United States

Securities and Exchange Commission

Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer

Pursuant to Rule 13a-16 or 15d-16

of the

Securities Exchange Act of 1934

For the month of

October 2012

Vale S.A.

Avenida Graça Aranha, No. 26
20030-900 Rio de Janeiro, RJ, Brazil

(Address of principal executive office)

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.)

(Check One) Form 20-F x Form 40-F o

(Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1))

(Check One) Yes o No x

(Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7))

(Check One) Yes o No x

(Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.)

(Check One) Yes o No x

(If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b). 82- .)

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BM&F BOVESPA: VALE3, VALE5

NYSE: VALE, VALE.P

HKEx: 6210, 6230

EURONEXT PARIS: VALE3, VALE5

LATIBEX: XVALO, XVALP

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FACING THE CHALLENGES

PERFORMANCE OF VALE IN 3Q12

Rio de Janeiro, October 24, 2012 Vale S.A. (Vale) had a financial performance that reflected the challenges stemming from the downward price volatility typically created by a global economic deceleration, which combines the effects of a weaker demand for minerals and metals with negative expectations. Although our main financial indicators softened in comparison with last quarter, they remained solid.

Mining is fundamentally a cyclical industry and is thus exposed to high price volatility. In such environment and in light of prospects of a more moderate expansion of the world economy in the years to come, higher productivity and lower cost levels are of paramount importance to thrive in a very competitive global market.

Vale is increasingly focused on strengthening capital efficiency, as our priority is to maximize shareholder value creation while maintaining a strong balance sheet to preserve our credit rating status(1).

Investments in world-class assets with long life, low cost, expandability and high quality output - such as Carajás S11D and Moatize, are our focus in project execution. In this context, diversification is still a strategic priority, but only if investment in non-iron ore assets proves to be capable of creating significant value.

Divestiture of non-value adding assets will improve capital allocation and unlock funds to help the financing of investment in world-class assets, allowing for only a moderate use of the balance sheet at this stage of the cycle.

Alongside the efforts to optimize capital management, we are developing initiatives to streamline the cost structure of operating and corporate activities.

A significant improvement in our approach to applying for environmental permits is being rewarded, with the granting of licenses critical to run mining and logistics operations in Brazil as well as to the development of projects, such as Serra Sul S11D.

The competitiveness of our iron ore business is being enhanced through initiatives to cut costs, increase productivity, improve quality and expand the global distribution network. The most important ones are the execution of projects based on the high quality reserves of Carajás Additional 40 Mtpy, Serra Sul S11D, the start-up of production of the 67.1% Fe content N5 South mine in Carajás and the use of technology to counteract the effects of ageing in our Southern/Southeastern Systems reserves.

As the global leader in iron ore, by size and quality of production and reserves, we will continue to benefit from a scenario of growth and structural transformation of emerging market economies.

We strongly believe that the execution of a strategy anchored on a rigorous discipline in capital allocation and the exploitation of our rich endowment of mineral resources will enable us to deliver substantial value over the next few years.

(1) Vale is rated A- by Standard & Poors, BBB+ by Fitch, BBB(high) by DBRS and Baa2 by Moody´s.

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Financial highlights in 3Q12:

- Gross operating revenues totaled US$ 11.0 billion, 9.8% below the US$ 12.2 billion in 2Q12. The decline was a consequence of lower sales prices.

- Income from existing operations, as measured by adjusted EBIT(a) (earnings before interest and taxes), decreased to US$ 2.7 billion, 32.5% below 2Q12. After excluding the effect of the provision related to mining royalties (CFEM), adjusted EBIT reached US$ 3.2 billion.

- Operating income margin of 29.7%, as measured by adjusted EBIT margin, after excluding the effect of the CFEM provision.

- Net earnings were US$ 1.7 billion in 3Q12, equal to US$ 0.32 per share.

- Cash generation, as measured by adjusted EBITDA(b) (earnings before interest, taxes, depreciation and amortization), of US$ 3.7 billion, 27.0% lower than the previous quarter. After excluding the effects of non-recurring items, cash generation was US$ 4.3 billion in 3Q12. Over the last 12-month period ended at September 30, 2012, adjusted EBITDA was US$ 22.1 billion, after excluding non-recurring accounting charges.

- Capex excluding acquisitions in 3Q12 equaled US$ 4.3 billion, in line with 2Q12. In the first nine months of the year, capital expenditures totaled US$ 12.3 billion, 8.4% above the US$ 11.3 billion spent in the same period of 2011.

- Dividend of US$ 3.0 billion, US$ 0.5821 per share, to be paid from October 31, 2012 onward, totaling US$ 6.0 billion for 2012, and equal to US$ 1.1771 per common or preferred share.

- Maintenance of a strong balance sheet, with low debt leverage, measured by total debt/LTM adjusted EBITDA, equal to 1.4x, long average maturity, 10.3 years, and low average cost, 4.6% per year as of September 30, 2012.

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Table 1 - SELECTED FINANCIAL INDICATORS

US$ million	3Q11 (A)	2Q12 (B)	3Q12 (C)	% (C/A)	% (C/B)
Operating revenues	16,741	12,150	10,963	(34.5)	(9.8)
Adjusted EBIT	8,373	3,923	2,647	(68.4)	(32.5)
Adjusted EBIT excluding non-recurring items	8,373	4,300	3,189	(61.9)	(25.8)
Adjusted EBIT margin excluding non-recurring items(%)	51.2	36.2	29.7		
Adjusted EBITDA	9,631	5,119	3,738	(61.2)	(27.0)
Adjusted EBITDA excluding non-recurring items	9,631	5,496	4,280	(55.6)	(22.1)
Net earnings	4,935	2,662	1,669	(66.2)	(37.3)
Earnings per share on a fully diluted basis (US$ / share)	0.94	0.52	0.32	(65.5)	(38.0)
Total debt/ adjusted EBITDA (x)	0.6	0.9	1.4	119.0	45.6
ROIC(1) (%)	36.9	33.1	26.2		
Capex (excluding acquisitions)	4,529	4,287	4,289	(5.3)	

(1) ROIC LTM return on invested capital for the last twelve-month period.

US$ million	9M11 (A)	9M12 (B)	% (B/A)
Operating revenues	45,634	34,452	(24.5)
Adjusted EBIT	24,089	10,420	(56.7)
Adjusted EBIT excluding non-recurring items	22,576	11,339	(49.8)
Adjusted EBIT margin excluding non-recurring items(%)	50.7	33.7	
Adjusted EBITDA	27,876	13,822	(50.4)
Adjusted EBITDA excluding non-recurring items	26,363	14,741	(44.1)
Net earnings	18,213	8,158	(55.2)
Capex (excluding acquisitions)	11,308	12,253	8.4
Acquisitions	299	648	116.6

Except where otherwise indicated the operational and financial information in this release is based on the consolidated figures in accordance with US GAAP and, with the exception of information on investments and behavior of markets, quarterly financial statements are reviewed by the company s independent auditors. The main subsidiaries that are consolidated are the following: Compañia Minera Miski Mayo S.A.C., Ferrovia Centro-Atlântica S.A.(FCA), Ferrovia Norte Sul S.A, Mineração Corumbaense Reunida S.A., PT Vale Indonesia Tbk (formerly International Nickel Indonesia Tbk), Sociedad Contractual Minera Tres Valles, Vale Australia Pty Ltd., Vale International Holdings GMBH, Vale Canada Limited (formely Vale Inco Limited), Vale Fertilizantes S.A., Vale International S.A., Vale Manganês S.A., Vale Mina do Azul S.A., Vale Moçambique S.A., Vale Nouvelle-Calédonie SAS, Vale Oman Pelletizing Company LLC and Vale Shipping Holding PTE Ltd.

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STRATEGY, GROWTH AND VALUE CREATION

Vale is increasingly focused on strengthening capital efficiency, as our priority is to maximize shareholder value creation while maintaining a strong balance sheet to preserve our credit rating status.

We will conclude projects already under execution, while R&D expenditures are being cut to give rise in the future to a smaller and more select portfolio of projects with high expected rates of return and effective potential to foster value creation. Some mineral exploration efforts were terminated in cases where costs were expected to be higher than risk-adjusted benefits.

2012 is very likely to be the peak year for capital expenditures in the foreseeable future.

Investment in world-class assets   with long life, low cost, high quality output and expandability - such as Carajás S11D and Moatize are our focus in project execution. In this context, diversification is still a strategic priority, but only if investment in non-iron ore assets proves to be able to create value.

Divestiture of non-value adding assets will improve capital allocation and will unlock funds to help the financing of investment in world-class assets, allowing for only a moderate use of the balance sheet at this stage of the cycle.

Alongside the efforts to optimize capital management, we are developing initiatives to streamline the cost structure of operating and corporate activities.

The competitiveness of our iron ore business is being enhanced through initiatives to cut costs, increase productivity and improve quality. The most important ones are the execution of projects based on the high quality reserves of Carajás and the use of technology to counteract the effects of ageing in our Southern/Southeastern Systems reserves.

The significant improvement in our approach to applying for environmental permits is being rewarded. This year we obtained a total of 52 licenses, which were critical to the running of our mining and logistics operations in Brazil. Moreover, we received the preliminary license for Serra Sul S11D, a very important project for the future supply of iron ore, and the operating license for the N5 South mine, at Carajás.

N5 South has 1.025 billion metric tons of proven and probable reserves and an average Fe content of 67.1%. It is expected to begin production by year-end, providing approximately 25% of the run-of-mine (ROM) ores to be extracted from Carajás in 2013, boosting quality while leading to lower operating costs. N5 South is important for strengthening Vale s position as the leading global producer of high quality iron ore.

The four Itabiritos projects Conceição, Conceição II, Cauê and Vargem Grande will replace lost capacity, as well as expand net capacity. The most important implication will be the rise in Fe content to above 65% and a sharp reduction in the silica content through the construction/adaptation of plants with additional phases of crushing and screening.

An estimated fleet of 20 Valemax vessels will be in operation by the end of 2012, leading to stronger global competitiveness by our iron ore business. By the same token, our global distribution network is being expanded with new ports able to receive the Valemax ships, the construction of the Malaysian distribution center and other floating transfer stations in Asia.

Three pellet plants Tubarão I & II and São Luís - are being temporarily shutdown in order to accommodate the effect of a cyclical weakening of demand, while the feed is reallocated to enhance the supply of iron ore sinter feed.

The size and performance of our coal business will be significantly improved with the development of the mining and logistics operations in Mozambique, taking advantage of an efficient mine-railway-port system and large-scale production of premium hard coking coal coming on stream by 2015.

The base metals business is finding ways to live within its means, pursuing lower costs and higher productivity, and will benefit from the expansion of capacity in copper - Salobo I & II and Lubambe. Loss-making nickel mines in Canada will be shut down.(2) We do not expect an impact on the production of finished nickel as mine output losses will be offset by higher production in Sorowako.

We are finalizing the assessment of costs to reform the furnaces of Onça Puma. Afterwards, the impairment test will be concluded and the results will be publicly disclosed immediately.

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(2) Labor will be redeployed to other operations.

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BUSINESS OUTLOOK

The global economic outlook presents several challenges. Global GDP growth has slowed since the middle of last year and has been hovering around 2-2.5% over the last two quarters, far below its long-term trend and with the weakest pace since the current cyclical recovery began in 2Q09.

Despite the downside risks, we expect global economic activity to strengthen gradually over the next few months, mostly driven by emerging market economies, although expansion is likely to proceed at a moderate pace.

Prices of industrial metals, much more than energy and food commodities, tend to be predominantly influenced by the fluctuations in economic activity industrial production - and expectations about the future. Therefore, the downward trend in iron ore, nickel and copper prices, among others, came in line with the cyclical deceleration in global industrial production growth and negative expectations about the evolution of the global economy(3).

Industrial production expansion started a down cycle in 2Q11. Over the last few months global IP growth neared zero, but the global manufacturing PMI increased in September for the first time in five months, which may be signaling the beginning of a trend reversal.

The most encouraging indication is given by the rise in the new orders-to-inventories of finished goods ratio. This is consistent with the increase in global retail sales and suggests that the inventory cycle, which has been holding industrial output from expanding, is coming to an end. Thus, we expect industrial production to pick up by year-end, strengthening the global demand for minerals and metals.