</b>	<b>12,155</b>	<b>(7,729)</b>	<b>4,426</b>	<b>(1,623)</b>	<b>(950)</b>	<b>1,853</b>	<b>29,461</b>	
-	1,303	1,303	(205)	1,098	(749)	349	(103)	-	246	1,431	
11	293	304	(39)	265	(198)	67	(26)	-	41	1,441	
-	-	-	-	-	-	-	-	-	-	374	
<b>11</b>	<b>1,596</b>	<b>1,607</b>	<b>(244)</b>	<b>1,363</b>	<b>(947)</b>	<b>416</b>	<b>(129)</b>	<b>-</b>	<b>287</b>	<b>3,246</b>	
749	186	935	(30)	905	(703)	202	(37)	-	165	1,054	
<b>31,834</b>	<b>6,675</b>	<b>38,509</b>	<b>(1,083)</b>	<b>37,426</b>	<b>(18,921)</b>	<b>18,505</b>	<b>(2,807)</b>	<b>(950)</b>	<b>14,748</b>	<b>49,329</b>	

(\* Includes nickel co-products and by-products (copper, precious metals, cobalt and others).

F-44

---

**Table of Contents****Operating segment after eliminations (disaggregated)**

As of and for the year ended Dec

		Revenue				Depreciation, depletion and amortization		Operation		Property, plant and equipment, net and intangible assets		Additions to property, plant and equipment and intangible assets	
Foreign	Domestic	Total	Value added tax	Net revenues	Cost and expenses	Net	and	income	intangible assets	and	intangible assets	and	intangible assets
9,873	2,035	11,908	(286)	11,622	(4,520)	7,102	(777)	6,325	17,031	2,491	2,491	2,491	2,491
2,151	587	2,738	(132)	2,606	(1,860)	746	(87)	659	754	9	9	9	9
48	21	69	(5)	64	(66)	(2)	(7)	(9)	79	2	2	2	2
445	274	719	(70)	649	(442)	207	(25)	182	168	2	2	2	2
81	-	81	-	81	(57)	24	(5)	19	198	3	3	3	3
<b>12,598</b>	<b>2,917</b>	<b>15,515</b>	<b>(493)</b>	<b>15,022</b>	<b>(6,945)</b>	<b>8,077</b>	<b>(901)</b>	<b>7,176</b>	<b>18,230</b>	<b>2,641</b>	<b>2,641</b>	<b>2,641</b>	<b>2,641</b>
11,664	125	11,789	-	11,789	(6,077)	5,712	(927)	4,785	23,668	2,081	2,081	2,081	2,081
-	178	178	(10)	168	(108)	60	(23)	37	218	1	1	1	1
202	36	238	(9)	229	(228)	1	(33)	(32)	295	3	3	3	3
663	139	802	(30)	772	(456)	316	(64)	252	1,841	19	19	19	19
2,418	304	2,722	(66)	2,656	(1,717)	939	(111)	828	4,448	85	85	85	85
<b>14,947</b>	<b>782</b>	<b>15,729</b>	<b>(115)</b>	<b>15,614</b>	<b>(8,586)</b>	<b>7,028</b>	<b>(1,158)</b>	<b>5,870</b>	<b>30,470</b>	<b>3,191</b>	<b>3,191</b>	<b>3,191</b>	<b>3,191</b>
-	1,220	1,220	(199)	1,021	(636)	385	(88)	297	1,735	49	49	49	49
13	254	267	(46)	221	(177)	44	(22)	22	1,371	10	10	10	10
17	21	38	(3)	35	(44)	(9)	(3)	(12)	36	1	1	1	1
<b>30</b>	<b>1,495</b>	<b>1,525</b>	<b>(248)</b>	<b>1,277</b>	<b>(857)</b>	<b>420</b>	<b>(113)</b>	<b>307</b>	<b>3,142</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
261	85	346	(17)	329	(474)	(145)	(14)	(159)	2,783	20	20	20	20
<b>27,836</b>	<b>5,279</b>	<b>33,115</b>	<b>(873)</b>	<b>32,242</b>	<b>(16,862)</b>	<b>15,380</b>	<b>(2,186)</b>	<b>13,194</b>	<b>54,625</b>	<b>6,651</b>	<b>6,651</b>	<b>6,651</b>	<b>6,651</b>



(\* Includes nickel co-products and by-products (copper, precious metals, cobalt and others).

F-45

---

**Table of Contents****24 Related party transactions**

Balances from transactions with major related parties are as follows:

	2009		As of December 31 2008	
	Assets	Liabilities	Assets	Liabilities
<b>AFFILIATED COMPANIES AND JOINT VENTURES</b>				
Companhia Hispano-Brasileira de Pelotização HISPANOBRÁS	34	34	7	34
Companhia Ítalo-Brasileira de Pelotização ITABRASCO	1	6	37	64
Companhia Nipo-Brasileira de Pelotização NIBRASCO	-	22	29	71
Companhia Coreano-Brasileira de Pelotização KOBRASCO	1	5	1	22
Baovale Mineração SA	2	22	2	20
Usinas Siderúrgicas de Minas Gerais SA USIMINAS(*)	-	-	18	-
Minas da Serra Geral SA MSG	-	26	-	13
MRS Logística SA	10	418	8	219
Mineração Rio Norte SA	-	25	8	38
Samarco Mineração SA	55	-	10	-
Teal Minerals Incorporated	84	-	-	-
Korea Nickel Corporation	11	-	38	-
Mitsui & CO, LTD	-	26	-	-
Others	24	29	32	24
	222	613	190	505
<b>Current</b>	<b>186</b>	<b>496</b>	<b>190</b>	<b>414</b>
<b>Long-term</b>	<b>36</b>	<b>117</b>	<b>-</b>	<b>91</b>

(\*) Sold in April 2009

These balances are included in the following balance sheet classifications:

	2009		As of December 31 2008	
	Assets	Liabilities	Assets	Liabilities
<b>Current assets</b>				
Accounts receivable	79	-	137	-
Loans and advances to related parties	107	-	53	-

<b>Non-current assets</b>				
Loans and advances to related parties	36	-	-	-
<b>Current liabilities</b>				
Suppliers	-	463	-	302
Loans from related parties	-	33	-	112
<b>Non-current liabilities</b>				
Long-term debt	-	117	-	91
	<b>222</b>	<b>613</b>	<b>190</b>	<b>505</b>

Income and expenses from the principal transactions and financial operations carried out with major related parties are as follows:

	<b>Year ended December 31,</b>					
	<b>2009</b>		<b>2008</b>		<b>2007</b>	
	<b>Income</b>	<b>Expense</b>	<b>Income</b>	<b>Expense</b>	<b>Income</b>	<b>Expense</b>
<b>AFFILIATED COMPANIES AND JOINT VENTURES</b>						
Companhia Nipo-Brasileira de Pelotização NIBRASCO	29	47	105	393	386	328
Samarco Mineração SA	97	-	259	-	117	-
Companhia Ítalo-Brasileira de Pelotização ITABRASCO	-	18	240	163	233	163
Companhia Hispano-Brasileira de Pelotização HISPANOBRÁS	85	75	342	378	247	195
Companhia Coreano-Brasileira de Pelotização KOBRASCO	-	29	101	234	220	270
Usinas Siderúrgicas de Minas Gerais SA USIMINAS(*)	46	-	651	-	442	-
Mineração Rio Norte SA	-	210	-	249	-	232
MRS Logística SA	12	484	9	829	17	593
Others	19	29	34	34	30	29
	<b>288</b>	<b>892</b>	<b>1,741</b>	<b>2,280</b>	<b>1,692</b>	<b>1,810</b>

(\*) Sold in April 2009.

**Table of Contents**

These amounts are included in the following statement of income line items:

	<b>Year ended December 31,</b>					
	<b>2009</b>		<b>2008</b>		<b>2007</b>	
	<b>Income</b>	<b>Expense</b>	<b>Income</b>	<b>Expense</b>	<b>Income</b>	<b>Expense</b>
Sales / Cost of iron ore and pellets	233	193	1,698	1,369	1,649	960
Revenues / expense from logistic services	26	457	25	624	17	593
Sales / Cost of aluminum products	-	210	-	249	-	232
Financial income/expenses	29	32	18	38	26	24
Others	-	-	-	-	-	1
	<b>288</b>	<b>892</b>	<b>1,741</b>	<b>2,280</b>	<b>1,692</b>	<b>1,810</b>

Additionally we have loans payable to Banco Nacional de Desenvolvimento Social and BNDES Participações S.A in the amounts of US\$1,691 and US\$662 respectively, accruing interest at market rates, which fall due through 2029. The operations generated interest expenses of US\$94. We also maintained cash equivalent balances with Banco Bradesco S.A. in the amount of US\$53 as of December 31, 2009. The effect of these operations in results was US\$39.

**25 Derivative financial instruments****Risk management policy**

Vale's risk management strategy encompasses an enterprise risk management approach where we evaluate not only market risk impacts on the business, but also the impacts arising from credit and operating risks.

An enterprise wide risk management approach is considered by us to be mandatory for Vale as traditional market risk measures, such as VaR (Value at Risk), are not sufficient to evaluate the group exposures since our main goal is to avoid a possible lack of cash to fulfill our future obligations and needs.

We also consider the correlations between different market risk factors when evaluating our exposures. By doing so, we are able to evaluate the net impact on our cash flows from all main market variables. Using this framework we also identified a natural diversification of products and currencies in our portfolio. This diversification benefit implies in a natural reduction of the overall risk of the Company. Additionally, we are constantly working to implement risk mitigation strategies that significantly contribute to reduce the volatility in our cash flows beyond the levels initially observed and to acceptable levels of risk.

Vale considers that the effective management of risk is a key objective to support its growth strategy and financial flexibility. The risk reduction on Vale's future cash flows contributes to a better perception of the Company's credit quality, improving its ability to access different markets. As a commitment to the risk management strategy, the Board of Directors has established an enterprise-wide risk management policy and a risk management committee.

The risk management policy determines that Vale should evaluate regularly its cash flow risks and potential risk mitigation strategies. Whenever considered necessary, mitigation strategies should be put in place to reduce cash flow volatility. The executive board is responsible for the evaluation and approval of long-term risk mitigation strategies recommended by the risk management committee.

The risk management committee assists our executive officers in overseeing and reviewing our enterprise risk management activities including the principles, policies, process, procedures and instruments employed to manage risk. The risk management committee reports periodically to the executive board on how risks have been monitored, what are the most important risks we are exposed to and their impact on cash flows.

The risk management policy and the risk management procedures, that complement the normative of risk management governance model, explicitly prohibit speculative transactions with derivatives and require the diversification of operations and counterparties.

Besides the risk management governance model, Vale has put in place a well defined corporate governance structure. The recommendation and execution of the derivative transactions are implemented by different and independent areas. It is the responsibility of the risk management department to define and propose to the risk management committee market risk mitigation strategies consistent with Vale's and its wholly owned subsidiaries corporate strategy. It is the responsibility of the finance department the execution of the risk mitigation strategies

**Table of Contents**

through the use of derivatives. The independence of the areas guarantees an effective control on these operations.

The consolidated market risk exposure and the portfolio of derivatives are measured monthly and monitored in order to evaluate the financial results and market risk impacts on our cash flow, as well as to guarantee that the initial goals will be achieved. The mark-to-market of the derivatives portfolio is reported weekly to management.

Considering the nature of Vale's business and operations, the main market risk factors which the Company is exposed are:

Interest rates;

Foreign exchange; and

Product prices and input costs

**Foreign exchange and interest rate risk**

Vale's cash flows are exposed to volatility of several different currencies. While most of our product prices are indexed to the US dollars, most of our costs, disbursements and investments are indexed to currencies other than the US dollar, mainly the Brazilian Real and Canadian dollar.

Derivative instruments may be used to reduce Vale's potential cash flow volatility arising from the currency mismatch between our debt and our revenues. Vale's foreign exchange and interest rate derivative portfolio consists, basically, of interest rate swaps to convert floating cash flows in Brazilian Reais to fixed or floating US dollar cash flows, without any leverage.

Vale is also exposed to interest rate risks on loans and financings. Our floating rate debt consists mainly of loans including export pre-payments, commercial banks and multilateral organizations loans. In general, our US dollar floating rate debt is subject to changes in the LIBOR (London Interbank Offer Rate in US dollars). To mitigate the impact of the interest rate volatility on its cash flows, Vale takes advantage of natural hedges resulting from the correlation of metal prices and US dollar floating rates. When natural hedges are not present, we may opt to look for the same effect by using financial instruments.

Our Brazilian Real denominated debt subject to floating interest rates are debentures, loans obtained from Banco Nacional de Desenvolvimento Econômico e Social (BNDES) and property and services acquisition financing in the Brazilian market. These debts are mainly linked to CDI and TJLP.

The swap transactions have similar settlement dates to the debt interest and principal payment dates, taking into account the liquidity restrictions of the market. At each settlement date, the results on the swap transactions partially offset the impact of the US dollar / Brazilian Real exchange rate in our obligations, contributing to a stable flow of cash disbursements in US dollars for interest and/or principal payment of our Brazilian Real denominated debt.

In the event of an appreciation (depreciation) of the Brazilian Real against the US dollar, the negative (positive) impact on our Brazilian Real denominated debt obligations (interest and/or principal payment) measured in US dollars will be partially offset by a positive (negative) effect from any existing swap transaction, regardless of the US dollar / Brazilian Real exchange rate on the payment date.

We have other exposures associated with our outstanding debt portfolio. In order to reduce cash flow volatility associated with a financing from KFW (Kreditanstalt Für Wiederaufbau) indexed to Euribor, Vale entered into a swap contract where cash flows in Euros are converted into cash flows in US dollars.

In order to reduce the cash flows volatility associated with the foreign exchange exposure from coal fixed price sales, Vale purchased forward Australian dollars.

**Product price risk**

Vale is also exposed to several market risks associated with global commodities price volatilities.

Currently, our derivative transactions include nickel, aluminum, bunker oil and maritime freight (FFA) derivatives and all have the same purpose of mitigating Vale's cash flow volatility.

**Table of Contents**

**Nickel** The Company has the following derivative instruments in this category:

Strategic derivative program In order to protect our cash flows in 2009 and 2010, we entered into derivative transactions where we fixed the prices of some of our nickel sales during the period.

Fixed price sales program we use to enter into nickel future contracts on the London Metal Exchange (LME) with the purpose of maintaining our exposure to nickel price variation, regarding the fact that, in some cases, the commodity is sold at a fixed price to some customers. This program was interrupted after the decision of the strategic derivative program.

Nickel purchase program Vale has also sold nickel futures on the LME, in order to minimize the risk of mismatch between the pricing on the costs of intermediate products and finished goods.

**Aluminum** in order to protect our cash flow in 2009 and 2010, we entered into derivatives transactions where we fixed the prices of some of our aluminum sales during the period.

**Bunker Oil** In order to reduce the impact of bunker oil price fluctuation on Vale's freight hiring and consequently on Vale's cash flow, Vale implemented a derivative program that consists of forward purchases and swaps.

**Maritime Freight** In order to reduce the impact of freight price fluctuations on the Company's cash flows, Vale implemented a derivative program that consists of purchasing Forward Freight Agreements (FFA).

**Embedded derivatives** In addition to the contracts mentioned above, Vale Inco Ltd., Vale's wholly-owned subsidiary, has nickel concentrate and raw materials purchase agreements, where there are provisions based on the movement of nickel and copper prices. These provisions are considered embedded derivatives. There is also an embedded derivative related to energy purchase in our subsidiary Albras on which there is a premium that can be charged based on the movement of aluminum prices.

Under the standard Accounting for Derivative Financial Instruments and Hedging Activities, all derivatives, whether designated in hedging relationships or not, are required to be recorded in the balance sheet at fair value and the gain or loss in fair value is included in current earnings, unless if qualified as hedge accounting. A derivative must be designated in a hedging relationship in order to qualify for hedge accounting. These requirements include a determination of what portions of hedges are deemed to be effective versus ineffective. In general, a hedging relationship is effective when a change in the fair value of the derivative is offset by an equal and opposite change in the fair value of the underlying hedged item. In accordance with these requirements, effectiveness tests are performed in order to assess effectiveness and quantify ineffectiveness for all designated hedges.

At December 31, 2009, we had outstanding cash flow hedges. A cash flow hedge is a hedge of the exposure to variability in expected future cash flows that is attributable to a particular risk such as a forecasted purchase or sale. If a derivative is designated as a cash flow hedge, the effective portions of the changes in the fair value of the derivative are recorded in other comprehensive income and are recognized in earnings when the hedged item affects earnings. Ineffective portions of changes in the fair value of the derivatives designated as hedges are recognized in earnings. If a portion of a derivative contract is excluded for purposes of effectiveness testing, such as time value, the value of such excluded portion is included in earnings.





**Table of Contents**

The assets and liabilities balances of derivatives measured at fair value and the effects of their recognition are shown in the following tables:

	Assets				Liabilities	
	As of December 31 2009		2008		As of December 31 2009	
	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term
<b><u>Derivatives not designated as hedge</u></b>						
<b>Foreign exchange and interest rate risk</b>						
CDI & TJLP vs. floating & fixed swap	-	794	-	-	-	(561)
USD floating rate vs. fixed USD rate swap	-	-	-	(7)	(1)	(14)
EURO floating rate vs. USD floating rate swap	-	1	2	-	-	-
AUD floating rate vs. fixed USD rate swap	-	9	-	-	-	-
	-	<b>804</b>	<b>2</b>	<b>(7)</b>	<b>(1)</b>	<b>(575)</b>
<b>Commodities price risk</b>						
<b>Nickel</b>						
Fixed price program	12	2	-	(3)	(8)	(50)
Purchase program	-	-	-	-	-	(7)
Strategic program	-	-	-	(32)	-	-
Aluminium	-	-	-	(16)	-	-
Bunker Oil Hedge	49	-	-	-	-	-
Maritime Freight Hiring Protection Program	29	-	-	-	-	-
	<b>90</b>	<b>2</b>	<b>-</b>	<b>(51)</b>	<b>(8)</b>	<b>(57)</b>
<b>Embedded derivatives:</b>						
For nickel fixed price sale	-	-	69	-	-	-
Customer raw material contracts	-	-	22	-	-	-
Natural gas hedge	-	-	-	-	-	(2)
	-	-	<b>91</b>	<b>-</b>	<b>-</b>	<b>(2)</b>
<b><u>Derivatives designated as hedge</u></b>						
Foreign exchange cash flow hedge	15	59	-	-	-	-
Aluminium	-	-	-	(71)	-	-
	<b>15</b>	<b>59</b>	<b>-</b>	<b>(71)</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>105</b>	<b>865</b>	<b>93</b>	<b>(129)</b>	<b>(9)</b>	<b>(634)</b>



**Table of Contents**

The following table presents the effects of derivatives for the years ended:

	<b>Amount of gain or (loss) recognized in financial income</b>			<b>Financial settlement</b>			<b>Amount of gain or (loss) recognized in OCI</b>		
	<b>(expense)</b>			<b>Year ended December</b>			<b>Year ended December</b>		
	<b>Year ended December 31, 2009</b>	<b>2008</b>	<b>2007</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>
<b><u>Derivatives not designated as hedge</u></b>									
<b>Foreign exchange and interest rate risk</b>									
Swap BRL denominated Brazilian payroll into USD	-	82	-	-	(198)	-	-	-	-
CDI & TJLP vs. USD fixed and floating rate swap	1,598	(34)	934	(243)	(199)	(293)	-	-	-
EURO floating rate vs. USD floating rate swap	-	(684)	-	(1)	1	-	-	-	-
USD floating rate vs. USD fixed rate swap	(2)	7	-	8	-	-	-	-	-
AUD floating rate vs. fixed USD rate swap	14	-	-	(5)	-	-	-	-	-
	<b>1,610</b>	<b>(629)</b>	<b>934</b>	<b>(241)</b>	<b>(396)</b>	<b>(293)</b>	-	-	-
<b>Commodities price risk</b>									
<b>Nickel</b>									
Fixed price program	40	(102)	63	22	102	(38)	-	-	-

Edgar Filing: Vale S.A. - Form 20-F

Purchase program	(35)	21	-	57	(54)	-	-	-	-
Strategic program	(95)	(3)	-	73	-	-	-	-	-
Purchased scrap protection program	-	(23)	-	-	202	-	-	-	-
Strategic hedging program	-	(6)	(129)	-	(30)	240	-	-	-
<b>Platinum</b>	-	(5)	(17)	-	26	13	-	-	-
<b>Gold</b>	-	(30)	(16)	-	42	33	-	-	-
<b>Natural gas</b>	(4)	4	(9)	6	-	3	-	-	-
<b>Aluminum</b>	-	(68)	46	-	122	112	-	-	-
<b>Maritime Freight Hiring Protection Program</b>	66	-	-	(37)	-	-	-	-	-
<b>Bunker Oil Hedge</b>	50	(17)	-	(16)	-	-	-	-	-
	<b>22</b>	<b>(229)</b>	<b>(62)</b>	<b>105</b>	<b>410</b>	<b>363</b>	-	-	-
<b>Embedded derivatives:</b>									
For nickel concentrate costumer sales	(25)	29	-	(14)	-	-	-	-	-
Customer raw material contracts	(76)	10	-	-	(10)	-	-	-	-
Energy - Aluminum options	-	13	59	-	-	-	-	-	-
	<b>(101)</b>	<b>52</b>	<b>59</b>	<b>(14)</b>	<b>(10)</b>	-	-	-	-
<b><u>Derivatives designated as hedge</u></b>									
Aluminum hedge	(16)	(6)	-	4	-	-	(36)	(29)	29
Bunker Oil Hedge	13	-	-	-	-	-	-	-	-
Foreign exchange cash flow hedge	-	-	-	-	-	-	38	-	-

Edgar Filing: Vale S.A. - Form 20-F

<b>(3)</b>	<b>(6)</b>	-	<b>4</b>	-	-	<b>2</b>	<b>(29)</b>	<b>29</b>
<b>1,528</b>	<b>(812)</b>	<b>931</b>	<b>(146)</b>	<b>4</b>	<b>70</b>	<b>2</b>	<b>(29)</b>	<b>29</b>

F-51

---

**Table of Contents**

Unrealized gains (losses) in the period are included in our income statement under the caption of gains (losses) on derivatives, net.

Final maturity dates for the above instruments are as follows:

Interest rates / Currencies	December 2019
Bunker Oil	December 2010
Freight	December 2010
Nickel	May 2011
Aluminum	December 2010

**26 Subsequent events**

In January, we entered into an agreement, to sell the aluminum assets of our wholly-owned subsidiary Valesul Alumínio S.A, located in the State of Rio de Janeiro, Brazil, to Alumínio Nordeste S.A., a company of the Metalis group, for US\$31.

In January we redeemed all outstanding export receivables securitization notes issued in September 2000 and July 2003. The outstanding principal amounts were US\$28 for the September 2000, at an interest rate of 8.926% per annum notes due in 2010 and US\$122 for the July 2003, at an interest rate of 4.43% per annum notes due in 2013. Redeemed debt amounts totaled US\$150.

In January we entered into a purchase agreement with Bunge Fertilizantes S.A. and Bunge Brasil Holdings B.V. to acquire 100% of the outstanding shares of Bunge Participações e Investimentos S.A. (BPI), the Company which has assets in Brazil and investments in Fertifos Administração e Participações S.A. (Fertifos), which holds 42.3% of Fertilizantes Fosfatados S.A. Fosfertil (Fosfertil), for US\$3,800, in all cash-transaction. The acquisition is still subject to conditions precedent such as approvals from governmental regulatory agencies. Also, as part of this acquisition we entered into option contracts to buy the additional shares of Fertifos Administração e Participações S.A. (Fertifos) with Fertilizantes Heringer S.A. Heringer (strike price US\$2) , Fertilizantes do Paraná Ltda. Fertipar (strike price US\$40) and Yara Brasil Fertilizantes S.A. (strike price US\$785). These contracts give us the right to acquire 16.3% of Fosfertil shares and are subject to certain conditions, among them, the effective acquisition of the fertilizer assets of Bunge Group in Brazil. Control over these businesses have not been obtained when these financial statements were approved to be issued.