The following discussion should be read in conjunction with our consolidated audited financial statements for the financial years ended 31 December 2007, 2008 and 2009 and the six months ended 30 June 2010, together with the accompanying notes to the financial statements included in Appendix I to this Listing Document; and the unaudited interim financial information for the three months ended 30 September 2010 included in Appendix II to this Listing Document. We have prepared our consolidated financial statements in accordance with US GAAP, which differ in certain material respects from generally accepted accounting principles in other jurisdictions, including Hong Kong.

For further information on risks that could affect the accuracy of forward-looking statements in the items referred to in this section and our results of operations, please refer to the section in this Listing Document headed "Risk factors"

#### Overview

## Six months ended 30 June 2010

In the first half of 2010, we had our best performance since the peak of the global financial crisis in the third quarter of 2008. Our first-half results reflect rising global demand for minerals and metals, control of operating costs and efforts to increase production, as well as the implementation of a new pricing regime for iron ore and iron ore pellets beginning in the second quarter of 2010.

In the first half of 2010, we generated net income attributable to Shareholders of US\$5,309 million, an increase of US\$3,156 million, or 146.6%, compared to the first half of 2009. The growth in net income was driven primarily by a US\$4,031 million increase in operating income, reflecting higher sale volume and sale prices in connection with the global economic recovery. The increase in operating income was partially offset by a change in non-operating expenses of US\$2,393 million, comprising basically the negative effects due to devaluation of *Reais* against U.S. Dollars of swap transactions structured to convert our Real denominated debt into U.S. Dollars. For the six months ended June 2009, those operations generated a positive result due to the appreciation of *Reais* against U.S. Dollars.

# Financial year ended 31 December 2009

The year 2009 was a year of significant challenges brought on by a major recession that caused one of the few instances 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 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 labour 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 did not cancel any investment project, and identified new growth opportunities, and as a result we believe our growth potential was enhanced.

Despite weaker performance compared to previous years, our response to the recessionary environment heightened our capacity to create sustainable shareholder value. Below are the main highlights of our 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.

# Financial year ended 31 December 2008

The year 2008 saw the end of a long period of growing demand and rising prices for minerals and metals that began in 2002. The acceleration of the global financial crisis since September 2008 precipitated a dramatic change in the pace of economic activity around the world. The ensuing heightened levels of uncertainty and retrenchment in the demand for minerals and metals resulted in a weaker operational and financial performance in the fourth quarter of 2008.

We were very proactive in responding to the deterioration of the economic environment. Production cutbacks, involving primarily the shutdown of higher-cost operational units, and the implementation of new strategic priorities were the main steps we took to counteract the effects of the global recession. We also focused on cost minimisation, operational and financial flexibility and reconciliation of cash preservation with the pursuit of profitable growth options. Given powerful cash generation, large cash holdings and a low-risk debt portfolio, we were able to develop projects based on the merits of each growth opportunity and unconstrained by short-term cash restrictions.

Despite the sharp economic downturn in the fourth quarter, the year 2008 was our sixth consecutive year of record growth in revenues, operating income and net income. Our growth in 2008 reflected strong results for the first nine months of 2008 relative to the same period of 2007, which more than offset a weaker fourth quarter. Below are the main highlights of our performance in 2008.

- Record sales volumes of iron ore (264 million metric tons), nickel (276,000 metric tons), copper (320,000 metric tons), alumina (4.2 million metric tons), cobalt (3,087 metric tons), precious metals (2.4 million troy ounces), platinum group metals (411,000 troy ounces) and coal (4.1 million metric tons).
- Gross operating revenue of US\$38.5 billion, a 16.3% increase over 2007, mainly due to higher prices.
- Net income of US\$13.2 billion, or US\$2.61 per share on fully diluted basis. This was an 11.9% increase over 2007. The increase in net income was driven primarily by an 11.8% increase in operating income, reflecting a 16.1% increase in net operating revenue.
- Net income for 2008 included a charge of US\$950 million for impairment of goodwill we recorded upon the acquisition of Vale Canada.
- The acceleration of the global financial crisis in the fourth quarter of 2008 resulted in weak demand for our iron ore and iron ore pellets and substantial price declines for non-ferrous minerals. In contrast to the significant gains in the first nine months of 2008, when net income was 28.1% higher than in the same period of 2007, net income in the fourth quarter of 2008 was 46.9% lower than in the fourth quarter of 2007. Net income in the fourth quarter of 2008 was 71.6% lower than in the third quarter of 2008, mainly due to the goodwill impairment charge recognised in the fourth quarter, which in turn reduced net income by 19.7% compared to the third quarter of 2008.

## Financial year ended 31 December 2007

The year 2007 was our fifth consecutive year of record growth in revenues, operating income and net income. The main highlights of our performance in 2007 were:

- Record sales volumes of iron ore and pellets (296 million metric tons), copper (300,000 metric tons), alumina (3.253 million metric tons) and aluminium (562,000 metric tons).
- Gross operating revenue of US\$33.115 billion, a 62.6% increase over 2006.
- Net income of US\$11.825 billion, an 81.1% increase over 2006. The increase in net income
  was driven primarily by a 72.8% increase in operating income, reflecting a 64.1% increase
  in net operating revenue, and an increase in non-operating income of US\$1.847 billion, due
  primarily to higher foreign exchange and monetary gains.
- Investment, excluding acquisitions, of US\$7.625 billion, the highest in the global mining and metals industry in 2007.
- Investment in corporate social responsibility of US\$652 million, of which US\$401 million was allocated to environmental preservation and US\$251 million to social projects.

Our growth in 2007 reflected three primary factors. First, we benefited from a broader portfolio of assets and the globalisation of our operations following the acquisition of Vale Canada. In 2007, US\$11.880 billion of net operating revenue was attributable to a full year of consolidation of Vale Canada. Second, we experienced strong demand and rising prices for our principal products driven principally by continued strong demand from China and expanded demand from our other markets in Asia and Europe. Finally, we maintained high production levels, supported by new projects coming on stream, operation at full capacity at most of our units, and productivity gains.

# Factors affecting the Group's Financial Results

## Demand and prices

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

	Year ended 31 December			
	2007	2008	2009	
	(US\$ per	metric ton, exce indicated)	pt where	
Iron ore	45.33	67.32	55.99	
Iron ore pellets	78.62	131.76	73.75	
Manganese	107.34	350.46	147.06	
Ferroalloys	1,311.48	2,709.60	1,395.26	
Nickel	37,442.28	21,662.14	14,596.55	
Copper	6,611.27	6,331.07	5,229.39	
Kaolin	195.88	194.06	216.52	
Potash	264.09	591.18	521.46	
Platinum (US\$/oz)	1,314.25	1,557.07	1,073.98	
Cobalt (US\$/lb)	24.56	31.01	10.03	
Aluminium	2,784.70	2,805.86	1,686.87	
Alumina	338.76	348.42	226.46	
Bauxite	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 have reached agreements on a new iron ore pricing regime with all our iron ore clients around the globe 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, involve 100% 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.

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

We expect Chinese imports to remain at a high level for the remainder of 2010, primarily due to strength in the final demand for carbon steel. The increase in capacity utilisation 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.

## 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 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 accounts on average for 60 to 65% of global nickel consumption. Nickel demand for sources of consumption other than stainless steel production represents 35 to 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, a majority of our refined nickel sales were made into non-stainless steel applications. As a result of our focus on such higher-value segments, our average realised 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 (that is, 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 for the remainder of 2010. Stainless steel production has picked up in major Asian producing countries, including China, Japan, Korea and Taiwan. In North America and Europe, utilisation 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.

# 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 LME and 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 six months after the shipment date.

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

## Fertilizer nutrients

Demand for fertilizers is driven by global agricultural production, which is a function of food demand and is driven mainly by population growth, age distribution, economic development and dietary preferences. Rising population and declining arable land will continue to drive fertilizer application to increase yield and productivity. Rapid per capita income growth in emerging economies is changing diet behavior towards an increasing intake of proteins that ultimately contributes to crease additional demand for grains and fertilizer use. In addition, biofuel has emerged as an alternative source of energy to reduce world reliance on fossil fuel, being the main source of climate-changing greenhouse gases. The cultivation of sugar cane, corn and palm, being the main crops used for the production of biofuels, involves intensive use of fertilizers. We believe the rising global demand for food and biofuels will be key to the continued growth in demand for fertilizers.

#### 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 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 programme, 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.

Production at our Canadian operations have been affected by industrial disputes, and any of our operations may be affected by them in future. For further details of the industrial disputes in Canada, please see the section in this Listing Document headed "Business — Employees and labour relations".

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 the sections in this Listing Document headed "Business — Overview" and "Business — Mining and Exploration Operations".

# 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.
- Most of our long-term debt is denominated in currencies other than the Real, principally
  the U.S. Dollar (US\$14,700 million at 30 June 2010). Because our functional currency for
  accounting purposes is the 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\$6,789 million at 30 June 2010. 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, the section in this Listing Document headed "Financial information Risks affecting the Group's Financial Results".

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 half of the year. At 30 June 2010, the U.S. Dollar had appreciated 3.5% against the Real and 1.4% against the Canadian Dollar relative to 31 December 2009. These currency price changes affect our operating margins and result in higher foreign exchange gains and gains on 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 and nickel 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.

# **Critical Accounting Policies**

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, please see Note 3 to our 30 June 2010 consolidated financial statements included in Appendix I to this Listing Document.

## Mineral reserves and mines' lifespan

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.

One of the ways calculation methods of our ore reserve estimations are made is to determine the mine lifespan used in recording the fair value of the obligations related to the mine closing procedures, including environmental-related and site reclamation-related costs and the periods over which we amortise our mining assets. Any change in our estimations of total expected future mine or asset lifespan could have an impact on the depreciation, depletion and amortisation 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 capitalised as appropriate. These ongoing programmes are designed to minimise the environmental impact of our activities.

We recognise 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 30 June 2010 we estimated the fair value of our aggregate asset retirement obligations at US\$1,162 million.

## 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 amortised over their estimated useful lives, and 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 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 recognised 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 guarter of 2008, we determined that the

goodwill associated with the acquisition of Vale Canada, included within the reportable segment "Non-ferrous — nickel," was partially impaired at 31 December 2008.

The impairment charge recorded in operating results in the fourth quarter of 2008 was US\$950 million. We did not recognise any impairment in 2009 or during the six months ended 30 June 2010.

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. 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 recognise 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. Unrealised fair value adjustments to cash flow hedges are recognised in other comprehensive income. We use well-known market participants' valuation methodologies to compute the fair value of instruments. To evaluate the financial instruments, we use estimates and judgments related to present values, taking into account market curves, projected interest rates, exchange rates, 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 aluminium hedge and for a foreign exchange hedge. At 31 December 2009, we recorded US\$1,528 million of gains related to derivative instruments. During the six months to 30 June 2010, we recorded a loss of US\$342 million in relation to fair value adjustments on derivative instruments.

## Income taxes

We recognise 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 realised. 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 the section in this Listing Document headed "Financial information — Contingent Liabilities".

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 a liability has been incurred at the date of the financial statements, and the amount of the loss can be reasonably estimated. In particular, given the nature of Brazilian tax legislation, the assessment of potential tax liabilities requires significant management judgment. By their nature, contingencies will only be resolved when one or more future events occurs or fails to occur, and typically those events will occur a number of years in the future. Assessing such liabilities, particularly in the Brazilian legal environment, inherently involves the exercise of significant management judgment and estimates of the outcome of future events.

The provision for contingencies at 30 June 2010, US\$1,967 million (31 December 2009, US\$1,763 million), consists of provisions of US\$703 million (31 December 2009, US\$657 million) for labour, US\$646 million (31 December 2009, US\$582 million) for civil, US\$595 million (31 December 2009, US\$489 million) for tax and US\$23 million (31 December 2009, US\$35 million) for other claims. A provision for contingent liabilities related to civil claims brought by inhabitants of Port Colborne and pre-operating expenses related to our New Caledônia, Onça Puma and Salobo plants was made in the six months ended 30 June 2010. Vale Canada was ultimately ordered to pay CAD36 million in damages in respect of the civil claims brought by inhabitants of Port Colborne in July 2010. Vale Canada has filed a notice of appeal in respect of that judgment.

## 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 2009 consolidated financial statements included in Appendix I to this Listing Document 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).

## **Description of Selected Income Statement Line Items**

# Revenues and expenses

Revenues are recognised when title is transferred to the customer or services are rendered. Revenue from exported products is recognised when such products are loaded on board the ship.

Revenue from products sold in the domestic market is recognised when delivery is made to the customer. Revenue from logistic services is recognised when the service order has been fulfilled. Expenses and costs are recognised on the accrual basis.

### Income taxes

The deferred tax effects of tax loss carryforwards and temporary differences are recognised pursuant to accounting for income taxes. A variation allowance is made when we believe that it is more likely than not that tax assets will not be fully recovered in the future.

## **Results of Operations**

The following table sets out selected financial data which is extracted from our consolidated financial statements for our financial years ended 31 December 2007, 2008 and 2009, respectively, and the six months ended 30 June 2010, included in Appendix I to this Listing Document:

For the

## Statement of income data

				For the
				six months
	For the ye	ar ended 31 l	December	ended 30 June
	2007	2008	2009	2010
		(US\$ ı	million)	
Net operating revenues	32,242	37,426	23,311	16,262
Cost of products and services	(16,463)	(17,641)	(13,621)	(7,661)
Selling, general and administrative expenses	(1,245)	(1,748)	(1,130)	(636)
Research and development	(733)	(1,085)	(981)	(361)
Impairment of goodwill	_	(950)		_
Other expenses	(607)	(1,254)	(1,522)	<u>(912</u> )
Operating income	13,194	14,748	6,057	6,692
Non-operating (expenses) income:				
Financial (expenses) income	(1,291)	(1,975)	351	(1,204)
Exchange and monetary gains, net <sup>(1)</sup>	2,553	364	675	36
Gain on sale of investments <sup>(2)</sup>	777	80	40	
Subtotal	2,039	(1,531)	1,066	(1,168)
Income before discontinued operations, income taxes				
and equity results	15,233	13,217	7,123	5,524
Income taxes charge	(3,201)	(535)	(2,100)	(422)
Equity in results of affiliates and joint ventures and				
change in provision for gains on equity				
investments	595	794	433	379
Net income from continuing operations	12,627	13,476	5,456	5,481
Discontinued operations, net of tax				<u>(151</u> )
Net income	12,627	13,476	5,456	5,330
Net income attributable to non-controlling interests	802	258	107	21
Net income attributable to Company's stockholders	11,825	13,218	5,349	5,309
Total cash paid to shareholders (3)	1,875	2,850	2,724	1,250

<sup>(1)</sup> The aggregate foreign currency transaction gain or loss (both realised and unrealised) included in determining net income for the reporting period.

<sup>(2)</sup> The net realised gain or loss on investments sold during the period, which, for cash flow reporting, is a component of proceeds from investing activities.

<sup>(3)</sup> Consists of total cash paid to Shareholders during the period, whether classified as dividends or interest on shareholders' equity.

For the

# Basic and diluted earnings per share

	For the v	year ended 31 D	ecember	six months ended 30 June	
	2007	2008 <sup>(4)</sup>	2009	2010	
		(US\$, excep	(US\$, except as noted)		
Earnings per share <sup>(1)</sup> : Basic					
Per common share	2.41	2.58	0.97	0.99	
Per preferred share	2.41	2.58	0.97	0.99	
Per common share	2.42	2.61	1.00	1.00	
Per preferred share	2.42	2.61	1.00	1.01	
Weighted average number of shares outstanding (in thousands) <sup>(2)</sup> :					
Common shares	2,943,216	3,028,817	3,181,706	3,186,018	
Preferred shares	1,889,171	1,946,454	2,030,700	2,033,272	
convertible notes	34,510	56,582	74,998	18,416	
convertible notes	18,478	30,295	77,580	47,285	
Total	4,885,375	5,062,148	5,364,984	5,284,991	
Distributions to shareholders per share <sup>(3)</sup> :					
In US\$	0.39	0.56	0.53		
In R\$	0.74	1.09	1.01		

<sup>(1)</sup> Diluted earnings per share for 2007, 2008 and 2009 include Class A Preferred Shares and Common Shares underlying the mandatorily convertible notes issued in June 2007. Diluted earnings per share for 2009 also include Class A Preferred Shares and Common Shares underlying the mandatorily convertible notes issued in July 2009.

<sup>(2)</sup> Each common ADS represents one Common Share and each preferred ADS represents one Class A Preferred Share.

<sup>(3)</sup> 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.

<sup>(4)</sup> In July 2008, we issued 80,079,223 common ADSs, 176,847,543 Common Shares, 63,506,751 preferred ADSs and 100,896,048 Class A Preferred Shares in a global equity offering. In August 2008, we issued an additional 24,660,419 Class A Preferred Shares. In October 2008, the Board of Directors approved a share buy-back programme, which was terminated on May 27, 2009. While the programme was in effect, our Company acquired 18,415,859 Common Shares and 47,284,800 Class A Preferred Shares, corresponding respectively to 1.5% and 2.4% of the outstanding shares of each class on the date the programme was launched.

	At 31 December,			At 30 June	At 30 September
	2007	2008	2009	2010	2010
			(US\$ mi	llion)	
Current assets	11,380	23,238	21,294	25,039	31,489
Property, plant and equipment, net	54,625	49,329	68,810	73,749	79,892
Investments in affiliated companies					
and joint ventures and other investments	2,922	2,408	4,585	4,444	4,911
Other assets	7,790	5,017	7,590	7,571	9,003
•					<del></del>
Total assets	<u>76,717</u>	79,992	102,279	110,803	<u>125,295</u>
	10,083	7,237	9,181	12,213	15,017
	13,195	10,173	12,703	15,045	16,722
Long-term debt <sup>(2)</sup>	<u>17,608</u>	<u>17,535</u>	19,898	19,125	20,743
	40,886	34,945	41,782	46,383	52,482
Redeemable non-controlling					
interests <sup>(3)</sup>	375	599	731	724	666
Stockholders' equity:	40.006			25 726	24.050
•	12,306	23,848	23,839	25,726	24,858
Additional paid-in capital	498	393	411	1,790	2,188
Mandatorily convertible notes — common ADSs	1 200	1 200	1 570	200	200
Mandatorily convertible notes —	1,288	1,288	1,578	290	290
preferred ADSs	581	581	1,225	644	644
	18,603	16,446	29,882	31,761	41,341
Total Company shareholders'	,	10/110			
	33,276	42,556	56,935	60,211	69,321
Non-controlling interests	2,180	1,892	2,831	3,485	2,826
Total shareholders' equity	<u>35,456</u>	44,448	59,766	63,696	<u>72,147</u>
Total liabilities and shareholders'					
equity	<u>76,717</u>	<u>79,992</u>	102,279	110,803	<u>125,295</u>

<sup>(1)</sup> Excludes long-term debt.

<sup>(2)</sup> Excludes current portion of long-term debt.

<sup>(3)</sup> The aggregate amount to be paid by the entity upon redemption of the security that is classified as temporary equity. In January 2009, we adopted a newly issued accounting standard in US GAAP for non-controlling interests. This new accounting standard clarifies that a non-controlling 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. Non-controlling interests that could be redeemed upon the occurrence of certain events outside our Company's control have been classified as redeemable non-controlling interest using the mezzanine presentation on the balance sheet between liabilities and stockholders' equity.

The following table presents the breakdown of our total operating revenues attributable to the destination from which they originated:  $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left( \frac{1}{2} \int_{-\infty}^{\infty}$ 

	, ,	Y	ear ended 31 De	ecembei	r		Six mont ended 30 J	
	2007		2008		2009		2010	
	(US\$ million)	(%)	(US\$ million)	(%)	(US\$ million)	(%)	(US\$ million)	(%)
North America	4,922	14.9	4,236	11	1,742	7.3	706	4.2
USA	2,966	9.0	2,466	6.4	832	3.5	298	1.8
Canada	1,761	5.3	1,517	3.9	886	3.7	390	2.3
Others	195	0.6	253	0.7	24	0.1	18	0.1
South America	6,181	18.7	7,725	20.1	3,997	16.7	3,328	19.8
Brazil	5,288	16.0	6,675	17.3	3,655	15.3	3,014	18.0
Others	893	2.7	1,050	2.7	342	1.4	314	1.9
Asia	13,346	40.3	15,761	40.9	13,633	56.9	8,319	49.6
China	5,865	17.7	6,706	17.4	9,003	37.6	4,955	29.5
Japan	3,827	11.6	4,737	12.3	2,412	10.1	1,904	11.3
South Korea	1,473	4.4	1,474	3.8	883	3.7	548	3.3
Taiwan	1,665	5.0	954	2.5	681	2.8	447	2.7
Others	516	1.6	1,890	4.9	654	2.7	464	2.8
Europe	7,325	22.1	9,450	24.5	4,036	16.9	3,738	22.3
Germany	1,856	5.6	2,511	6.5	1,085	4.5	1,169	7.0
Belgium	683	2.1	910	2.4	336	1.4	100	0.6
France	722	2.2	815	2.1	336	1.4	174	1.0
UK	1,066	3.2	1,261	3.3	492	2.1	498	3.0
Italy	632	1.9	821	2.1	335	1.4	436	2.6
Others	2,366	7.1	3,132	8.1	1,452	6.1	1,362	8.1
Rest of the World	1,340	4.0	1,337	3.5	<u>531</u>	2.2	687	4.1
Total	<u>33,115</u>	100.0	38,509	100	23,939	100	16,778	100.0

# Results of Operations — Six Months ended 30 June 2010 Compared with Six Months ended 30 June 2009

#### Revenues

Our gross operating revenues were US\$16,778 million in the first half of 2010, 59.7% higher than in the first half of 2009, as a result of increases in both sale volume and sale prices, which reflect the recovery from the worldwide financial crisis that began in late 2008. The proportion of our total gross operating revenues attributable to sales of bulk materials increased to 73.6% in the first half of 2010 from 61.4% in the first half of 2009, while the proportion of our total operating revenues attributable to base metals decreased to 19.4% from 30.1% in the same period last year. In the first half of 2010, sales to Asia decreased to 49.6% of our total revenues from 60.5% in the first half of 2009, while sales to the Americas (excluding Brazil) declined to 6.1% from 9.7%, and sales to Europe increased to 22.3% from 14.1%. The following table presents our gross operating revenues by product and our net operating revenues for the periods indicated.

		Six months ended 30 June,		
	2009	2010	% Change	
	(US\$ million) (unaudited)			
Bulk Materials:				
Iron ore	5,551	9,182	65.4	
Iron ore pellets	452	2,393	429.4	
Manganese	58	147	153.4	
Ferroalloys	148	312	110.8	
Pig iron	11	9	(18.2)	
Coal	230	312	35.7	
Subtotal	6,450	12,355	91.6	
Base Metals:				
Nickel and other products <sup>(1)</sup>	1,972	1,621	(17.8)	
Copper concentrate <sup>(2)</sup>	277	387	39.7	
Aluminium products	910	_1,254	37.8	
Subtotal	3,159	3,262	3.3	
Fertilizer Nutrients:				
Potash	186	120	(35.5)	
Phosphates	_	155	_	
Subtotal	186	275	47.8	
Logistics:		_, _	.,	
Railroads	381	537	40.9	
Ports	99	181	82.8	
Ships	_	5	_	
Subtotal	480	723	50.6	
Other products and services	230	163	(29.1)	
·			` '	
Gross revenues	10,505	16,778	59.7	
Value added tax	<u>(233</u> )	<u>(516</u> )	121.5	
Net operating revenues	10,272	16,262	58.3	

<sup>(1)</sup> Includes nickel co-products and by-products (copper, precious metals, cobalt and others).

*Iron ore.* Gross revenues from sales of iron ore increased 65.4% in the first half of 2010 compared to the first half of 2009, primarily as a result of a 42.1% increase in the average sale price and a 16.4% increase in volume sold. The increase in the average sale price resulted from price

<sup>(2)</sup> Does not include copper produced as a nickel co-product.

increases under the new quarterly pricing system beginning in the second quarter of 2010. The increase in volume is a consequence of the worldwide economic recovery. Given strong demand pressure, the market for iron ore has been very tight, with rising spot prices and a decreasing stock-to-consumption ratio in China relative to last year. The price indices that affect our prices under the new quarterly pricing system were higher in the three month period (March/April/May 2010) that was being taken into account to price third quarter 2010 sales and declined in the following three month period (June/July/August 2010) that will be taken as a reference to price fourth quarter 2010 sales. For more information about this pricing system, see the section in this Listing Document headed "Risk factors".

Iron ore pellets. Gross revenues from sales of iron ore pellets increased 429.4%, driven by a 236.4% increase in volume sold due to increased utilisation of production capacity, and a 58.9% increase in the average sale price due to the new pricing regime described above in relation to iron ore, which also covers iron ore pellets.

Manganese ore. Gross revenues from sales of manganese ore increased 153.4%, driven by a 70.4% increase in the average sale price and a 49.6% increase in volume sold due to demand from the Chinese ferroalloy industry.

Ferroalloys. Gross revenues from sales of ferroalloys increased 110.8%, due primarily to a 62.9% increase in volume sold in connection with the recovery of the steel industry, a 29.0% increase in the average sale price and a favourable change in the mix of alloys sold.

*Coal.* Gross revenues from sales of coal increased 35.7%, mainly due to the consolidation of sales from Vale Colombia, which the Group acquired in the first quarter of 2009.

*Nickel and other products.* Gross revenues from this segment decreased 17.8%, mainly due to a decline in volume sold as a result of the labour strikes at our production plants in Sudbury and Voisey's Bay.

- Gross revenues from nickel sales decreased 3.2%, primarily due to a 45.7% decline in volume sold, which was partially offset by a 78.5% increase in the average sale price due to an increase in the LME price.
- Gross revenues from copper sales decreased 68.4%, primarily due to a 75.9% decline in volume sold, which was partially offset by a 31.5% increase in the average sale price.

*Potash.* Gross revenues from sales of potash decreased 35.5%, mainly due to a 34.2% decrease in the average sale price as a result of a decline in the international reference price.

*Phosphates.* Gross revenues from sales of phosphates are attributable to the consolidation of Vale Fosfatados S.A. (formerly known as Bunge Participações e Investimentos S.A.), which was acquired in May 2010.

Copper concentrate. Gross revenues from sales of copper concentrate increased 39.7%, reflecting a 57.2% increase in the average sale price as a result of structural limitations on the growth of the supply of concentrates. The increase was partially offset by an 11.0% decrease in volume sold.

Aluminium products. Gross revenues from sales of aluminium-related products increased 37.8%, primarily reflecting an increase in the average sale price as a result of an increase in the LME price.

Logistics services. Gross revenues from sales of logistics services increased 50.6% as a result of the factors listed below.

- Revenues from railroad transportation increased 40.9%, primarily reflecting the rise in transportation of agricultural products and steel industry inputs and products in the first half of 2010.
- Revenues from port operations increased 82.8% due to increased operational efficiencies.

Other products and services. Gross revenues from sales of other products and services decreased 29.1%, primarily due to the classification of kaolin as a discontinued operation in the first quarter of 2010.

# Operating costs and expenses

The following table summarises our operating costs and expenses for the periods indicated.

		onths 30 June,		
	2009	2010	% Change	
	•	nillion) idited)		
Cost of ores and metals sold	4,400	5,565	26.5	
Cost of aluminium products	981	1,052	7.2	
Cost of logistic services	343	492	43.4	
Cost of fertilizer products	64	213	232.8	
Cost of other products and services	_247	_339	37.2	
Cost of goods sold	6,035	7,661	26.9	
Selling, general and administrative expenses	463	636	37.4	
Research and development expenses	454	361	(20.5)	
Other operating costs and expenses	659	912	38.4	
Total operating costs and expenses	<u>7,611</u>	9,570	25.7	

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

	Six m ended 3		
	2009	2010	% Change
	(US\$ n	nillion) dited)	70 change
Outsourced services	943	1,171	24.2
Materials costs	1,220	1,304	6.9
Energy:			
Fuel	517	852	64.8
Electric energy	353	<u>514</u>	45.6
Subtotal	870	1,366	57.0
Acquisition of products:			
Iron ore and iron ore pellets	48	307	539.6
Aluminium products	134	140	4.5
Nickel	162	160	(1.2)
Other	9	32	255.6
Subtotal	353	639	81.0
Personnel	892	873	(2.1)
Depreciation and depletion	1,094	1,268	15.9
Other costs of goods sold	663	1,040	56.9
Total	6,035	7,661	26.9

Our total cost of goods sold was US\$7,661 million in the first half of 2010, 26.9% higher than in the first half of 2009. Of the US\$1,626 million increase in cost of goods sold, US\$977 million was attributable to higher sale volume, and US\$925 million was attributable to the average appreciation of the Real against the U.S. Dollar. The increase in costs was partially offset by our efforts to reduce costs by optimising the flow of materials, optimising plant and labour utilisation, and cutting administrative costs, among other measures.

- Outsourced services costs (primarily for operational services such as waste removal, cargo freight and maintenance of equipment and facilities) increased 24.2%, driven primarily by higher volumes sold and the appreciation of the Real against the U.S. Dollar and effectively offset by the acceleration of maintenance in 2009.
- Materials costs increased 6.9%, driven primarily by higher volumes sold and the appreciation of the Real against the U.S. Dollar.
- Energy costs increased 57.0%, driven primarily by higher volumes sold, higher average prices and the appreciation of the Real against the U.S. Dollar.
- Costs for the acquisition of products from third parties increased 81.0%, driven primarily by the purchase of iron ore and iron ore pellets. In 2009, the Group did not purchase iron ore pellets from third parties, due to the lower level of demand during the financial crisis.
- Personnel costs decreased 2.1%, due primarily to the stoppage of our nickel plants and partially offset by a 7% wage increase for Brazilian employees that took effect in November 2009 and by the appreciation of the Real against the U.S. Dollar.
- Depreciation and depletion expense increased 15.9%, driven primarily by the general
  increase in volume sold and the appreciation of the Real against the U.S. Dollar. The
  increase was effectively offset by lower volume sold from the Northern System as a result of
  exceptional problems with discharge of product from the Ponta da Madeira maritime
  terminal due to a shipping accident. The temporary difficulties with transportation logistics
  have now been solved.
- Other costs of goods sold increased 56.9%, primarily reflecting higher expenditures for mining royalties, adjustment of inventories in the ferrous minerals business, the effects of purchase accounting adjustments of US\$24 million in connection with the acquisition of Vale Fosfatados S.A. (formerly known as Bunge Participações e Investimentos S.A.), and increased demurrage costs as a result of greater activity during the first half of 2010.

# Selling, general and administrative expenses

Selling, general and administrative expenses increased 37.4%, due primarily to increased expenses with respect to personnel, sales, services and advertising as a result of the resumption of normal economic activity after the costs containment required during the financial circumstances of the previous year and the effect of the appreciation in value of the Real, the currency in which many of those expenses are recorded, as against the U.S. Dollar in the latter period.

# Research and development expenses

Research and development expenses decreased 20.5% in the first half of 2010, primarily due to the conclusion of some projects.

# Other operating costs and expenses

Other operating costs and expenses increased by US\$253 million in the first half of 2010 compared to the same period in 2009, mainly due to a provision for contingent liabilities related to civil claims brought by inhabitants of Port Colborne and pre-operating expenses related to our New Caledônia, Onça Puma and Salobo plants.

# Operating income by segment

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

	Six months ended 30 June,				
		2009		2010	
		Segment operat	ing income (loss)		
	(US\$ million) (unaudited)	% of net operating revenues	(US\$ million)	% of net operating revenues	
Bulk Materials:					
Iron ore	3,053	55.6	5,296	58.7	
Iron ore pellets	(38)	(9.0)	1,249	55.2	
Manganese ore	12	21.1	74	52.5	
Ferroalloys	(13)	(9.8)	112	40.0	
Pig iron	(2)	(18.2)	_	_	
Coal	(3)	(1.3)	<u>(97</u> )	(31.1)	
Subtotal	3,009	47.4	6,634	55.1	
Base Metals:					
Nickel and other products <sup>(1)</sup>	(241)	(12.2)	(162)	(9.9)	
Copper concentrate <sup>(2)</sup>	27	9.9	69	18.3	
Aluminium products	<u>(135</u> )	(15.1)	<u> 141</u>	11.4	
Subtotal	(349)	(11.1)	48	1.5	
Fertilizer Nutrients:	, ,	, ,			
Potash	106	58.6	16	14.0	
Phosphates		_	(16)	(11.4)	
Subtotal	106	58.6		_	
Logistics:					
Railroads	17	5.3	49	10.9	
Ports	5	5.9	40	25.5	
Ships			(11)	(220.0)	
	22	5.4	<del></del>	12.7	
Other	(127)	(62.0)	(68)	(53.5)	
Total	2,661	25.9	6,692	41.2	

<sup>(1)</sup> Includes nickel co-products and by-products (copper, precious metals, cobalt and others).

Operating income as a percentage of net operating revenues increased from 25.9% in the first half of 2009 to 41.2% in the first half of 2010. In general, the segments benefited from higher prices and volume sold, as summarized in more detail below.

- The increase in operating margin for iron ore and iron ore pellets primarily reflects higher average sale prices and volume sold.
- The increase in operating margins for manganese and ferroalloys is attributable to higher prices.
- The decrease in operating margin for coal is attributable to higher expenses related to the operations of Vale Colombia and Vale Australia.
- The decrease in operating margin for potash is attributable to the reassessment of inventories and the purchase price allocation for Vale Fosfatados S.A. (formerly known as Bunge Participações e Investimentos S.A.) and Vale Fertilizantes (formerly known as Fertilizantes Fosfatados S.A. Fosfertil).

<sup>(2)</sup> Does not include copper produced as a nickel co-product.

- The increase in operating margin in the aluminium products segment resulted primarily from higher average sale prices.
- The increase in operating margin for railroads is due to the mix of products carried.
- The increase in operating margin for ports is due to increased operational efficiencies.
- The increase in operating margin for copper concentrate reflects higher prices.

## Non-operating income (expenses)

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

		ns ended une,
	2009	2010
		nillion) dited)
Financial income	218	117
Financial expenses	(580)	(979)
Gains (losses) on derivatives, net	891	(342)
Foreign exchange and indexation gains, net	539	36
Gain on sale of investments	157	
Total	1,225	<u>(1,168</u> )

We had net non-operating expenses of US\$1,168 million in the first half of 2010, compared to net non-operating revenues of US\$1,225 million in the first half of 2009. This variation primarily reflects the following factors:

- Losses on derivatives of US\$342 million in the first half of 2010 compared to gains of US\$891 million in the first half of 2009. The net fair value of our currency and interest rate swaps, which mainly convert our Real-denominated debt into U.S. Dollars to protect our cash flow from exchange rate volatility, produced a positive effect of US\$967 million in the first half of 2009 due to the appreciation of the Real against the U.S. Dollar, and a loss of US\$263 million in the first six months of 2010 due to the depreciation of the Real against the U.S. Dollar.
- An increase in financial expenses of US\$399 million, principally due to the mark-to-market
  effects of our amounts due under shareholder debentures, IOF (financial operations tax),
  charges related to the conversion of our mandatorily convertible notes due June 2010 and
  higher financial interest due to a higher average level of debt.
- A decrease in financial income of US\$101 million, principally due to a lower average cash balance.
- Lower foreign exchange and indexation gains due to foreign exchange loss generated by the combination of lower cash and treasury positions in U.S. Dollars in the first half of 2010 and the depreciation of the Real against the U.S. Dollar during the first half of 2010.
- No gain on sale of investments in the first half of 2010, compared to a US\$157 million gain on the sale of all our common shares of Usiminas Siderúrgicas de Minas Gerais S.A.— Usiminas in the first half of 2009.

# **Income taxes**

In the first half of 2010, we recorded income tax expense of US\$422 million, compared to US\$1,930 million in the same period of 2009. The effective tax rate on our pretax income was 7.6%, lower than the statutory rate, mainly because of a retroactive tax benefit related to our Carajás iron ore operations, the tax benefit of shareholder distributions categorised as interest on stockholders'

equity, and a 3.5% depreciation of the Real against the U.S. Dollar during the first half of 2010. The effective tax rate on our pretax income was 49.7% in the first half of 2009, substantially higher than the statutory rate, mainly because of the effect caused by the 16.5% appreciation of the Real against the U.S. Dollar during the first half of 2009. Exchange variations directly impact the exchange gains or losses recognised on transactions between the parent company and certain subsidiaries with lower statutory tax rates. Although those gains and losses are eliminated from reported consolidated pretax amounts in the consolidation and currency re-measurement process, they are not eliminated for tax purposes since in Brazil there is no consolidated income tax regime.

# Affiliates and joint ventures

Our equity in the results of affiliates and joint ventures increased to US\$379 million in the first half of 2010 from US\$207 million in the same period of 2009. The increase is primarily attributable to our joint venture Samarco, which experienced higher sale volume and prices for iron ore pellets.

# Results of Operations — Financial Year ended 31 December 2009 Compared with Financial Year ended 31 December 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 summarises our gross revenues by product and our net operating revenues for the periods indicated.

Voor onded

		Year ended 31 December	
	2008	2009	% change
	(US\$ m		∕₀ change
	(03\$11	illiloti)	
Ferrous minerals:			
Iron ore	17,775	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 <sup>(1)</sup>	7,829	3,947	(49.6)
Potash	295	413	40.0
Kaolin	209	173	(17.2)
Copper concentrate <sup>(2)</sup>	893	682	(23.6)
Aluminium	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 <sup>(3)</sup>	935	825	(11.8)
Gross revenues	38,509	23,939	(37.8)
Value-added tax	<u>(1,083</u> )	(628)	42.0
Net operating revenues	37,426	23,311	(37.7)

#### Notes:

<sup>(1)</sup> Includes copper, precious metals, cobalt and other by-products produced by Vale Canada.

<sup>(2)</sup> Does not include copper produced by Vale Canada.

<sup>(3)</sup> 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 (iii) 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.

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's Bay operations as a result of labour 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.

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

- Gross revenues from sales of aluminium 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.

	Year ended 31 December		
	2008	2009	% change
	(US\$ n	nillion)	
Cost of ores and metals	14,055	10,026	(28.7)
Cost of logistic services	930	779	(16.2)
Cost of aluminium 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
Total operating costs and expenses	22,678	17,254	(23.9)

## Cost of goods sold

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

	Year e	ended ember	
	2008	2009	% change
	(US\$ n	nillion)	
Outsourced services	2,880	2,264	(21.4)
Material 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 the products:			
Nickel	687	271	(60.6)
Aluminium	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)
Total	17,641	13,621	(22.8)

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 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.
- 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 recognised 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 recognised a US\$950 million impairment of the goodwill associated with our 2006 acquisition of Vale Canada.

## 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).

# 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.

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	Year ended 31 December				
	2008		2009		
	Segment ope	erating income (loss)	Segment operating income (loss)		
	(US\$ million)	(% to net operating revenues)	(US\$ million)	(% to net operating revenues)	
Ferrous minerals:					
Iron ore	9,988	57.4	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)	_	
Non-ferrous minerals:					
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	
Aluminium products	516	17.3	(191)	_	
Logistics:					
Railroads	246	22.4	65	9.3	
Ports	41	15.5	36	15.9	
Ships	_	_	(7)	_	
Others	165	18.2	<u>(503</u> )	_	
Total	14,748	39.4	6,057	26.0	

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 summarised 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 strikes at some of our Canadian operations.
- The margin declines in the aluminium 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 recognising price adjustments in 2008.

## Non-operating income (expenses)

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

	Year ended 31 December	
	2008	2009
	(US\$ m	illion)
Financial income	602	381
Financial expenses	(1,765)	(1,558)
(Losses) gains on derivatives, net	(812)	1,528
Foreign exchange and monetary gains, net	364	675
Gain on sale of assets	80	40
Non-operating (expenses) income	<u>(1,531</u> )	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 recognised on Valesul Aluminio S.A. 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.

Results of Operations — Financial Year ended 31 December 2008 compared with Financial Year ended 31 December 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 summarises our gross revenues by product and our net operating revenues for the periods indicated.

	Year e		
	2007	2008	% change
	(US\$ m	nillion)	
Ferrous minerals:			
Iron ore	11,908	17,775	49.3
Iron ore pellets	2,738	4,301	57.1
Manganese	77	266	245.5
Ferroalloys	711	1,211	70.3
		1,211	70.3 80.2
Pig iron	81		80.2
Subtotal	15,515	23,699	52.7
Non-ferrous minerals:			
Nickel and other products <sup>(1)</sup>	11,789	7,829	(33.6)
Potash	178	295	65.7
Kaolin	238	209	(12.2)
Copper concentrate <sup>(2)</sup>	802	893	`11.3 <sup>´</sup>
Aluminium	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 <sup>(3)</sup>	346	<u>935</u>	170.2
Gross revenues	33,115	38,509	16.3
Value-added tax	(873)	(1,083)	24.1
Net operating revenues	32,242	37,426	16.1

#### Notes:

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 realised 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.

<sup>(1)</sup> Includes copper, precious metals, cobalt and other by-products produced by Vale Canada.

<sup>(2)</sup> Does not include copper produced by Vale Canada.

<sup>(3)</sup> Includes coal.

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.

*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.

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

- Gross revenues from sales of aluminium 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
  aluminium market prices and sales prices, our average aluminium sales price in the fourth
  quarter of 2008 did not fully reflect the drop in aluminium 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. 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 Logística Intermodal S.A. in 2007 as a result of which Log-In Logística Intermodal S.A. 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 31 December		
	2007	2008	% change
	(US\$ million)		
Cost of ores and metals	13,628	14,055	3.1
Cost of logistic services	853	930	9.0
Cost of aluminium 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	19,048	22,678	19.1

# Cost of goods sold

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

	Year o		
	2007	2008	% change
	(US\$ n	nillion)	
Outsourced services	2,628	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)
Aluminium	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	<u>16,463</u>	<u>17,641</u>	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 Reais, 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 pelletising 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 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 guarter 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 recognised 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 Canada.

# 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 information technology infrastructure advertising and brand management. The adjustment for copper sales arose from the effects of sharply declining copper prices under the MAMA pricing system (the MAMA or month after the month of arrival pricing system is a payment condition attributed to the sale of copper concentrate where the billing adjustment is made when the cargo is received by the customer. In practice, it is the difference between the price on the departure date and on the delivery date). In the fourth quarter of 2008, copper prices declined 48.8% compared to the third quarter of 2008, causing final prices for copper sales to 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 recognised a US\$950 million impairment of the goodwill associated with our 2006 acquisition of Vale Canada, of which US\$1.336 billion remained at 31 December 2008. For a full description of the impairment test, see the notes of our 2008 consolidated financial statements included in Appendix I to this Listing Document.

## 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.

## 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.

	Year ended 31 December			
	2007 Segment operating income (loss)		2008 Segment operating income (lo	
	(US\$ million)	(% to net operating revenues)	(US\$ million)	(% to net operating revenues)
Ferrous minerals:				
Iron ore	6,325	54.4	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
Aluminium 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	<u>(159</u> )	_	<u> 165</u>	18.2
Total	13,194	40.9	14,748	39.4

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, aluminium 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 aluminium 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 Mineração Rio do Norte S.A.

# Non-operating income (expenses)

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

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

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 Logística Intermodal S.A. (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 pre-tax 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. The notes to our 2008 consolidated financial statements included in Appendix I to this Listing Document summarise our equity in the results of affiliates and joint ventures.

## **Liquidity and Capital Resources**

#### Overview

In the ordinary course of business, our principal uses of funds are capital expenditures, dividend payments and repayment of debt. We have historically met these funding requirements by using cash generated from operating activities and through short-term and long-term borrowings. For 2010, we have budgeted US\$12,894 million for capital expenditures and announced minimum dividend payments of US\$2,500 million plus an additional dividend of US\$500 million.

We regularly review acquisition and investment opportunities and, when suitable opportunities arise, we make selected 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.

## Sources of funds

Our principal sources of funds are operating cash flow and borrowings. Our operating activities generated positive cash flow of US\$5,082 million in the first half of 2010.

In March 2010, our Company issued €750 million notes due March 2018 with a coupon of 4.375% per annum, payable annually. These notes are listed on the Luxembourg Stock Exchange.

We completed two debt offerings and an offering of mandatorily convertible notes in 2009. In November 2009, our wholly-owned finance subsidiary Vale Overseas Limited issued US\$1,000 million of 30-year notes guaranteed by our Company. These notes bear interest at 6.875% per annum, payable semi-annually and will mature in November 2039. In September 2009, Vale Overseas Limited also issued US\$1,000 million of 10-year notes guaranteed by our Company. These notes bear interest at 5.625% per annum, payable semi-annually and will mature in September 2019. These notes issued by Vale Overseas Limited are listed on NYSE.

In July 2009, our wholly-owned finance subsidiary Vale Capital II issued US\$942 million of notes due June 2012 that are mandatorily convertible into ADSs. 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. These notes are listed on NYSE.

We have revolving credit lines available under which amounts can be drawn down and repaid at the option of the borrower. At 30 June 2010, the total amount available under revolving credit lines was US\$1,600 million, of which US\$850 million was granted to Vale International S.A. and the balance to Vale Canada. As of 30 June 2010, neither Vale International S.A. nor Vale Canada had drawn any amounts under these facilities, but US\$108 million of letters of credit were issued and remained outstanding pursuant to Vale Canada's facility.

In June 2010, we entered into a bilateral pre-export finance agreement in the amount of US\$500 million and a term of 10 years.

In May 2008, we entered into framework agreements with the Japan Bank for International Cooperation in the amount of US\$3,000 million and Nippon Export and Investment Insurance (NEXI) in the amount of US\$2,000 million for the financing of mining, logistics and power generation projects. In November 2009, we signed a US\$300 million export facility agreement through our subsidiary PT International Nickel Indonesia Tbk with Japanese financial institutions, using credit insurance provided by NEXI, to finance the construction of the Karebbe hydroelectric power plant on the Larona River, on the island of Sulawesi, Indonesia. As of 30 June 2010, PT International Nickel Indonesia Tbk had drawn US\$150 million under this facility.

In April 2008, we entered into a credit line of R\$7,300 million with BNDES to help finance our investment programme. As of 30 June 2010, we had drawn the then equivalent of US\$862 million under this facility.

## Debt

We are currently rated BBB+ (Standard & Poor's), Baa2 (Moody's), BBB high (Dominion) and BBB+ (Fitch). Our credit ratings can affect the cost and availability of funds. Ratings are not a recommendation, as ratings do not comment as to market price or suitability for a particular investor. The ratings are based on current information furnished to the rating agencies by our Company 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. 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 30 June 2010, we had US\$88 million of outstanding short-term debt and US\$25 million of loans from related parties.

In addition to the outstanding long-term debt mentioned below, at 30 June 2010 the Group had a total debt of US\$765 million included in liabilities associated with current assets held for sale deriving from the agreement with Norsk Hydro ASA (as to which see the section in this Listing Document headed "Business — Overview").

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\$5,633 million at 30 June 2010). This category includes export financing lines, import finance from export credit agencies, and loans from commercial banks and multilateral organisations. Most recently, in June 2010, we entered into a bilateral pre-export finance agreement in the amount of US\$500 million and a term of 10 years. 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\$6,000 million. The outstanding amount at 30 June 2010 was US\$3,900 million.

U.S. Dollar-denominated fixed rate notes (US\$8,496 million at 30 June 2010). We, through our finance subsidiary Vale Overseas Limited, have issued in public offerings several series of fixed-rate debt securities guaranteed by our Company. The amount of these securities outstanding at 30 June 2010 was US\$7,381 million. Our subsidiary Vale Canada has an outstanding balance for fixed rate debt in the amount of US\$1,115 million.

Euro-denominated fixed rate notes (US\$918 million at 30 June 2010). On 24 March 2010, our Company issued €750 million of fixed-rate notes in a global public offering. These notes are due 2018 and have a coupon of 4.375% per year, payable annually.

Real-denominated non-convertible debentures (US\$3,365 million at 30 June 2010). In November 2006, we issued non-convertible debentures in the amount of approximately US\$2,600 million, in two series, with four- and seven-year maturities. The first series, representing approximately US\$700 million at issuance, matures this year and bears interest at 101.75% of the accumulated variation of the Brazilian CDI (interbank certificate of deposit) interest rate. The second series, representing approximately US\$1,900 million at issuance, matures in 2013 and bears interest at the Brazilian CDI interest rate plus 0.25% per year. At 30 June 2010, the total outstanding amount of these two series was US\$3,053 million.

Perpetual notes (US\$78 million at 30 June 2010). We have issued perpetual notes that are exchangeable for 48 billion preferred shares of the Brazilian bauxite producer 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\$4,312 million at 30 June 2010). We have outstanding debt, principally owed to BNDES and Brazilian commercial banks denominated in Reais and other currencies. Part of the debt we owe to BNDES is constituted by two sets of debentures held by BNDESPAR. The first series was issued on 17 December 2007 with an aggregate nominal value of approximately R\$665 million and the second series issued on 15 October 2009 has an aggregate nominal value of approximately R\$385 million. The debentures in each series may be exchanged at the option of their holder in their entirety, or only in part, at any time from the date falling eleven years after the date of issue for common shares in FNS on the basis of a pre-determined formula for exchange.

## Indebtedness

As of 30 June 2010, the Group had outstanding long-term debt of US\$23,083 million, including accrued charges, the details of which are set forth in the table below:

	Parent Company primary obligation and Parent Company guaranteed (US\$ million)	Not Parent Company guaranteed (US\$ million)	Total (US\$ million)
Debt securities	12,502 <sup>(1)</sup>	1,100	13,602
Term loans	8,794 <sup>(2)</sup>	605	9,399
Other borrowing	0	82	82

#### Notes:

<sup>(2)</sup> Comprises US\$4,576 million by way of Parent Company primary obligation and US\$4,218 million by way of Parent Company guarantee only.

	Secured	Unsecured	Total
	(US\$ million)	(US\$ million)	(US\$ million)
Debt securities	0	13,602	13,602
Term loans	3	9,396	9,399
Other borrowing	0	82	82

As of 30 June 2010, US\$3 million of the Group's debt was secured by liens over some of the Group's assets.

As of 30 September 2010, which is the latest practicable date for the purposes of this indebtedness statement, the Group had outstanding long-term debt of US\$24,372 million, including accrued charges, the details of which are set forth in the table below:

	and Parent Company primary obligation and Parent Company guaranteed (US\$ million)	Not Parent Company guaranteed (US\$ million)	Total (US\$ million)
Debt securities	14,742 <sup>(1)</sup>	1,100	15,842
Term loans	7,823 <sup>(2)</sup>	624	8,447
Other borrowing	0	82	82

#### Notes:

<sup>(1)</sup> Comprises US\$4,677 million by way of Parent Company primary obligation and US\$7,825 million by way of Parent Company guarantee only.

<sup>(1)</sup> Comprises US\$5,133 million by way of Parent Company primary obligation and US\$9,609 million by way of Parent Company guarantee only.

<sup>(2)</sup> Comprises US\$4,866 million by way of Parent Company primary obligation and US\$2,957 million by way of Parent Company guarantee only.

	Secured	Unsecured	Total
	(US\$ million)	(US\$ million)	(US\$ million)
Debt securities	0	15,842	15,842
Term loans	3	8,444	8,447
Other borrowing	0	82	82

As of 30 September 2010, the latest practicable date for the purposes of the indebtedness statement, US\$3 million of the Group's debt was secured by liens over some of the Group's assets.

### Shareholders' debentures

At the time of the first stage of our privatisation 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-privatisation 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 privatisation. 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 privatisation, 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 2009 consolidated financial statements included in Appendix I to this Listing Document for a description of the terms of the debentures.

### Capital Expenditures and Commitments

We have an extensive programme of investments in the organic growth of our businesses.

During 2009, we made capital expenditures and other investments of US\$9,013 million, of which US\$6,855 million was on organic growth, while US\$2,157 million was invested in maintaining existing operations. Research and development expenditures are treated as current expense for accounting purposes.

For 2010, we have budgeted US\$12,894 million for capital expenditures. This amount includes expenditures on project development as well as maintenance of existing operations, and research and development, which are headed as current expenses for accounting purposes. Our actual capital expenditures may differ from the budgeted amount for a variety of reasons, including changes in exchange rates. In the first half of 2010, we spent US\$4,533 million on capital expenditures, excluding acquisitions.

The allocation of total expenditures in 2009 and in the six months ended 30 June 2010 is set forth in the following table.

	2009 expenditures	Six months June	
	(US\$ million)	(US\$ million)	(% of total)
Organic growth	6,855	3,693	81.5
Project execution	5,845	3,234	71.4
Research and development	1,010	458	10.1
Investments to support existing operations	<u>2,158</u>	840	18.5
Total	<u>9,013</u>	<u>4,533</u>	100.0

The following table summarizes by major business area the breakdown of our capital expenditures in 2007, 2008 and 2009, and for the six months ended 30 June 2010.

	20	07	20	08	200	09	Six months ended 30 June 2010		
	(US\$ million)	(% of total)	(US\$ million)	(% of total)	(US\$ million)	(% of total)	(US\$ million)	(% of total)	
Ferrous minerals Non-ferrous	1,748	15.9	2,171	21.3	2,124	23.6	1,193	26.3	
minerals	3,988	36.2	4,614	45.3	3,144	34.9	1,453	32.1	
Logistics services	977	8.9	1,952	19.2	1,985	22.0	893	19.7	
Coal	169	1.5	392	3.8	564	6.3	384	8.5	
Power generation	165	1.5	406	4.0	688	7.6	295	6.5	
Steel	279	2.5	146	1.4	184	2.0	71	1.6	
Other	298	2.7	510	5.0	324	3.6	244	5.4	
Acquisitions	3,379	30.7		_=		_=		_=	
Total	11,004	100	10,191	100.0	9,013	100.0	4,533	100.0	

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.

		Actual <sup>(1)</sup>	Bud	geted
Business area	Project	2009	2010	Total <sup>(2)</sup>
		(US	\$ millio	n)
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	_	78	975
	Conceição Itabiritos iron ore mine	7	184	1,174
	Tubarão VIII pellet plant	208	122	636
	Oman pellet plant and iron ore distribution centre	344	484	1,356
	Teluk Rubiah maritime terminal and distribution centre	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

<sup>(1)</sup> All figures presented on a cash basis.

<sup>(2)</sup> Estimated total capital expenditure cost for each project.

On 28 October 2010 we announced that the Board of Directors had approved the investment budget for 2011, including capital expenditures of US\$24,000 million dedicated to sustaining existing operations, research and development and project execution.

### **Contingent Liabilities**

The total amount of any contingent liabilities of the Group as at 30 June 2010 was US\$1,967 million, as discussed in Note 21 to our financial statements for the period ended 30 June 2010 included in Appendix I to this Listing Document.

The total amount of any contingent liabilities of the Group as at 30 September 2010, the latest practicable date for the purposes of the indebtedness statement, was US\$2,028 million, as discussed in Note 17 to our financial statements for the period ended 30 September 2010 included in Appendix II to this Listing Document.

In connection with a tax-advantaged lease financing arrangement sponsored by the French Government, our Company provided certain guarantees on behalf of Vale Nouvelle — Calédonie S.A.S. (VNC) pursuant to which our Company guaranteed payments due from VNC of up to a maximum amount of US\$100 million (Maximum Amount) in connection with an indemnity. Our Company also provided an additional guarantee covering the payments due from VNC of (a) amounts exceeding the Maximum Amount in connection with the indemnity and (b) certain other amounts payable by VNC under a lease agreement covering certain assets.

Two bank guarantees totalling €43 million were established by our Company on behalf of VNC in favour of the South Province of New Caledonia in order to guarantee the performance of VNC 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 VNC, has a put option to sell our Company 25%, 50%, or 100% of the shares they own in VNC. 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.

Our Company provided a guarantee covering certain termination payments due from VNC to the supplier under an electricity supply agreement (ESA) entered into in October 2004 for the VNC 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 VNC and the date on which an early termination of the ESA were to occur. During the first quarter of 2010, the supply of electricity under the ESA to the project began, and the guaranteed amount now decreases over the life of the ESA from its maximum amount. As at 30 June 2010, the guaranteed amount was €131 million (US\$160 million).

As of 30 June 2010, there was an additional US\$108 million of letters of credit issued and outstanding and US\$42 million 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.

### Disclaimer

Save as aforesaid or as otherwise disclosed herein and apart from intra-group liabilities, the Group did not have any debt securities issued and outstanding, or authorised or otherwise created but unissued, term loans, bank loans and overdrafts, borrowings or indebtedness in the nature of borrowing, finance lease or hire purchase commitments, liabilities under acceptance or acceptance credits, mortgages, charges, guarantees or other contingent liabilities outstanding as at the close of business on 30 September 2010, the latest practicable date for the purposes of the indebtedness statement.

# Working Capital

Taking into account the available credit facilities and cash flows from operations, the Directors confirm that the Group has sufficient working capital for 125% of the Group's present requirements, that is for at least the next 12 months from the date of this Listing Document.

### **Key Financial Ratios**

The following tables set out the Group's key financial ratios during the Track Record Period:

		For the year ended/As at 31 December			For the six months ended/As at 30 June	
Financial ratios	Formulae	2007	2008	2009	2010	
Liquidity ratios:						
Current ratio	current assets/current					
	liabilities	1.13	3.21	2.32	2.05	
Quick ratio	(current assets - inventories)/current					
	liabilities	0.75	2.67	1.97	1.74	
Profitability ratios:						
Return on equity ratio	net income/stockholders'					
	equity	0.36	0.31	0.09	0.09	
Return on assets ratio	net income/total assets	0.15	0.17	0.05	0.05	
Gearing ratios:						
Debt/EBITDA		1.21	0.96	2.49	2.75	
EBITDA/Interest Exp		11.71	15.93	10.25	16.66	

### Current ratio/Quick ratio

Position as at 31 December 2008 compared with the position as at 31 December 2007

The significant increase in the current and quick ratios between 31 December 2007 and 31 December 2008 was mainly due to the increase in our current assets in the intervening period. This reflected the increase in cash and cash equivalents and short-term investments during that period due primarily to the funds obtained through our public offering of securities in 2008.

Position as at 31 December 2009 compared with the position as at 31 December 2008

The reduction in current assets between 31 December 2008 and 31 December 2009 mainly reflected the increased volume of funds raised in 2008 through a public offering of securities (and the subsequent expenditure of those funds in 2009) and the increase in current liabilities reflected long-term loans being reclassified under current liabilities due to repayment in accordance with their terms falling due within the succeeding 12 months. The combined effect of reduced current assets and increased current liabilities depressed the liquidity ratios in this period.

Position as at 30 June 2010 compared with the position as at 31 December 2009

The decrease in the current and quick ratios between 31 December 2009 and 30 June 2010 was mainly due to a decrease in cash and cash equivalents and short term investments partially offset by an increase in net assets held for sale represented by our aluminium business.

# Return on equity ratio

This ratio is based on net income/stockholders' equity. The consolidated financial results of our Company in 2009 reflected the effects of the global recession and, as a consequence, net income decreased from US\$13,218 million in 2008 to US\$5,349 million in 2009 and the return on equity ratio decreased accordingly. In 2009, stockholders' equity increased due to the issue of mandatory

convertibles, which further depressed the return on equity ratio. The return on equity ratio remained unchanged between 31 December 2009 and 30 June 2010.

### Return on assets ratio

This ratio is based on net income/total assets. The net income decrease in the year to 31 December 2009 when compared to the year to 31 December 2008 and the consequent depression of the return on assets ratio was due mainly to the factors explained in "Return on equity ratio" above. Total assets reflected the increase within non-current assets from US\$48,454 million as at 31 December 2008 to US\$67,637 million as at 31 December 2009 to US\$72,616 million as at 30 June 2010 constituted by the increase in fixed assets due mainly to the acquisition of companies. During 2009 we acquired Mineração Corumbá Reunidas S.A. and in the first six months of 2010 we acquired Vale Fosfatados S.A. and a majority of the equity capital of Vale Fertilizantes. The return on assets ratio remained unchanged between 31 December 2009 and 30 June 2010.

## Gearing ratios

On 31 December 2009, debt leverage, as measured by total debt/EBITDA, increased to 2.49x, compared to 0.96x and 1.21x as at 31 December 2008 and 31 December 2007, respectively. The higher leverage reflected the effects of the global recession on our earnings performance and the increase in total debt due to the issue of loan notes in aggregate nominal principal amount at issue of US\$1,000 million in 2009 and €750 million in the first six months of 2010.

### Risks affecting the Group's Financial Results

We have developed our risk management strategy with the objective of providing an integrated view of risks to which we are exposed. 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 the impact of interest rates, exchange rates, commodity prices and supplies and other costs of our business results (market risk), but also risks arising from third party obligations (credit risk) and risks inherent in our operational processes (operational risk).

Traditional metrics for measuring market risk such as VaR (Value at risk) are not sufficient to assess the different types of exposure of our Company, as in our case, the main goal is to avoid situations of financial distress such as a breach of covenants or, more directly, liquidity problems that make it difficult to honour future commitments. Our Company manages the probability of breaking of covenants of its debt, which could accelerate their payment, as well as the likelihood of using additional credit lines in extreme conditions.

In furtherance of the objective of our risk management strategy, the 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 the Latest Practicable Date, the members of the risk management committee were: Guilherme Perboyre Cavalcanti, Chief Financial and Investor Relations Officer; Jose Carlos Martins, Executive Officer responsible for Marketing, Sales & Strategy; Tito Botelho Martins Junior, Executive Officer responsible for Basic Metals Operations; Mauro Neves, Planning, Development & Continuous Improvement Director; and Pedro Zinner, Global Head of Treasury and Finance.

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, foreign exchange rates, product prices and input prices.

We recognise all derivatives on our balance sheet at fair value, and the gain or loss in fair value is recognised in our current earnings, except as described in the next paragraph. Fair value accounting of 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 2010, we implemented hedge accounting partially for aluminium and nickel derivatives and for a foreign exchange 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 recognised 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 recognised in the income statement, as otherwise required.

We have contracts subject to margin calls only for part of the nickel and copper trades executed by Vale Canada. The total cash amount as of 30 June 2010 was not material.

The asset (liability) balances at 30 June 2010; 31 December 2009; and 31 December 2008 and the movement in fair value of derivative financial instruments are shown in the following table:\*

	Interest rates/ (LIBOR)/	Aluminium	Copper/					Fuel/ natural	
	currencies	products	coal	Nickel	Platinum	Gold	Freight	gas	Total
				US\$ mi	llion				
Fair value at 1 January 2008	632	(98)	(188)	42	(24)	(36)	0	(6)	322
Financial settlement	(394)	120	173	38	27	41	0	0	5
Unrealised gains (losses) in the year	(686)	(18)	(29)	(46)	(6)	(30)	0	4	(811)
Effect of exchange rate changes	(123)	_(4)	44	(2)	3	25	_0	_0	(57)
Unrealised gain (losses) at									
31 December 2008	<u>(571</u> )	0	0	32	0	0	0	(2)	(541)
Fair value at 1 January 2009	(571)	0	0	32	0	0	0	(2)	(541)
Financial settlement	(241)	5	0	139	0	0	(37)	(11)	(145)
Unrealised 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	(8)
Unrealised gain (losses) 31 December									
2009	<u>870</u>	<u>(87)</u>	0	(28)	0	0	29	49	833
Fair Value at 1 January 2010	870	(87)	0	(28)	0	0	29	49	833
Financial settlement	(174)	42	0	51	0	0	(20)	(23)	(124)
Unrealised gain (losses) in the year	(172)	42	(3)	0	0	0	(19)	(14)	(166)
Effect of exchange rate changes	(26)	2	0	3	0	0	_0	(2)	(23)
Unrealised gain (losses) at 30 June									
2010	<u>498</u>	<u>(1)</u>	<u>(3)</u>	<u>26</u>			<u>(10</u> )	10	<u>520</u>

<sup>\*</sup> The balances of aluminium products and US\$57 of swap derivatives included in "Interest rates/(LIBOR)/Currencies", belong to Albras which is currently classified as held for sale.

# 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 organisation 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 and the TJLP.

The following table sets forth our floating and fixed rate long-term debt, categorised by 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.

			At 30 June						
	200	7	200	2008 20			201	2010	
			(US\$ m	illion, exce					
Floating rate debt:									
<i>Real</i> -denominated	5,071	27.4%	4,374	24.5%	6,949	30.8%	7,361	32.3%	
Denominated in other									
currencies	6,272	<u>33.8</u> %	6,612	<u>37.0</u> %	6,764	<u>30.0</u> %	5,793	<u>25.4</u> %	
Subtotal	11,343	61.2%	10,987	61.5%	13,713	60.8%	13,154	57.7%	
Fixed rate debt:									
<i>Real</i> -denominated	1	0%	1	0%	0	0%	0	0%	
Denominated in other									
currencies	7,180	<u>38.8</u> %	6,868	<u>38.5</u> %	8,830	<u>39.2</u> %	9,649	<u>42.3</u> %	
Subtotal	18,525	100%	17,857	100%	22,544	100%	22,803	100%	
Accrued charges	331		311		287		280		
Total	18,856		18,168		22,831		23,083		

The following table provides information about our debt obligations. 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 the dates indicated. Actual cash flows of these debt obligations are denominated mainly in U.S. Dollars or Reais, as indicated.

	Weighted average interest rate <sup>(1)(2)</sup> (%)	2010	2011	2012	2013		<u>To 2039</u> IS\$ millior	Total_ n)	Fair value cash flow at 31 December 2009 <sup>(3)</sup>	Fair value cash flow at 30 June 2010
US\$-denominated										
Fixed rate:										
Bonds	6.81	3	6	402	124	0	7,961	8,495	8,871.9	9,208
Loans	7.18	2	8	0	0	0	36	45	39.3	45
Securitisation notes	0	0	0	0	0	0	0	0	164.9	0
Floating rate:										
Loans	1.77	118	340	108	87	68	365	1,085	2,591.5	1,419
Trade finance	1.25	<u>1,250</u>	2,025	375	400	0	500	4,550	4,190.1	4,875
Subtotal		1,372	2,378	885	610	68	8,862	14,175	15,857.8	15,547
Real-denominated										
Floating rate loans	8.91	863	71	160	2,400	780	2,774	7,049	6,724.0	7,174
Subtotal		863	71	160	2,400	780	2,774	7,049	6,724.0	7,174
Denominated in other currencies										
Fixed rate loan	7.38	3	2	2	1	1	183	191	144.2	191
Fixed rate Eurobonds	4.43	0	0	0	0	0	918	918	0	1,029
Floating rate loan	4.08	9	12	8	9	8	33	80	243.5	79
Subtotal		12	14	10	10	9	1,134	1,189	387.7	1,299
No maturity						_	390	390	372.8	390
Total		2,248	2,463	1,055	3,021	857	13,160	22,803	23,342.3	24,410

#### Notes:

- (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.
- (3) Includes only long-term debt obligations.

As of 30 June 2010, the total principal amount and interest of our *Real*-denominated debt converted through swaps into U.S. Dollars was US\$6.4 billion and the total principal amount and interest of our Euro-denominated debt converted through swaps into U.S. Dollars was US\$612 million, with an average cost in U.S. Dollars of 4.46% per year after swap transactions and with maturity until September 2029. 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 when compared to the reference debt instrument, 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 programme 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, our Company 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).

	N	otional				Fair value	
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009
<del></del>	(R\$/U	ISD million)				(US	\$ million)
Swap CDI vs. fixed rate swap							
Receivable	R\$7,589	R\$7,574	CDI	101.02%	2015	5,265	4,630
Payable	USD3,670	USD3,670	USD	5.60%	2013	<u>(4,786</u> )	(3,997)
Net						479	633
Swap CDI vs. floating rate swap							
Receivable	R\$ 792	R\$ 792	CDI	102.07%	2015	455	477
Payable	USD 430	USD 430	Libor	1.31%	2013	(444)	(424)
Net						11	52

# Protection programme 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. Due to market liquidity constraints in respect of TJLP derivatives, some derivative transactions were made through CDI for equivalence.

	N	otional				Fair value			
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009		
<del></del>	(R\$/U	SD million)				(US	\$ million)		
Swap TJLP vs. fixed rate swap									
Receivable	R\$2,205	R\$2,031	TJLP	1.41%	2019	1,040	1,060		
Payable	USD1,135	USD1,048	USD	3.15%	2019	(1,087)	(982)		
Net						(47)	77		
Swap TJLP vs. floating rate swap									
Receivable	R\$ 710	R\$ 658	TJLP	0.92%	2019	326	354		
Payable	USD 382	USD 385	Libor	Libor - 1.14%	2019	(342)	(323)		
Net						(16)	31		

## Protection programme for Foreign Exchange for the first half of 2010

Between May and June, we entered into swap transactions to protect against market changes of the foreign exchange rate between U.S. Dollars and *Reais* in order to reduce cash flow volatility due to foreign exchange for our mandatory convertibles. In these swaps, we paid a fixed rate in U.S. Dollars and received a fixed rate in *Reais*. On the maturity date, 14 June 2010, we received R\$67 million.

In March 2010, we entered into a similar swap transactions in order to reduce cash flow volatility due to foreign exchange in relation to our Euro note issue. These short-term swaps were executed and settled in March 2010, when we received R\$3.6 million.

### Foreign exchange cash flow hedge — Company

In order to reduce cash flow volatility, we entered into swap transactions to mitigate the foreign exchange exposure that arises from the currency mismatch between our revenues denominated in U.S. Dollars and disbursements and investments denominated in *Reais*.

Notional						Fair value		
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009	
(R\$/USD million)						(US\$ million)		
Receivable	R\$3,981	R\$1,964	Fixed	7.95%	2011	2,263	1,117	
Payable	USD2,180	USD1,110	USD	0.00%	2011	(2,168)	(1,096)	
Net						95	21	

# Foreign exchange cash flow hedge-Albras

In order to reduce cash flow volatility, we entered into swap transactions to mitigate the foreign exchange exposure that arises from the currency mismatch between revenues denominated in U.S. Dollars and disbursements and investments denominated in *Reais*.

Notional						Fair value		
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009	
<del></del>	(R\$/U	SD million)				(US\$ million)		
Receivable	R\$914	R\$711	Fixed	7.25%	2011	521	401	
Payable	USD471	USD359	USD	0.00%	2011	<u>(464</u> )	(349)	
Net						57	52	

# Foreign exchange protection programme on cash flow

In order to reduce cash flow volatility, we entered into non-deliverable forward transactions to mitigate the foreign exchange exposure that arises from the currency mismatch between revenues denominated in U.S. Dollars and disbursements and investments denominated in *Reais*.

	N	otional				Fa	ir value
Flow	30 June 2010	31 December 2009	Buy/Sell	Average rate	Final maturity	30 June 2010	31 December 2009
<u> </u>	(US	D million)	(BRL/USD)			(US\$ million)	
Forward	USD60	USD60	S	1.8425	2010	0.4	(0.1)

# Protection programme for Euro-denominated floating rate debt

In order to reduce cash flow volatility, we entered into a swap transaction to convert cash flows from loans in Euros linked to EURIBOR to U.S. Dollars linked to LIBOR. This trade *was* used to convert the cash flow of a debt in Euros, with an outstanding notional amount of €3.6 million, issued in 2003. In this trade, we receive floating rates in Euros (EURIBOR) and pay floating rates in U.S. Dollars (LIBOR).

Notional						Fair value	
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009
	(€/U	D million)				(US	\$ million)
Receivable	€4	€5	EUR	Euribor+0.875%	2011	4.4	6.9
Payable	USD4	USD5	USD	Libor+1.0425%	2011	<u>(4.1)</u>	(5.2)
Net						0.3	1.7

# Fair Value hedge programme for the Euro denominated fixed rate debt

In order to hedge the volatility of debt costs to U.S. Dollars, we entered into a swap transaction to convert the cash flows from loans in Euros linked to fixed rates to U.S. Dollars linked to fixed rates. We receive fixed rates in Euros and pay fixed rates in U.S. Dollars. This trade was used to convert part of the cash flow of a debt in Euros, with an outstanding notional amount of €750 million, issued in 2010 by our Company.

Notional						Fair value	
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009
<del></del>	(€/US	D million)				(US	\$ million)
Receivable	€500	_	EUR	4.38%	2014	680	0
Payable	USD675	_	USD	4.71%	2014	<u>(758</u> )	<u>0</u>
Net						<u>(78)</u>	<u>0</u>

# Protection programme for US\$ floating rate debt

Our wholly-owned subsidiary Vale Canada 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 Canada pays fixed rates in U.S. Dollars and receives floating rates in LIBOR.

Notional						Fa	ir value
Flow	30 June 2010	31 December 2009	Index	Average rate	Final maturity	30 June 2010	31 December 2009
	(USI	D million)				(US\$ million)	
Receivable	USD125	USD200	USD	3M Libor	2011	126	149
Payable	_	_	USD	4.80%	(132)	<u>(157</u> )	_
Net						<u>(6</u> )	(8)

### Foreign exchange protection programme 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 equalise production cost and revenue currencies exposure.

Notional							Fair value		
Flow	30 June 2010	31 December 2009	Buy/Sell	Average rate	Final maturity	30 June 2010	31 December 2009		
	(AU	D million)	(AUD/USD)			US\$ million			
Forward	AUD13	AUD41	В	0.6610	2011	2	9		

## 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;
- 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, copper, PGMs and other precious metals are sold in an active global market and traded on commodity exchanges such as LME and NYMEX. The prices of those metals are subject to significant fluctuations and are affected by many factors, including macroeconomic conditions and real and expected policies, levels of supply and demand, availability and cost of substitutes, inventory levels, investments by commodity funds and other actions by participants in the commodities market.

### Aluminium strategic cash flow hedging programme

In order to reduce cash flow volatility in 2010, we entered into hedging transactions that effectively fix aluminium prices for part of our sales for this period.

				Fair value			
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
		(ton)		(USD/ton)		(US	\$ million)
Put	60,000	120,000	В	1,940	2010	5	9
Call	60,000	120,000	S	2,073	2010	<u>(4</u> )	<u>(36)</u>
Net						<u>1</u>	<u>(27)</u>
Forward	60,000	120,000	S	1,945	2010	<u>(2)</u>	<u>(37)</u>

## Nickel strategic cash flow protection programme

In order to reduce cash flow volatility in 2010, we entered into hedging transactions that effectively fix nickel prices for part of our sales for this period.

Notional							ir value
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
		(ton)	(USD/ton)			(US\$ million)	
Forward	14,706	29,122	S	17,890	2010	<u>(27</u> )	(21)

# Nickel sales hedging programme

In order to reduce cash flow volatility in 2010 and 2011, we implemented hedging transactions. These transactions fixed the prices of part of the sales in the period.

Notional						Fa	ir value
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
		(ton)		(USD/ton)		(US	\$ million)
Forward	19,500	_	S	21,869	2011	42	$\equiv$

### Nickel fixed price programme

In order to maintain exposure to nickel price fluctuations, we entered into derivatives to convert to floating prices all contracts with clients that required a fixed price. These trades aim to guarantee that the prices of these operations would be the same as the average prices negotiated on LME on the date the product is delivered to the client. It normally involves buying nickel forwards (over-the-counter) or futures (exchange negotiated). These operations are usually reverted before the maturity in order to match the settlement dates of the commercial contracts in which the prices are fixed. Whenever the nickel strategic cash flow protection programme or the nickel sales hedging programme is executed, the nickel fixed price programme is interrupted.

	Notional						
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
	(ton)		(USD/ton)			(US\$ million)	
Nickel Futures	1,986	3,426	В	14,428	2012	11	12

## Coal sales protection programme

In order to reduce cash flow volatility for 2010, we entered into hedging transactions to fix the price of a portion of coal sales in the period.

	N	otional			Fa	ir value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
	(metric tons)			(USD/metric ton)		(US\$ million)	
Forward	210,000	_	В	82	2010	(2.2)	<u> </u>

# 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

Energy costs are a significant component of our cost of production, representing 15.6% of our total cost of goods sold in 2009. To fulfil 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 and nickel businesses.

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

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.

We are developing hydroelectric and thermal power plants and engaging in natural gas exploration programmes in order to increase our energy production and reduce our future exposure to energy price and supply volatility.

# Acquisition of products

### Nickel purchase protection programme

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 utilised 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.

Notional							ir value
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
<del></del>	(ton)		(USD/ton)			(US\$ million)	
Nickel Futures	1,152	1,446	S	20,132	2010	0.6	<u>(2)</u>

# Bunker oil purchase protection programme

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.

Notional							ir value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009	
<del></del>	(me	etric tons)		(USD/metric ton)		(US\$ million)		
Forward	270,000	452,000	В	410	2011	8.9	<u>45</u>	

## Maritime freight hiring protection programme

In order to reduce the impact of price fluctuation of maritime freight hired to support CIF and CFR sales and consequently reduce cash flow volatility, freight derivatives (FFA — forward freight agreements) were implemented. These transactions are usually executed through forward purchases.

	Notional					Fair value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
	(days)		(USD/day)			(US\$ million)	
Forward	3,496	6,125	В	30,634	2010	<u>(14</u> )	29

## Copper scrap purchase protection programme

This programme was implemented in order to reduce cash flow volatility due to the quotation period mismatch between the pricing period of copper scrap purchase and the pricing period of final products sale to clients, as the copper scrap is combined with other raw materials or inputs to produce copper. This programme is usually implemented by the sale of futures on LME or by forwards through Over-the-Counter operations.

	Notional					Fair value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
	(lbs)		(USD/lbs)			(US\$ million)	
Forward	902,825	_	В	3	2010	0.3	_

### Embedded derivatives

### Energy purchase

An energy purchase agreement between Albras and Eletronorte contains a clause that defines that a premium can be charged if aluminium prices trades in the range from US\$1,450 per ton to US\$2,773 per ton. This clause is considered as an embedded derivative.

	N	otional					Fair value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009	
		(ton)	(USD/ton)			(US\$ million)		
Call	200,228	200,228	В	2,773	2012	2	26	
Call	200,228	200,228	S	1,450	2012	<u>(71</u> )	<u>(172</u> )	
Total						<u>(69</u> )	<u>(146</u> )	

Raw material and intermediate products purchase

Our wholly-owned subsidiary Vale Canada has embedded derivatives in purchase agreements for nickel concentrate and raw materials that are linked to nickel and copper future prices.

	N	otional				Fair value	
Flow	30 June 2010	31 December 2009	Buy/Sell	Average strike	Final maturity	30 June 2010	31 December 2009
	(ton)		(USD/ton)			(US\$ million)	
Nickel Forwards	1,383	440	S	22,533	2010	4.4	0.2
Copper Forwards	5,603	3,463		7,079	2010	3.3	<u>(1.0</u> )
Total						7.8	<u>(0.8)</u>

### 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 analyses 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.

### **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, our 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.

## **Dividends and Dividend Policy**

Under our dividend policy, the Board of Executive Officers shall announce, no later than 31 January in each year, a proposal to be submitted to the Board of Directors regarding the minimum dividend, expressed in U.S. Dollars, that will be declared according to our Company's expected performance in the year of distribution. The proposal will comprise payment in two semi-annual instalments, in the form of dividends and/or interest on shareholders' equity, to be paid in April and October, respectively of the year of distribution. If approved by the Board of Directors, dividends are converted from U.S. Dollars into and paid in *Reais* at the Brazilian *Real/*U.S. Dollar exchange rate (*Ptax* — option 5) announced by the Central Bank of Brazil on the last business day in Brazil before the Board meeting that will decide upon the declaration and payment of dividends. The Board of Executive Officers can also propose to the Board of Directors, depending on our cash flow performance, an additional payment to Shareholders of an amount over and above the minimum dividend initially established. If approved by the Board of Directors, this extra instalment will be paid together with either of the other two instalments previously declared.

For 2010, the Board of Executive Officers has proposed a minimum dividend of US\$2,500 million. Assuming the total amount of dividend is sufficient to comprise an aggregate amount, equivalent to the amount of the preferential dividend payable on the Preferred Shares paid in respect of all of the Shares, we pay the same amount per share on both Common Shares and Preferred Shares in accordance with the By-laws. The first instalment of this dividend of US\$1,250 million was paid on 30 April 2010.

On 23 September 2010, we announced that the Board of Executive Officers had approved and would submit to the Board of Directors for approval:

- payment of the second instalment of this dividend of US\$1,250 million;
- payment of an additional dividend of US\$500 million; and
- payment of an extraordinary dividend of US\$1,000 million.

The payment of the second instalment and the additional dividend was made on 29 October 2010.

The proposal for the payment of an extraordinary dividend of US\$1,000 million will be evaluated by the Board of Directors in the meeting scheduled for 14 January 2011 and, if approved, payment will be made on 31 January 2011.

Under Brazilian law and the By-laws, we are required to distribute to Shareholders an annual amount equal to not less than 25% of the distributable amount referred to as the minimum dividend, unless the Board of Directors advises Shareholders at our Shareholders' meeting that payment of that amount is inadvisable in light of our financial condition. Under Brazilian law, we are required to hold an annual Shareholders' meeting by April 30 of each year at which an annual dividend can be declared. Additionally, the Board of Directors might declare interim dividends.

For a discussion of dividend distribution provisions under Brazilian corporate law and the Bylaws, please see Appendix V to this Listing Document.

For further information on the logistics of distributions for HDR Holders, please see the section in this Listing Document headed "Listings, terms of Depositary Receipts and Depositary Agreements, registration, dealings and settlement.".

### **Distributable Reserves**

As at 30 June 2010, our Company had US\$23,880 million in reserves available for distribution to Shareholders.

## No Material Adverse Change

The Directors confirm that there has been no material adverse change in the Group's financial or trading position or prospects since 30 June 2010, being the date of the Group's latest audited financial statements included in Appendix I to this Listing Document.

# **Cash Operating Costs**

Our Company has obtained a waiver from the inclusion of an estimate of the operating cash cost per appropriate unit for its minerals produced for the purposes of Listing Rule 18.06. For further details, please see the section in this Listing Document headed "Waivers".

## **Subsequent Events**

On 8 September 2010 we announced the pricing of an offering by our wholly-owned finance subsidiary, Vale Overseas Limited, of:

 US\$1,000 million, 4.625% Guaranteed Notes 2020, bearing a coupon of 4.625% per annum, payable semi-annually and maturing in September 2020; and

 US\$750 million, 6.875% Guaranteed Notes 2039, to be consolidated with and forming a single series with Vale Overseas Limited's US\$1,000 million 6.875% Guaranteed Notes due 2039 issued on 10 November 2009, bearing a coupon of 6.875% per annum, payable semiannually and maturing in November 2039.

On 10 September 2010 we announced the entry into agreements with The Export-Import Bank of China and the Bank of China Limited for the financing to build 12 very large ore carriers. These two institutions will provide a credit line of up to US\$1,229 million, which corresponds to 80% of the amount required to fund the construction of the vessels. The credit line has a thirteen year total term to be repaid, and the funds will be disbursed during the next three years according to the construction schedule.

On 29 September 2010 we announced that we had concluded the acquisition under our contract with The Mosaic Company (Mosaic) of Mosaic's direct and indirect stakes in Vale Fertilizantes, corresponding to 27.27% of the common shares and 16.65% of the preferred shares and to 20.27% of the equity capital of Vale Fertilizantes, for US\$1,029,811,129.77, at the same price per share of our other acquisitions of equity interests in Vale Fertilizantes.

On 4 October 2010 we entered into an agreement with Export Development Canada (EDC) for the financing of our capital expenditure programme. Pursuant to the agreement, EDC will provide a facility in the amount of up to US\$1,000 million. US\$500 million will be available for investments in Canada and the remaining US\$500 million will be available in relation to existing and future purchase of goods and services in Canada.