

Sector: Basic Materials; Industry: Metal Mining

NYSE: RIO

## Introduction:

Companhia Vale do Rio Doce (Vale), created by the Brazilian government in 1942 (and privately run since 1997), is the second largest diversified metals and mining company in the world and the largest publicly traded company in Latin America by market capitalization (approximately US\$ 167 billion).

Vale is the world's largest and lowest-cost producer of iron ore and pellets, key raw materials for the steel industry. Vale also is the world's second largest producer of nickel, which is used to produce stainless steel, batteries, special alloys, chemicals and other products. The company also produces copper, manganese, ferroalloys, bauxite, alumina, aluminum, coal, and other raw materials important to the global industrial sector. In addition, Vale operates a logistics business that owns and operates railroads, shipping ports and power plants in Brazil.

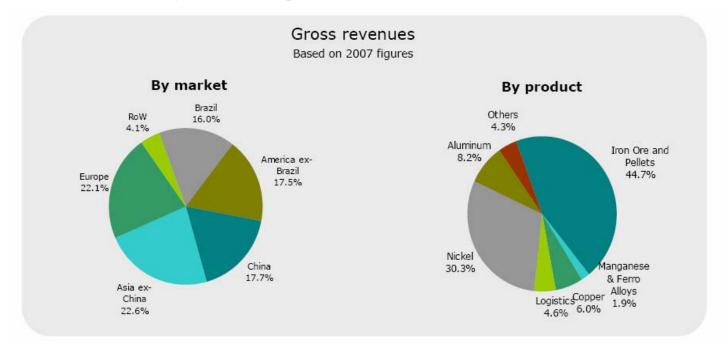
Worldwide economic growth catalyzed Vale's already aggressive growth strategy. Organic growth is due primarily to rapid internal expansion fueled by a significant increase in the world's iron ore consumption in the past 5 years, particularly in China. In addition, **the company is committed to a goal of being a one-stop shop for steel production** and aggressively seeks acquisition candidates to diversify. In 2006, the company acquired Canadian nickel miner Inco, vaulting the company in to the position of the world's second largest nickel miner.

## **Global presence**

Vale is a global company headquartered in Brazil, with a workforce of over 100,000 employees. Vale operates on all continents except Antarctica, through its mining operations, mineral research plants and commercial offices.



## Global presence



# VALE's Revenue by market and product (\$32 billion sales in 2007):

# Positive Influences—Reasons to Buy

- Booming demand! Despite the U.S. slowdown, global steel demand is rising about 5% a year. The China Daily recently reported China's crude steel demand could rise 11% in 2008 alone. Yet, crude steel production in the country is anticipated to only grow 6.3%. China consumes almost half of the world's iron ore. China is Vale's largest client. And Vale is China's largest provider of iron ore.
- ▶ Iron ore prices have almost tripled over the past 5 years
- Vale has a wide economic moat for its iron ore business. Vale negotiates an annual benchmark price for iron ore with Chinese steel makers, which significantly influences the price of iron ore charged by all producers.
- The company is experiencing dramatic growth and has been delivering above average returns relative to its competition
- Vale is the lowest cost producer of iron ore (in no small part due to having the logistics business and controlling some transportation costs), which provides downside protection when demand weakens

# Negative Influences—Reasons for Concern

A US recession will have global repercussions, which will weaken world demand for steel (and any weakening of world demand would diminish Vale's ability to negotiate increases in iron ore prices).

- Vale's dependence on China as a consumer of its iron ore leaves it vulnerable to a Chinese economic slowdown
- Big capital expenditures coming: The Company recently announced a huge capital expenditure program--\$60 billion over 5 years—for rapid expansion of production in all mineral areas
- Big acquisition costs likely: With its goal of looking for acquisition candidates, the costs could be steep-- the industry is in "consolidation frenzy."
- The company's efforts to diversify away from iron ore could reduce profits and its competitive advantage. In nonferrous metals, Vale isn't clearly the low-cost leader and doesn't wield the pricing power that it does with iron ore.
- The majority of Vale's costs are in Brazillian currency, reals. If the Brazilian currency continues to strengthen (in effect increasing costs) and ore prices fall, the margins will be squeezed.
- Brazil may have some regulatory instability (significant changes in fiscal and international trade policies could hurt the business)
- Cyclical industry

## Competition

The top three players - BHP Billiton, Rio Tinto and Vale - act as an oligopoly, dominating nearly 80% of the seaborne iron ore market (as of 2006).

	Percent of Seaborne <i>(conveyed by ships)</i> Iron Ore, Market %						
	2004	2005	2006	2007			
Vale	34.0%	38.5%	39.6%				
Rio Tinto	19.8%	22.0%	24.4%				
BHP Billiton	16.0%	16.2%	14.2%				
Total	69.8%	76.7%	78.2%				
Ore price increase	17%	71.5%	19%	9.50%			
Ore price index 2003 =100	117	200.7	238.8	261.5			

 Source for market shares: Raw Materials Group quoted in UNCTAD Trust Fund on Iron Ore Information "Iron Ore Market 2006-2008", Geneva, May 2007

## Stock Study by Diane Windingland 4/4/08

BHP Billiton, an Australian company, is the world's largest publicly-traded mining conglomerate. BHP is trying to acquire Rio Tinto (also Australian) for \$130 billion. This merger would reduce competition (only 2 big guys instead of 3), probably causing ore prices to increase even more.

Vale vs. top competitors*	Total Revenue	5-yr Pre- tax profit margin	5-yr ROE
Vale (RIO) 2007	32,242	42.43	47.63
BHP Billiton (BBL) 6/30/07	39,498	35.48	37.74
Rio Tinto (RTP) 2006	22,465	34.41	29.84

\*data from Reuters

## Financial info:

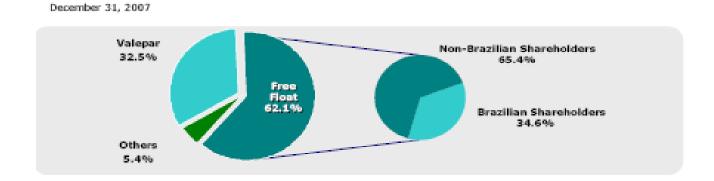
Vale's gross revenue increased six-fold from 2003 to 2007. In 2007, revenue was up 28.8% and earnings were \$2.42, up 62.9%

At the end of 2007, the company has \$19 billion in debt, down from \$22.5 billion in 2006. Management is committed to continue paying down debt. There had been a big jump in debt at the end of 2006 to finance the acquisition of nickel miner, Inco.

## Note on Shareholder Structure:

Shareholding structure

The shareholder structure is complex. The company was privatized in 1997 when the Brazilian government sold it to Valepar, an entity comprised of a consortium of businesses. The company has common, preferred and golden shares owned by the government. Therefore, even though the government owns only 5.5% of Vale's total capital, the golden shares entitle it to special veto power over fundamental changes in Vale's business. Valepar holds about 32.5% of Vale's combined preferred and common shares.



Stock Study by Diane Windingland 4/4/08 Analysts Estimates Valueline—there is no Valueline for this stock

**Morningstar (3/27/2008)**—We expect a 44% increase in revenue in 2008 based on increases in iron ore production and the dramatic price increases negotiated for 2008 iron ore fines and pellets. . .the company's structural advantages should continue to support a long-run operating margin of around 40%. (the Morningstar model assumes a moderation in iron ore price increases over the next 8 years). Morningstar gave the company a 4-star rating, but assigned it a narrow moat because it doesn't have a clear competitive advantage in the non-ferrous half of its business.

**Standard & Poors (3/29/2008)**—21% increase in sales for 2008, with earnings lagging sales due to high interest expense. Estimated earnings of 2.75 for 2008 (which would be a 13.6% earnings growth for 2008). Longer-term (after 2008) prospects are attractive. Given the debt from the Inco merger, and expected increase in capital spending S&P analysts believe that RIO's target P/E should be at a slight discount to its peers. Applying a P/E multiple of 12.4 to earnings estimate of 2.75 gives a target price of \$34 for 2008

## Yahoo consensus

33.7% average annual EPS growth over the next 5 years

## **Reuters consensus**

31.33% Long Term EPS growth

**Company guidance** (2/29/2008 4Q Conference call). They expect 2008 to be "much better" than 2007.

Judgment Notes:

P.A.R. of 12.5% and a Total Return of 17.1% from the following judgments:

3/31/08 I added 4Q2007 raw data.

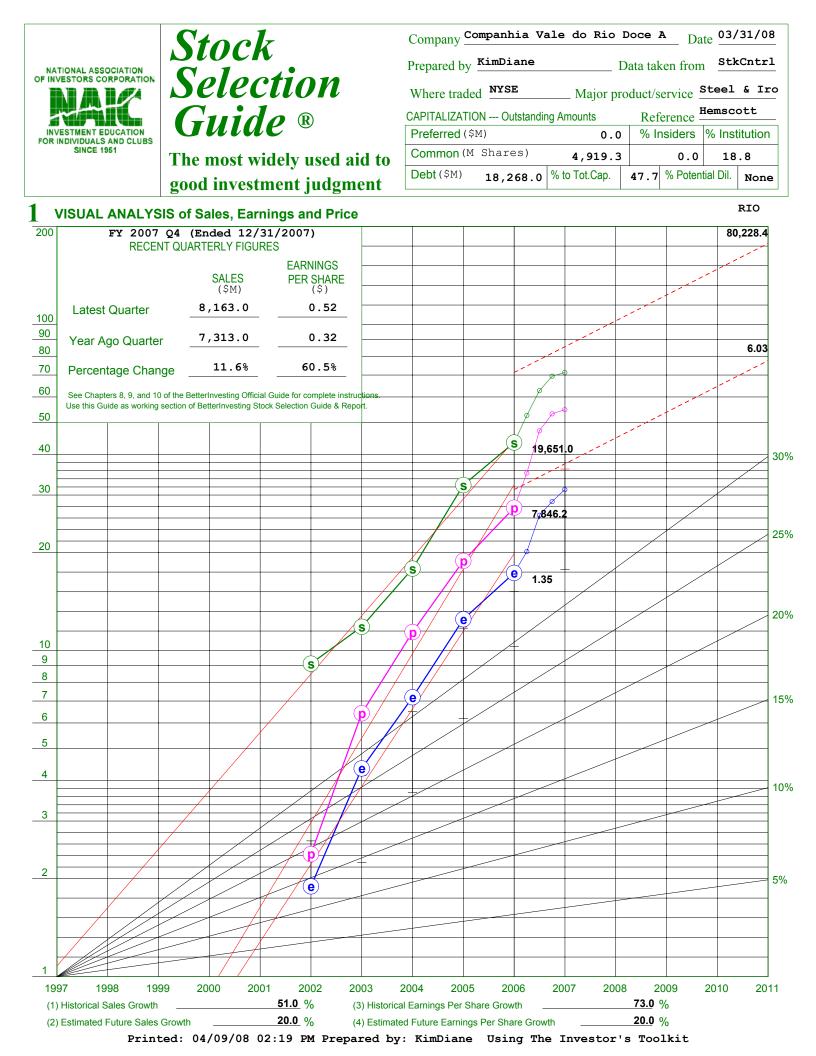
I chose to cap sales and EPS growth at 20, choosing to ignore the recent slower sales 4Q2007. Yahoo's 5-yr EPS growth estimate is 33.7 and Reuters LT growth estimate is 31.33. However, Manifest predicted sales growth at 12%

For High and Low PE, I struck out the highest year, 2002 and took the resulting average (11.3 and 6.5). However, if I use Manifests average of 12 for both the high and low PE, the return is 18.4%.

I used the trailing 4 quarters EPS for the low EPS (2.42).

For the low price, I used the forecasted low (15.7), which was lower than the low for this year.

# My suggestion: Either do not buy at this time or take a small stake. The current price is fairly near the high price.



											1	LACTE		
		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	LAST 5 YEAR AVG.	TF UP	
4	% Pre-tax Profit on Sale (Net Before Taxes ÷ Sal						16.5	34.3	40.4	37.1	39.9	33.7	UP	
3	% Earned on Equity (E/S ÷ Book Value)						18.1	26.0	24.5	28.3	33.0	26.0	UP	
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	2005	11.2		. 9		.97	11.		6.1		0.280	28.9		4.7
	2006	14.5		. 9		.35	10		7.4		0.200	14.9		2.0
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Printed: 04/09/08 02:19 PM Prepared by: KimDiane Using The Investor's Toolkit

## Companhia Vale do Rio Doce

S&P Recommendation	HOLD	$\star$	$\star$	$\star$	$\star$	$\star$
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GICS Sector Materials Sub-Industry Diversified Metals & Mining **Summary** Following its acquisition of Inco in 2007, this Brazilian miner became one of the world's largest nickel producers in addition to being the world's largest iron ore company.

\$101.407

0.94

\$0.32

17

12-Mo. Target Price

\$34.00

Key Stock Statistics (Source S&P, Vickers, company reports)

52-Wk Range	\$38.32- 17.00	S&P Oper. EPS 2008 <b>E</b>	2.75	Market Capitalization(B)
Trailing 12-Month EPS	\$2.28	S&P Oper. EPS 2009 <b>E</b>	NA	Yield (%)
Trailing 12-Month P/E	15.0	P/E on S&P Oper. EPS 2008E	12.4	Dividend Rate/Share
\$10K Invested 5 Yrs Ago	\$174,124	Common Shares Outstg. (M)	4,832.4	Institutional Ownership (%)

#### **Price Performance**



Analysis prepared by Leo J. Larkin on March 11, 2008, when the stock traded at \$ 32.95.

#### Highlights

- Following 2007's gain of 64%, we look for a 21% sales increase in 2008, mostly reflecting a higher average price for iron ore. Our expectation for another rise in the iron ore price is predicated on our view that iron ore supply in 2008 will remain tight relative to demand as we expect global steel production to rise in 2008. At the same time, we see a lower average nickel price assuming less robust demand compared with 2007 and greater nickel supply. We anticipate higher shipment volume in 2008, reflecting gains in iron ore and nickel along with increases in alumina, copper and coal.
- We forecast slight operating margin improvement, mostly reflecting lower costs in nickel operations. However, after continued high interest expense, we anticipate that our projected gain in earnings will lag our expected rise in sales. We estimate earnings per ADS of \$2.75 in 2008, versus earnings per ADS of \$2.42 in 2007.
- Longer term, we see earnings benefiting from increased global steel output, strong secular demand for iron ore, nickel and other base metals, and consolidation of the global mining industry.

#### **Investment Rationale/Risk**

Price

\$34.15 (as of Mar 28, 2008)

- RIO's long-term prospects are attractive, in our view, given what we see as steadily rising demand for iron ore in China together with what we believe is a positive secular outlook for global nickel market supply/demand fundamentals. Over the next 12 months, though, we believe that RIO's P/E valuation will likely trail that of its peers due to the high debt levels necessitated by the acquisition of Inco and its plans to increase capital spending to \$11 billion in 2008. We think this spending could strain free cash flow. That, along with its high debt levels, could limit RIO's ability to buy back shares or implement large dividend increases. With RIO recently trading with little upside potential to our 12-month target price, we would not add to positions.
- Risks to our recommendation and target price include a lower nickel price in 2008 than we currently project.
- Given the debt from the Inco merger along with our expectation for growing strain on free cash flow, we believe that RIO's target P/E should be at a slight discount to peers. On that basis, applying a multiple of 12.4X to our 2008 estimate, we derive our 12-month target price of \$34.

Qualitative	Rick	Assassment	

S&P Credit Rating

**Beta** 

LOW	MEDIUM	HIGH

S&P 3-Yr. Proj. EPS CAGR(%)

**STANDARD** 

2 14

AAA

HIGHEST = 99

43

&POOR'S

Our risk assessment reflects RIO's exposure to highly cyclical demand from the global steel industry and, increasingly, for other base metals. This is offset by RIO's dominant share of the global market for iron ore and its large share of the global nickel market.

Quantitative	Evaluations

S&P 0	S&P Quality Ranking NR									
D	C	B-	В	B+	<b>A</b> -	Α	A+			
Relati	ve Stre	ength I	Rank			S	TRONG			
						86				

#### **Revenue/Earnings Data**

#### Revenue (Million \$)

LOWEST

	10	20	30	40	Year					
2007	7,489	8,899	8,124	8,412	33,115					
2006	3,340	4,146	5,066	7,313	19,651					
2005	2,641	3,536	3,610	3,598	12,792					
2004	1,610	1,920	2,287	2,317	8,066					
2003	1,110	1,170	1,483	1,690	5,350					
2002	953.0	1,027	1,133	1,039	4,123					
Earnings Per ADS (\$)										
2007	0.46	0.85	0.60	0.52	2.42					
0000	0.00	0.00	0.40	0.00	1 05					

2007	0.46	0.85	0.60	0.52	Z.4Z
2006	0.26	0.39	0.40	0.33	1.35
2005	0.15	0.35	0.29	0.26	1.05
2004	0.09	0.11	0.21	0.16	0.56
2003	0.08	0.10	0.10	0.06	0.34
2002	0.06	Nil	-0.03	0.12	0.15

Fiscal year ended Dec. 31. Next earnings report expected: Mid June. EPS Estimates based on S&P Operating Earnings; historical GAAP earnings are as reported.

Dividend Data (Dates: mm/dd Payment Date: mm/dd/yy)				
Amount (\$)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.299		04/17	04/19	05/07/07
2-for-1	08/27	09/13	09/05	09/12/07
0.173		10/19	10/23	11/07/07
D:		0000 0	~	

Dividends have been paid since 2002. Source: Company reports.

## Companhia Vale do Rio Doce

#### Business Summary March 11, 2008

CORPORATE OVERVIEW: Incorporated in 1942 and privatized by the Brazilian government in 1997, Vale (formerly Companhia Vale do Rio Doce) is the world's largest producer of iron ore and pellets for use in steelmaking, and the world's second largest producer of manganese and ferroalloys. RIO also produces bauxite, alumina, and primary aluminum, as well as gold, kaolin, and potash. Following its acquisition of Inco Ltd., RIO is one of the world's largest producers of nickel. Through its ownership and operation of railroads and ports, RIO is the largest provider of transportation and logistics in Brazil. As of December 31, 2006, Valepar S.A. held 53.3% of the company's common shares and 32.5% of its total outstanding capital.

CORPORATE STRATEGY: RIO's plans to use its strength in iron ore and nickel as a platform to enhance its position as one of the world's leading diversified metals and mining companies. The company also seeks to increase its geographical and product diversification. RIO expects capital spending to total \$59 billion from 2008 through 2012 and be \$11.0 billion in 2008. The capital spending program is designed to increase iron ore production to 422 million metric tons by the end of 2012 from 296 million metric tons in 2007. The company expects to boost nickel production to 507,000 metric tons by 2012 from 2007's 247,900 metric tons. RIO also plans substantial increases in the production of alumina, copper, and coal by 2012.

Ferrous products (46.6% of gross revenues in 2007) comprise iron ore mining and pellet production, as well as the Northern and Southern transportation systems, including railroads, ports and terminals, as they pertain to mining operations. Manganese mining and ferroalloys are also included in the segment.

Non-ferrous products (39.3%) include copper, gold, kaolin, nickel, potash, precious metals, platinum group metals and cobalt.

Aluminum products, which include aluminum, alumina and bauxite, accounted for 8.2% of sales.

Logistics services, which includes the operation of rails, shipping and ports, accounted for 4.6% of sales. Other accounted for 0.8% of sales and coal accounted for 0.5%.

Gross revenues by region in 2007 were: Brazil, 16%; U.S., 9%; other Americas, 8.6%; European Union 22.1%; China 17.7%; Japan 11.6%; other Asia 11%; and rest of world 4.0%.

MARKET PROFILE: Mining for base metals is a highly capital intensive business requiring large sums of money to explore for deposits and construct mines once deposits have been discovered. Since the early part of this century, mining costs have risen dramatically. Risks in mining are numerous, and long-term survival and profitability require deep pockets. Since the beginning of the 21st century, the base metals mining industry has become more concentrated as a result of mergers and mining costs have risen substantially.

The company's main competitors in iron ore are BHP Billition and Rio Tinto. These three companies account for some 75% of the seaborne trade in iron ore. Demand for iron ore in recent years has increased dramatically as a result of rising steel production in China. Global production of iron ore in 2006 (latest available data) was some 1.6 billion metric tons.

RIO competes with BHP Billiton, Norilsk Nickel of Russia, ERAMET, Jinchuan Nonferrous Metals and Xstrata in the nickel market. On average, stainless steel production accounts for two thirds of nickel demand. From 1997 to 2006, refined nickel production increased at a CAGR of 3.1%, while refined consumption rose at a CAGR of 3.7%. Global nickel production totaled 1.36 million metric tons in 2006 (latest available data).

UPCOMING CATALYSTS: On March 5, 2008, RIO stated that it was still negotiating to buy Xstrata Plc. The company also stated that it was considering other acquisitions.

FINANICAL TRENDS: From 1999 to 2007, revenues increased at a compound annual growth rate (CAGR) of 34.1%, while earnings per ADR rose at a CAGR of 50.9%. From 2002 to 2007, dividends advanced at a CAGR of 27.7%. From 1999 through 2007, capital spending averaged 400.2% of depreciation, depletion and amortization. For the same period, free cash flow, before acquisitions, dividends and asset sales, increased at a CAGR of 19.3%. We look for a large drop in free cash flow in 2008 from 2007, mostly reflecting sharply higher capital spending.

Each ADS reprsents one ordinary share.

### STANDARD &POOR'S

#### **Corporate Information**

#### Investor Contact

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#### Officers

**Chrmn** S.R. Silva Rosa

#### Vice Chrmn

M. da Silveira Teixeira Junior

#### CEO

R. Agnelli

#### **Board Members**

J. S. Gomes de Almeida E. F. Jardim Pinto A. Magno de Oliveira J. L. Pacheco E. Persson S. R. Silva Rosa H. Tada F. A. da Costa e Silva R. da Cruz Gomes M. da Silveira Teixeira Junior O. A. de Camargo Filho

#### **Domicile** Brazil

Auditor PricewaterhouseCoopers, Rio de Janeiro, Brazil

1942 Employees

Founded

52,646

**Stockholders** NA