

ROYAL BANK OF CANADA  
Form 424B2  
April 26, 2018

RBC Capital Markets® Filed Pursuant to Rule 424(b)(2)  
Registration Statement No. 333-208507

## Pricing Supplement

Dated April 25, 2018

To the Product \$986,000

Prospectus Supplement Absolute Return Buffered Return Notes Linked to the  
ERN-EI-1 Dated January 12, 2016, the Prospectus Due October 28, 2021

Supplement Dated Royal Bank of Canada

January 8, 2016, and the

Prospectus Dated

January 8, 2016

Royal Bank of Canada is offering Absolute Return Buffered Return Notes Linked to the Lesser Performing of Two Equity Indices (the “Notes”) linked to the lesser performing of two equity indices (each, a “Reference Asset” and collectively, the “Reference Assets”). The Notes offered are senior unsecured obligations of Royal Bank of Canada and will have the terms described in the documents described above, as supplemented or modified by this pricing supplement.

Reference Assets	Initial Levels	Buffer Levels*
Dow Jones Industrial Average® (“INDU”)	24,083.83	18,062.87, which is 75.00% of its Initial Level
EURO STOXX 50® Index (“SX5E”)	3,485.83	2,614.37, which is 75.00% of its Initial Level

\*Rounded to two decimal places

The Notes do not guarantee any return of principal at maturity. Any payments on the Notes are subject to our credit risk.

Investing in the Notes involves a number of risks. See “Additional Risk Factors Specific to the Notes” beginning on page PS-4 of the product prospectus supplement dated January 12, 2016, “Risk Factors” beginning on page S-1 of the prospectus supplement dated January 8, 2016, and “Selected Risk Considerations” beginning on page P-7 of this pricing supplement.

The Notes will not constitute deposits insured by the Canada Deposit Insurance Corporation, the U.S. Federal Deposit Insurance Corporation or any other Canadian or U.S. government agency or instrumentality.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Notes or determined that this pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

Issuer:	Royal Bank of Canada	Stock Exchange Listing:	None
Pricing Date:	April 25, 2018	Principal Amount:	\$1,000 per Note
Issue Date:	April 30, 2018	Maturity Date:	October 28, 2021
Valuation Date:	October 25, 2021	Leverage Factor:	146.00%
Initial Level:	For each Reference Asset, its closing level on the Pricing Date, as set forth above.		
Final Level:	For each Reference Asset, its closing level on the Valuation Date.		
Payment at Maturity:	If, on the Valuation Date, the Final Level of the Lesser Performing Index is greater than or equal to its Initial Level, then the investor		

will receive a return equal to the principal amount multiplied by the product of the Percentage Change (as defined below) of the Lesser Performing Index and the Leverage Factor.

If the Final Level of the Lesser Performing Index is less than its Initial Level, but greater than or equal to its Buffer Level (75.00% of its Initial Level), the investor will receive a one-for-one positive return equal to the absolute value of the Percentage Change of the Lesser Performing Index.

If the Final Level of the Lesser Performing Index is less than the Buffer Level, you will lose 1% of the principal amount for any decrease in the level of the Lesser Performing Index by more than 25%. An investor could lose some or substantially all of its investment in the Notes.

Lesser Performing Index: The Reference Asset which has the lowest Percentage Change.  
 Interest Payments: None.  
 CUSIP: 78013XJG4

	Per Note	Total
Price to public <sup>(1)</sup>	100.00%	\$986,000
Underwriting discounts and commissions <sup>(1)</sup>	2.25%	\$22,185
Proceeds to Royal Bank of Canada	97.75%	\$963,815

<sup>(1)</sup>Certain dealers who purchase the Notes for sale to certain fee-based advisory accounts may forego some or all of their underwriting discount or selling concessions. The public offering price for investors purchasing the Notes in these accounts may be between \$977.50 and \$1,000 per \$1,000 in principal amount.

The initial estimated value of the Notes as of the date of this pricing supplement is \$951.61 per \$1,000 in principal amount, which is less than the price to public. The actual value of the Notes at any time will reflect many factors, cannot be predicted with accuracy, and may be less than this amount. We describe our determination of the initial estimated value in more detail below.

RBC Capital Markets, LLC, which we refer to as RBCCM, acting as agent for Royal Bank of Canada, received a commission of \$22.50 per \$1,000 in principal amount of the Notes and used a portion of that commission to allow selling concessions to other dealers of up to \$22.50 per \$1,000 in principal amount of the Notes. The other dealers may forgo, in their sole discretion, some or all of their selling concessions. See “Supplemental Plan of Distribution (Conflicts of Interest)” below.

RBC Capital Markets, LLC

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SUMMARY

The information in this “Summary” section is qualified by the more detailed information set forth in this pricing supplement, the product prospectus supplement, the prospectus supplement, and the prospectus.

General: This pricing supplement relates to an offering of Absolute Return Buffered Return Notes Linked to the Lesser Performing of Two Equity Indices (the “Notes”) linked to the lesser performing of two equity indices (the “Reference Assets”).

Issuer: Royal Bank of Canada (“Royal Bank”)

Issue: Senior Global Medium-Term Notes, Series G

Pricing Date: April 25, 2018

Issue Date: April 30, 2018

Term: Approximately 3.5 years

Denominations: Minimum denomination of \$1,000, and integral multiples of \$1,000 thereafter.

Designated Currency: U.S. Dollars

Valuation Date: October 25, 2021

Maturity Date: October 28, 2021

Initial Level: For each Reference Asset, its closing level on the Pricing Date, as set forth on the cover page.

Final Level: For each Reference Asset, its closing level on the Valuation Date.

Buffer Level: For each Reference Asset, 75.00% of its Initial Level, as set forth on the cover page.

Buffer Amount: 25.00%

Leverage Factor: 146.00%

On the Valuation Date, we will pay you at maturity an amount based on the Final Level of the Lesser Performing Index:

- If the Final Level of the Lesser Performing Index is greater than or equal to its Initial Level, then the investor will receive an amount equal to:  
 $\$1,000 + (\$1,000 \times \text{Percentage Change of the Lesser Performing Index} \times \text{Leverage Factor})$
- If the Final Level of the Lesser Performing Index is less than its Initial Level, but greater than or equal to its Buffer Level, the investor will receive a one-for-one positive return equal to the absolute value of the Percentage Change of the Lesser Performing Index, calculated as follows:  
 $\$1,000 + [-1 \times (\$1,000 \times \text{Percentage Change of the Lesser Performing Index})]$
- If the Final Level of the Lesser Performing Index is less than its Buffer Level, then the investor will receive an amount equal to:  
 $\$1,000 + [\$1,000 \times (\text{Percentage Change of the Lesser Performing Index} + \text{Buffer Amount})]$   
 In this case, you will lose up to 75% of the principal amount of the Notes.

With respect to each Reference Asset:

Percentage Change:  $\frac{\text{Final Level} - \text{Initial Level}}{\text{Initial Level}}$

Lesser Performing Index: The Reference Asset which has the lowest Percentage Change.

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Market Disruption Event: If a market disruption event occurs on the Valuation Date as to a Reference Asset, the determination of the Final Level of that Reference Asset will be postponed. However, the determination of the Final Level of any Reference Asset that is not affected by that market disruption event will not be postponed.

Calculation Agent: RBC Capital Markets, LLC ("RBCCM")

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U.S. Tax Treatment: By purchasing a Note, each holder agrees (in the absence of a change in law, an administrative determination or a judicial ruling to the contrary) to treat the Note as a pre-paid cash settled derivative contract in respect of the Reference Assets for U.S. federal income tax purposes. However, the U.S. federal income tax consequences of your investment in the Notes are uncertain and the Internal Revenue Service could assert that the Notes should be taxed in a manner that is different from that described in the preceding sentence. Please see the section below, “Supplemental Discussion of U.S. Federal Income Tax Consequences” and the discussion (including the opinion of our counsel Morrison & Foerster LLP) in the product prospectus supplement dated January 12, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences,” which apply to the Notes.

Secondary Market: RBCCM (or one of its affiliates), though not obligated to do so, may maintain a secondary market in the Notes after the Issue Date. The amount that you may receive upon sale of your Notes prior to maturity may be less than the principal amount.

Listing: The Notes will not be listed on any securities exchange.

Settlement: DTC global (including through its indirect participants Euroclear and Clearstream, Luxembourg as described under “Description of Debt Securities—Ownership and Book-Entry Issuance” in the prospectus dated January 8, 2016).

Terms Incorporated in the Master Note: All of the terms appearing above the item captioned “Secondary Market” on the cover page and pages P-2 and P-3 of this pricing supplement and the terms appearing under the caption “General Terms of the Notes” in the product prospectus supplement dated January 12, 2016, as modified by this pricing supplement. In addition to those terms, the following two sentences are also so incorporated into the master note: RBC confirms that it fully understands and is able to calculate the effective annual rate of interest applicable to the Notes based on the methodology for calculating per annum rates provided for in the Notes. RBC irrevocably agrees not to plead or assert Section 4 of the Interest Act (Canada), whether by way of defense or otherwise, in any proceeding relating to the Notes.

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#### ADDITIONAL TERMS OF YOUR NOTES

You should read this pricing supplement together with the prospectus dated January 8, 2016, as supplemented by the prospectus supplement dated January 8, 2016 and the product prospectus supplement dated January 12, 2016, relating to our Senior Global Medium-Term Notes, Series G, of which these Notes are a part. Capitalized terms used but not defined in this pricing supplement will have the meanings given to them in the product prospectus supplement. In the event of any conflict, this pricing supplement will control. The Notes vary from the terms described in the product prospectus supplement in several important ways. You should read this pricing supplement carefully.

This pricing supplement, together with the documents listed below, contains the terms of the Notes and supersedes all prior or contemporaneous oral statements as well as any other written materials including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, brochures or other educational materials of ours. You should carefully consider, among other things, the matters set forth in “Risk Factors” in the prospectus supplement dated January 8, 2016 and “Additional Risk Factors Specific to the Notes” in the product prospectus supplement dated January 12, 2016, as the Notes involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisors before you invest in the Notes. You may access these documents on the Securities and Exchange Commission (the “SEC”) website at [www.sec.gov](http://www.sec.gov) as follows (or if that address has changed, by reviewing our filings for the relevant date on the SEC website):

Prospectus dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008810/j18160424b3.htm>

Prospectus Supplement dated January 8, 2016:

<http://www.sec.gov/Archives/edgar/data/1000275/000121465916008811/p14150424b3.htm>

Product Prospectus Supplement ERN-EI-1 dated January 12, 2016:

<https://www.sec.gov/Archives/edgar/data/1000275/000114036116047560/form424b5.htm>

Our Central Index Key, or CIK, on the SEC website is 1000275. As used in this pricing supplement, “we,” “us,” or “our” refers to Royal Bank of Canada.

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#### HYPOTHETICAL EXAMPLES

The table set out below is included for illustration purposes only. The table illustrates the Redemption Amount of the Notes for a hypothetical range of performance for the Lesser Performing Reference Asset, assuming the following terms:

Hypothetical Initial Level (for each Reference Asset):	1,000.00*
Hypothetical Buffer Level (for each Reference Asset):	750.00, which is 75.00% of the hypothetical Initial Level
Hypothetical Buffer Amount:	25.00%
Leverage Factor:	146.00%
Principal Amount:	\$1,000 per Note

\* The hypothetical Initial Level of 1,000.00 used in the examples below has been chosen for illustrative purposes only and does not represent the actual Initial Level of either Reference Asset. The actual Initial Levels for each Reference Asset is set forth on the cover page of this pricing supplement. We make no representation or warranty as to which of the Reference Assets will be the Lesser Performing Reference Asset. It is possible that the Final Level of each Reference Asset will be less than its Initial Level.

Hypothetical Final Levels are shown in the first column on the left. The second column shows the Redemption Amount for a range of Final Levels of the Lesser Performing Reference Asset on the Valuation Date. The third column shows the Redemption Amount to be paid on the Notes per \$1,000 in principal amount.

Hypothetical Final Level of the Lesser Performing Reference Asset	Redemption Amount as Percentage of Principal Amount	Redemption Amount per \$1,000 in Principal Amount
1,300.00	143.80%	\$1,438.00
1,200.00	129.20%	\$1,292.00
1,100.00	114.60%	\$1,146.00
1,000.00	100.00%	\$1,000.00
900.00	110.00%	\$1,100.00
850.00	115.00%	\$1,150.00
800.00	120.00%	\$1,200.00
750.00	125.00%	\$1,250.00
700.00	95.00%	\$950.00
600.00	85.00%	\$850.00
500.00	75.00%	\$750.00
400.00	65.00%	\$650.00
250.00	50.00%	\$500.00
0.00	25.00%	\$250.00





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#### Hypothetical Examples of Amounts Payable at Maturity

The following hypothetical examples illustrate how the payments at maturity set forth in the table above are calculated.

Example 1: The price of the Lesser Performing Reference Asset increases by 10% from the Initial Level of 1,000.00 to its Final Level of 1,100.00. Because the Final Level of the Lesser Performing Reference Asset is greater than the Initial Level, the investor receives at maturity, a cash payment of \$1,146.00 per Note, calculated as follows:  
 $\$1,000 + (\$1,000 \times \text{Percentage Change of the Lesser Performing Reference Asset} \times \text{Leverage Factor})$   
 $= \$1,000 + (\$1,000 \times 10\% \times 146\%) = \$1,146.00$

Example 2: The price of the Lesser Performing Reference Asset decreases by 15% from the Initial Level of 1,000.00 to its Final Level of 850.00. Because the Final Level of the Lesser Performing Reference Asset is less than the Initial Level but greater than its Buffer Level of 750.00, the investor receives at maturity, a positive return equal to the absolute value of the Percentage Change, despite the 15% decline in the share price of the Lesser Performing Reference Asset, calculated as follows:

$\$1,000 + [-1 \times (\$1,000 \times \text{Percentage Change of the Lesser Performing Reference Asset})]$   
 $= \$1,000 + [-1 \times (\$1,000 \times -15\%)] = \$1,000 + \$150 = \$1,150.00$

Example 3: The price of the Lesser Performing Reference Asset is 400.00 on the Valuation Date, which is less than its Buffer Level of 750.00. Because the Final Level of the Lesser Performing Reference Asset is less than its Buffer Level of 750.00, we will pay only \$650.00 for each \$1,000 in the principal amount of the Notes, calculated as follows:  
 Principal Amount + [Principal Amount x (Reference Asset Return of the Lesser Performing Reference Asset + Buffer Amount)]

$= \$1,000 + [\$1,000 \times (-60.00\% + 25.00\%)] = \$1,000 - \$350.00 = \$650.00$

\* \* \*

The Payments at Maturity shown above are entirely hypothetical; they are based on prices of the Reference Assets that may not be achieved on the Valuation Date and on assumptions that may prove to be erroneous. The actual market value of your Notes on the Maturity Date or at any other time, including any time you may wish to sell your Notes, may bear little relation to the hypothetical Redemption Amounts shown above, and those amounts should not be viewed as an indication of the financial return on an investment in the Notes or on an investment in the securities included in either Reference Asset.

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#### SELECTED RISK CONSIDERATIONS

An investment in the Notes involves significant risks. Investing in the Notes is not equivalent to investing directly in the Reference Assets. These risks are explained in more detail in the section “Additional Risk Factors Specific to the Notes” in the product prospectus supplement. In addition to the risks described in the prospectus supplement and the product prospectus supplement, you should consider the following:

**Principal at Risk** – Investors in the Notes could lose a substantial portion of their principal amount if there is a decline in the level of the Lesser Performing Index between the Pricing Date and the Valuation Date of more than 25%. You will lose 1% of the principal amount of your Notes for each 1% that the Final Level of the Lesser Performing Index is less than its Initial Level by more than 25%.

**Your Redemption Amount Will Be Determined Solely by Reference to the Lesser Performing Index Even if the Other Reference Asset Performs Better** – Your Redemption Amount will be determined solely by reference to the performance of the Lesser Performing Index. Even if the Final Level of the other Reference Asset has increased compared to its Initial Level, or has experienced a decrease that is less than that of the Lesser Performing Index, your return will only be determined by reference to the performance of the Lesser Performing Index, regardless of the performance of the other Reference Asset. The Notes are not linked to a weighted basket, in which the risk may be mitigated and diversified among each of the basket components. For example, in the case of notes linked to a weighted basket, the return would depend on the weighted aggregate performance of the basket components reflected as the basket return. As a result, the depreciation of one basket component could be mitigated by the appreciation of the other basket component, as scaled by the weighting of that basket component. However, in the case of the Notes, the individual performance of each of the Reference Assets would not be combined, and the depreciation of one Reference Asset would not be mitigated by any appreciation of the other Reference Asset. Instead your return will depend solely on the Final Level of the Lesser Performing Index.

**The Notes Do Not Pay Interest and Your Return May Be Lower than the Return on a Conventional Debt Security of Comparable Maturity** – You will not receive any interest payments on the Notes as there would be on a conventional fixed-rate or floating-rate debt security having the same maturity. The return that you will receive on the Notes, which could be negative, may be less than the return you could earn on other investments. Even if your return is positive, your return may be less than the return you would earn if you bought a conventional senior interest bearing debt security of Royal Bank.

**Payments on the Notes Are Subject to Our Credit Risk, and Changes in Our Credit Ratings Are Expected to Affect the Market Value of the Notes** – The Notes are Royal Bank’s senior unsecured debt securities. As a result, your receipt of the Redemption Amount is dependent upon Royal Bank’s ability to repay its obligations at that time. This will be the case even if the levels of the Reference Assets increase after the Pricing Date. No assurance can be given as to what our financial condition will be at the maturity of the Notes.

**There May Not Be an Active Trading Market for the Notes – Sales in the Secondary Market May Result in Significant Losses** – There may be little or no secondary market for the Notes. The Notes will not be listed on any securities exchange. RBCCM and other affiliates of Royal Bank may make a market for the Notes; however, they are not required to do so. RBCCM or any other affiliate of Royal Bank may stop any market-making activities at any time. Even if a secondary market for the Notes develops, it may not provide significant liquidity or trade at prices advantageous to you. We expect that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for your Notes in any secondary market could be substantial.

**Owning the Notes Is Not the Same as Owning the Securities Represented by the Reference Assets** — The return on your Notes is unlikely to reflect the return you would realize if you actually owned the securities represented by the

Reference Assets. For instance, you will not receive or be entitled to receive any dividend payments or other distributions on those securities during the term of your Notes. As an owner of the Notes, you will not have voting rights or any other rights that holders of the Reference Assets may have. Any positive return on the Notes may be less than the potential positive return on the securities included in the Reference Assets.

The Initial Estimated Value of the Notes Is Less than the Price to the Public — The initial estimated value set forth on the cover page of this pricing supplement does not represent a minimum price at which we, RBCCM or any of our affiliates would be willing to purchase the Notes in any secondary market (if any exists) at any time. If you attempt to sell the Notes prior to maturity, their market value may be lower than the price you paid for them and the initial estimated value. This is due to, among other things, changes in the levels of the Reference Assets, the borrowing rate we pay to issue securities of this kind, and the inclusion in the price to the public of the underwriting discount and the estimated costs relating to our hedging of the Notes. These factors, together with various credit, market and economic factors over the term of the Notes, are expected to reduce the price at which you may be able to sell the Notes in any secondary market and will affect the value of the Notes in complex and unpredictable ways. Assuming no change in market conditions or any other relevant factors, the price, if any, at which you may be able to sell your Notes prior to maturity may be less than your original purchase price, as any such sale price would not be expected to include the underwriting discount and the hedging costs relating to the Notes. In addition to bid-ask spreads, the

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value of the Notes determined by RBCCM for any secondary market price is expected to be based on the secondary rate rather than the internal funding rate used to price the Notes and determine the initial estimated value. As a result, the secondary price will be less than if the internal funding rate was used. The Notes are not designed to be short-term trading instruments. Accordingly, you should be able and willing to hold your Notes to maturity.

**The Initial Estimated Value of the Notes Is an Estimate Only, Calculated as of the Time the Terms of the Notes Were Set** — The initial estimated value of the Notes is based on the value of our obligation to make the payments on the Notes, together with the mid-market value of the derivative embedded in the terms of the Notes. See “Structuring the Notes” below. Our estimate is based on a variety of assumptions, including our credit spreads, expectations as to dividends, interest rates and volatility, and the expected term of the Notes. These assumptions are based on certain forecasts about future events, which may prove to be incorrect. Other entities may value the Notes or similar securities at a price that is significantly different than we do.

The value of the Notes at any time after the Pricing Date will vary based on many factors, including changes in market conditions, and cannot be predicted with accuracy. As a result, the actual value you would receive if you sold the Notes in any secondary market, if any, should be expected to differ materially from the initial estimated value of your Notes.

**Inconsistent Research** — Royal Bank or its affiliates may issue research reports on securities that are, or may become, components of the Reference Assets. We may also publish research from time to time on financial markets and other matters that may influence the levels of the Reference Assets or the value of the Notes, or express opinions or provide recommendations that may be inconsistent with purchasing or holding the Notes or with the investment view implicit in the Notes or the Reference Assets. You should make your own independent investigation of the merits of investing in the Notes and the Reference Assets.

**An Investment in the Notes Is Subject to Risks Relating to Non-U.S. Securities Markets** — Because foreign companies or foreign equity securities included in the SX5E are publicly traded in the applicable foreign countries and are denominated in currencies other than U.S. dollars, an investment in the securities involves particular risks. For example, the non-U.S. securities markets may be more volatile than the U.S. securities markets, and market developments may affect these markets differently from the U.S. or other securities markets. Direct or indirect government intervention to stabilize the securities markets outside the U.S., as well as cross-shareholdings in certain companies, may affect trading prices and trading volumes in those markets. Also, the public availability of information concerning the foreign issuers may vary depending on their home jurisdiction and the reporting requirements imposed by their respective regulators. In addition, the foreign issuers may be subject to accounting, auditing and financial reporting standards and requirements that differ from those applicable to U.S. reporting companies.

The securities included in the SX5E are issued by companies located within the Eurozone, which is and has been undergoing severe financial stress, and the political, legal and regulatory ramifications are impossible to predict. Changes within the Eurozone could have a material adverse effect on the performance of the SX5E and, consequently, on the value of the Notes.

**Market Disruption Events and Adjustments** — The Redemption Amount and the Valuation Date are subject to adjustment as to each Reference Asset as described in the product prospectus supplement. For a description of what constitutes a market disruption event as well as the consequences of that market disruption event, see “General Terms of the Notes—Market Disruption Events” in the product prospectus supplement.



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#### INFORMATION REGARDING THE REFERENCE ASSETS

All disclosures contained in this pricing supplement regarding the Reference Assets, including, without limitation, their make up, method of calculation, and changes in their components, have been derived from publicly available sources. The information reflects the policies of, and is subject to change by the applicable index sponsor. Each of these sponsors has no obligation to continue to publish, and may discontinue publication of, the applicable Reference Asset. The consequences of an index sponsor discontinuing publication of a Reference Asset are discussed in the section of the product prospectus supplement entitled “General Terms of the Notes— Unavailability of the Level of the Reference Asset.” Neither we nor RBCCM accepts any responsibility for the calculation, maintenance or publication of either Reference Asset or any successor index.

We obtained the information regarding the historical performance of each Reference Asset set forth below from Bloomberg Financial Markets.

#### The Dow Jones Industrial Average® (“INDU”)

The INDU is a price-weighted index, which means an underlying stock’s weight in the INDU is based on its price per share rather than the total market capitalization of the issuer. The INDU is designed to provide an indication of the composite performance of 30 common stocks of corporations representing a broad cross-section of U.S. industry. The corporations represented in the INDU tend to be market leaders in their respective industries and their stocks are typically widely held by individuals and institutional investors.

The INDU is maintained by an Averages Committee comprised of the Managing Editor of The Wall Street Journal (“WSJ”), the head of Dow Jones Indexes research and the head of CME Group Inc. research. The Averages Committee was created in March 2010, when Dow Jones Indexes became part of CME Group Index Services, LLC, a joint venture company owned 90% by CME Group Inc. and 10% by Dow Jones & Company. Generally, composition changes occur only after mergers, corporate acquisitions or other dramatic shifts in a component's core business. When such an event necessitates that one component be replaced, the entire INDU is reviewed. As a result, when changes are made they typically involve more than one component. While there are no rules for component selection, a stock typically is added only if it has an excellent reputation, demonstrates sustained growth, is of interest to a large number of investors and accurately represents the sector(s) covered by the average.

Changes in the composition of the INDU are made entirely by the Averages Committee without consultation with the corporations represented in the INDU, any stock exchange, any official agency or us. Unlike most other indices, which are reconstituted according to a fixed review schedule, constituents of the INDU are reviewed on an as-needed basis. Changes to the common stocks included in the INDU tend to be made infrequently, and the underlying stocks of the INDU may be changed at any time for any reason. The companies currently represented in the INDU are incorporated in the United States and its territories and their stocks are listed on the New York Stock Exchange and Nasdaq.

The INDU initially consisted of 12 common stocks and was first published in the WSJ in 1896. The INDU was increased to include 20 common stocks in 1916 and to 30 common stocks in 1928. The number of common stocks in the INDU has remained at 30 since 1928, and, in an effort to maintain continuity, the constituent corporations represented in the INDU have been changed on a relatively infrequent basis.

#### Computation of the INDU

The level of the INDU is the sum of the primary exchange prices of each of the 30 component stocks included in the INDU, divided by a divisor that is designed to provide a meaningful continuity in the level of the INDU. Because the

INDU is price-weighted, stock splits or changes in the component stocks could result in distortions in the index level. In order to prevent these distortions related to extrinsic factors, the divisor is periodically changed in accordance with a mathematical formula that reflects adjusted proportions within the INDU. The current divisor of the INDU is published daily in the WSJ and other publications. In addition, other statistics based on the INDU may be found in a variety of publicly available sources.

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#### License Agreement

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The Notes are not sponsored, endorsed, sold or promoted by S&P Dow Jones Indices LLC, Dow Jones, S&P or any of their respective affiliates (collectively, "S&P Dow Jones Indices"). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the Notes or any member of the public regarding the advisability of investing in securities generally or in the Notes particularly or the ability of the INDU to track general market performance. S&P Dow Jones Indices' only relationship to us with respect to the INDU is the licensing of the INDU and certain trademarks, service marks and/or trade names of S&P Dow Jones Indices and/or its third party licensors. The INDU is determined, composed and calculated by S&P Dow Jones Indices without regard to us or the Notes. S&P Dow Jones Indices have no obligation to take our needs or the needs of us or holders of the Notes into consideration in determining, composing or calculating the INDU. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the prices, and amount of the Notes or the timing of the issuance or sale of the Notes or in the determination or calculation of the equation by which the Notes are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the Notes. There is no assurance that investment products based on the INDU will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC and its subsidiaries are not investment advisors. Inclusion of a security or futures contract within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security or futures contract, nor is it considered to be investment advice. Notwithstanding the foregoing, CME Group Inc. and its affiliates may independently issue and/or sponsor financial products unrelated to the Notes currently being issued by us, but which may be similar to and competitive with the Notes. In addition, CME Group Inc. and its affiliates may trade financial products which are linked to the performance of the INDU. It is possible that this trading activity will affect the value of the Notes.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE INDU OR ANY DATA RELATED THERETO OR ANY COMMUNICATION, INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY US, HOLDERS OF THE NOTES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDU OR WITH RESPECT TO ANY DATA RELATED THERETO. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND US, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.



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#### Historical Information

The graph below sets forth the information relating to the historical performance of the INDU. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing levels of the INDU. The information provided in this table is for the four calendar quarters of 2013 through 2017, the first calendar quarter of 2018 and for the period from April 1, 2018 through April 25, 2018.

We obtained the information regarding the historical performance of the INDU in the chart below from Bloomberg Financial Markets. We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets. The historical performance of the INDU should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the INDU. We cannot give you assurance that the performance of the INDU will result in any positive return on your initial investment.

#### Dow Jones Industrial Average® (“INDU”)

Period-Start Date	Period-End Date	High Intra-Day Level of this Reference Asset	Low Intra-Day Level of this Reference Asset	Period-End Closing Level of this Reference Asset
1/1/2013	3/31/2013	14,585.10	13,104.30	14,578.54
4/1/2013	6/30/2013	15,542.40	14,434.43	14,909.60
7/1/2013	9/30/2013	15,709.58	14,760.41	15,129.67
10/1/2013	12/31/2013	16,588.25	14,719.43	16,576.66
1/1/2014	3/31/2014	16,573.07	15,340.69	16,457.66
4/1/2014	6/30/2014	16,978.02	16,015.32	16,826.60
7/1/2014	9/30/2014	17,350.64	16,333.78	17,042.90
10/1/2014	12/31/2014	18,103.45	15,855.12	17,823.07
1/1/2015	3/31/2015	18,288.63	17,037.76	17,776.12
4/1/2015	6/30/2015	18,351.36	17,576.50	17,619.51
7/1/2015	9/30/2015	18,137.12	15,370.33	16,284.70
10/1/2015	12/31/2015	17,977.85	16,013.66	17,425.03
1/1/2016	3/31/2016	17,790.11	15,450.56	17,685.09
4/1/2016	6/30/2016	18,167.63	17,063.08	17,929.99
7/1/2016	9/30/2016	18,668.44	17,713.45	18,308.15
10/1/2016	12/31/2016	19,987.63	17,883.56	19,762.60
1/1/2017	3/31/2017	21,169.11	19,677.94	20,663.22
4/1/2017	6/30/2017	21,535.03	20,379.55	21,349.63
7/1/2017	9/30/2017	22,419.51	21,279.30	22,405.09
10/1/2017	12/31/2017	24,876.07	22,416.00	24,719.22
1/1/2018	3/31/2018	26,616.71	23,360.29	24,103.11
4/1/2018	4/25/2018	24,858.97	23,344.52	24,083.83

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#### EURO STOXX 50<sup>®</sup> Index (“SX5E”)

##### The SX5E

The SX5E was created by STOXX, a subsidiary of Deutsche Börse AG. Publication of the SX5E began in February 1998, based on an initial index level of 1,000 at December 31, 1991.

##### Composition and Maintenance

The SX5E is composed of 50 component stocks of market sector leaders from within the 19 EURO STOXX<sup>®</sup> Supersector indices, which represent the Eurozone portion of the STOXX Europe 600<sup>®</sup> Supersector indices. The composition of the SX5E is reviewed annually, based on the closing stock data on the last trading day in August. The component stocks are announced on the first trading day in September. Changes to the component stocks are implemented on the third Friday in September and are effective the following trading day. Changes in the composition of the SX5E are made to ensure that the SX5E includes the 50 market sector leaders from within the SX5E. The free float factors for each component stock used to calculate the SX5E, as described below, are reviewed, calculated, and implemented on a quarterly basis and are fixed until the next quarterly review. The SX5E is also reviewed on an ongoing basis. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings, and bankruptcy) that affect the SX5E composition are immediately reviewed. Any changes are announced, implemented, and effective in line with the type of corporate action and the magnitude of the effect.

##### Calculation of the SX5E

The SX5E is calculated with the “Laspeyres formula,” which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the SX5E value can be expressed as follows:

$$\text{SX5E} = \frac{\text{Free float market capitalization of the SX5E}}{\text{Adjusted base date market capitalization of the SX5E}} \times 1,000$$

The “free float market capitalization of the SX5E” is equal to the sum of the products of the closing price, market capitalization, and free float factor for each component stock as of the time the SX5E is being calculated.

The SX5E is also subject to a divisor, which is adjusted to maintain the continuity of the SX5E values across changes due to corporate actions, such as the deletion and addition of stocks, the substitution of stocks, stock dividends, and stock splits.

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#### License Agreement

We have entered into a non-exclusive license agreement with STOXX providing for the license to us and certain of our affiliated or subsidiary companies, in exchange for a fee, of the right to use indices owned and published by STOXX (including the SX5E) in connection with certain securities, including the Notes offered hereby.

The license agreement between us and STOXX requires that the following language be stated in this document: STOXX has no relationship to us, other than the licensing of the SX5E and the related trademarks for use in connection with the Notes. STOXX does not:

- sponsor, endorse, sell, or promote the Notes;
- recommend that any person invest in the Notes offered hereby or any other securities;
- have any responsibility or liability for or make any decisions about the timing, amount, or pricing of the Notes;
- have any responsibility or liability for the administration, management, or marketing of the Notes; or
- consider the needs of the Notes or the holders of the Notes in determining, composing, or calculating the SX5E, or
- have any obligation to do so.

STOXX will not have any liability in connection with the Notes. Specifically:

- STOXX does not make any warranty, express or implied, and disclaims any and all warranty concerning:
  - the results to be obtained by the Notes, the holders of the Notes or any other person in connection with the use of the SX5E and the data included in the SX5E;
  - the accuracy or completeness of the SX5E and its data;
  - the merchantability and the fitness for a particular purpose or use of the SX5E and its data;
- STOXX will have no liability for any errors, omissions, or interruptions in the SX5E or its data; and

Under no circumstances will STOXX be liable for any lost profits or indirect, punitive, special, or consequential damages or losses, even if STOXX knows that they might occur.

The licensing agreement between us and STOXX is solely for their benefit and our benefit, and not for the benefit of the holders of the Notes or any other third parties.

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#### Historical Information

The graph below sets forth the information relating to the historical performance of the SX5E. In addition, below the graph is a table setting forth the intra-day high, intra-day low and period-end closing levels of the SX5E. The information provided in this table is for the four calendar quarters of 2013 through 2017, the first calendar quarter of 2018 and for the period from April 1, 2018 through April 25, 2018.

We obtained the information regarding the historical performance of the SX5E in the chart below from Bloomberg Financial Markets. We have not independently verified the accuracy or completeness of the information obtained from Bloomberg Financial Markets. The historical performance of the SX5E should not be taken as an indication of its future performance, and no assurance can be given as to the Final Level of the SX5E. We cannot give you assurance that the performance of the SX5E will result in any positive return on your initial investment.

#### EURO STOXX 50<sup>®</sup> Index (“SX5E”)

Period-Start Date	Period-End Date	High Intra-Day Level of this Reference Index	Low Intra-Day Level of this Reference Index	Period-End Closing Level of this Reference Index
1/1/2013	3/31/2013	2,754.80	2,563.64	2,624.02
4/1/2013	6/30/2013	2,851.48	2,494.54	2,602.59
7/1/2013	9/30/2013	2,955.47	2,539.15	2,893.15
10/1/2013	12/31/2013	3,116.23	2,891.39	3,109.00
1/1/2014	3/31/2014	3,185.68	2,944.13	3,161.60
4/1/2014	6/30/2014	3,325.50	3,083.43	3,228.24
7/1/2014	9/30/2014	3,301.15	2,977.52	3,225.93
10/1/2014	12/31/2014	3,278.97	2,789.63	3,146.43
1/1/2015	3/31/2015	3,742.42	2,998.53	3,697.38
4/1/2015	6/30/2015	3,836.28	3,374.18	3,424.30
7/1/2015	9/30/2015	3,714.26	2,973.16	3,100.67
10/1/2015	12/31/2015	3,524.04	3,036.17	3,267.52
1/1/2016	3/31/2016	3,266.01	2,672.73	3,004.93
4/1/2016	6/30/2016	3,156.86	2,678.27	2,864.74
7/1/2016	9/30/2016	3,101.75	2,742.66	3,002.24
10/1/2016	12/31/2016	3,290.52	2,937.98	3,290.52
1/1/2017	3/31/2017	3,500.93	3,214.31	3,500.93
4/1/2017	6/30/2017	3,666.80	3,407.33	3,441.88
7/1/2017	9/30/2017	3,594.85	3,363.68	3,594.85
10/1/2017	12/31/2017	3,708.82	3,503.20	3,503.96
1/1/2018	3/31/2018	3,687.22	3,261.86	3,361.50
4/1/2018	4/25/2018	3,523.81	3,300.50	3,485.83

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#### SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated January 12, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.” The discussions below and in the accompanying product prospectus supplement do not address the tax consequences applicable to holders subject to Section 451(b) of the Code.

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Assets or the Notes (for example, upon a Reference Asset rebalancing), and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Assets or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

#### SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on April 30, 2018, which is the third (3rd) business day following the Pricing Date (this settlement cycle being referred to as “T+3”). See “Plan of Distribution” in the prospectus dated January 8, 2016. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus dated January 8, 2016.

In the initial offering of the Notes, they were offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document.

We expect to deliver the Notes on a date that is greater than two business days following the Trade Date. Under Rule 15c6-1 of the

Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes more than two business days prior to the original issue date will be required to specify alternative settlement arrangements to prevent a failed settlement.

The value of the Notes shown on your account statement may be based on RBCCM’s estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately 9 months after the issue date of

the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM's estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may be a higher amount, reflecting the addition of RBCCM's underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the "Prospectus Directive")) will be prepared in connection with the Notes. Accordingly, the Notes may not be offered to the public in any member state of the European Economic Area (the "EEA"), and any purchaser of the Notes who subsequently sells any of the Notes in any EEA member state must do so only in accordance with the requirements of the Prospectus Directive, as implemented in that member state.

The Notes are not intended to be offered, sold or otherwise made available to, and should not be offered, sold or otherwise made available to, any retail investor in the EEA. For these purposes, the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to

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purchase or subscribe the Notes, and a “retail investor” means a person who is one (or more) of: (a) a retail client, as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (b) a customer, within the meaning of Insurance Distribution Directive 2016/97/EU, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (c) not a qualified investor as defined in the Prospectus Directive. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared, and therefore, offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

#### STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Assets. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Notes at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate rather than the secondary market rate, is a factor that reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value included in this pricing supplement, any value of the Notes determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Notes than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Reference Assets, and the tenor of the Notes. The economic terms of the Notes and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate is a factor that reduced the economic terms of the Notes to you. The initial offering price of the Notes also reflects the underwriting commission and our estimated hedging costs. These factors resulted in the initial estimated value for the Notes on the Pricing Date being less than their public offering price. See “Selected Risk Considerations—The Initial Estimated Value of the Notes Is Less than the Price to the Public” above.

#### VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, and will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law; to insolvency and other laws of general application affecting creditors’ rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act (Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject

to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated January 8, 2016, which has been filed as Exhibit 5.1 to Royal Bank's Form 6-K filed with the SEC dated January 8, 2016.

In the opinion of Morrison & Foerster LLP, when the Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes will be valid, binding and enforceable obligations of Royal Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith). This opinion is given as of the date hereof and is limited to the laws of the State of New York. This opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated January 8, 2016, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated January 8, 2016.

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#### US GAAP

4Q10

Expenditures with acquisitions during the year also included: (a) first installment of the acquisition of a 51% stake in Simandou for US\$500 million, with the remaining US\$2 billion payable upon achievement of certain milestones, (b) SDCN (Sociedade de Desenvolvimento do Corredor Norte S.A.) in Mozambique for US\$21 million, (c) the third installment of the concession of Ferrovia Norte Sul (US\$265 million) in Brazil, and (d) an additional 24.5% stake in the Belvedere coal project in Australia (US\$92 million), increasing our share in the project to 75.5%

Divestitures in 2010 generated US\$890 million. During the year the following transactions were concluded:

sale of Valesul aluminum assets for US\$31.2 million;

sale of PPSA, a producer of kaolin, in which we had a stake of 86.2%, and other kaolin mineral rights for US\$74 million;

sale of 49% of the voting shares of the Bayóvar project, a phosphate rock mine, for US\$660 million;

sale of 30% of the Oman project, a pelletizing operation, for US\$125 million.

In 2Q10 we entered into a transaction with Norsk Hydro ASA (Hydro) to transfer our stakes in aluminum smelting (Albras), alumina refining (Alunorte and CAP) and bauxite mining (Paragominas and mineral rights) for US\$1.4 billion in cash over time plus a net debt of US\$700 million and 22% of Hydro's capital. This transaction is expected to have its closing until the end of 1Q11.

In February 2011, we invested US\$173.5 million to acquire the control of Biopalma, in the state of Pará, Brazil and previously our partner in a consortium now dissolved to invest in biofuels. Biopalma will produce palm oil, a raw material used to make biodiesel, and most of the production will be used for the B20 mix (a blend of 20% biodiesel and 80% regular diesel) to power our fleet of locomotives, heavy-duty machinery and equipment. Our investment in producing biodiesel is part of the strategic priority to be a global sustainability agent.

*For more details about the projects and capex budget for 2011, please see the press release Vale to invest US\$24 billion in 2011*

**Table 7 TOTAL INVESTMENT BY CATEGORY**

US\$ million	4Q09	3Q10	4Q10	2009	%	2010	%
<b>Organic growth</b>	<b>2,232</b>	<b>2,248</b>	<b>3,434</b>	<b>6,855</b>	<b>76.1</b>	<b>9,375</b>	<b>73.8</b>
Projects	1,923	1,902	3,103	5,845	64.9	8,239	64.9
R&D	309	346	332	1,010	11.2	1,136	8.9

<b>Stay-in-business</b>	<b>817</b>	<b>833</b>	<b>1,657</b>	<b>2,157</b>	<b>23.9</b>	<b>3,330</b>	<b>26.2</b>
<b>Total</b>	<b>3,049</b>	<b>3,081</b>	<b>5,091</b>	<b>9,013</b>	<b>100.0</b>	<b>12,705</b>	<b>100.0</b>

**Table 8 TOTAL INVESTMENT BY BUSINESS AREA**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>%</b>	<b>2010</b>	<b>%</b>
<b>Bulk materials</b>	<b>1,041</b>	<b>1,165</b>	<b>1,698</b>	<b>2,687</b>	<b>29.8</b>	<b>4,441</b>	<b>35.0</b>
Ferrous minerals	843	948	1,332	2,124	23.6	3,474	27.3
Coal	199	217	366	564	6.3	967	7.6
<b>Non ferrous metals</b>	<b>983</b>	<b>702</b>	<b>1,095</b>	<b>3,053</b>	<b>33.9</b>	<b>2,973</b>	<b>23.4</b>
<b>Fertilizer nutrients</b>		<b>204</b>	<b>362</b>	<b>91</b>	<b>1.0</b>	<b>843</b>	<b>6.6</b>
<b>Logistics</b>	<b>663</b>	<b>604</b>	<b>1,354</b>	<b>1,985</b>	<b>22.0</b>	<b>2,852</b>	<b>22.4</b>
<b>Power generation</b>	<b>203</b>	<b>209</b>	<b>152</b>	<b>688</b>	<b>7.6</b>	<b>656</b>	<b>5.2</b>
<b>Steel</b>	<b>26</b>	<b>28</b>	<b>88</b>	<b>184</b>	<b>2.0</b>	<b>186</b>	<b>1.5</b>
<b>Others</b>	<b>132</b>	<b>170</b>	<b>342</b>	<b>324</b>	<b>3.6</b>	<b>755</b>	<b>5.9</b>
<b>Total</b>	<b>3,049</b>	<b>3,081</b>	<b>5,091</b>	<b>9,013</b>	<b>100.0</b>	<b>12,705</b>	<b>100.0</b>

**Table of Contents****US GAAP****4Q10****DEBT INDICATORS**

Total debt was US\$25.343 billion as of December 31, 2010, with a long average maturity, of 9.6 years. This is important for the minimization of refinancing risks. The recent financial stress in the peripheral economies of the Euro zone, in which the concentration of maturing debt to be rolled in a short period of time has played a key role, is a good example of how important it is to derisking a portfolio of long-term debt.

The average debt cost was 4.85% per year, consistent with the focus on minimization of the cost of capital. As of December 31, 2010, cash holdings reached US\$9,377 billion, and net debt<sup>(c)</sup> was US\$15.966 billion.

Debt leverage, as measured by total debt/LTM adjusted EBITDA<sup>(d)</sup> ratio, fell to 1.0x on December 31, 2010 from 1.3x on September 30, 2010 and 2.5x on December 31, 2009, when the negative effects of the global recession were still impacting our cash flow. The total debt/enterprise value<sup>(e)</sup> ratio fell to 13.2% on December 31, 2010 from 14.4% on September 30, 2010.

Interest coverage, measured by the LTM adjusted EBITDA/LTM interest payment ratio<sup>(f)</sup>, was 23.8x compared to 18.1x on September 30, 2010 and 8.2x in December 31, 2009.

Considering hedge positions, the total debt in December 2010 was composed of 33% of floating interest rates and 67% of fixed interest rates linked debt, while 96% was denominated in US dollars and the remainder in other currencies.

In March 2010, Vale made its debut in the Euro debt market by raising 750 million through the issuance of 8-year notes with a coupon of 4.375%, paid annually.

In September 2010, we raised US\$1.75 billion through the issuance of US\$1 billion notes due 2020@4.625% per annum, payable semi-annually, and US\$750 million notes due 2039@6.875% per annum, payable semi-annually and yield to investors of 6.074%. The 2039 notes are consolidated in a form of single series with the US\$1 billion notes 2039 issued in November 2009.

We have entered into agreements with official credit institutions of different countries – Brazil, Japan, Korea, China and Canada – for credit lines with terms and costs conditions proper to the financing of mining and infrastructure projects. In February 2011 we signed a contract with Servizi Assicurativi Del Commercio Estero Spa. (SACE), an official credit agency from Italy, to guarantee a 10-year credit line of US\$300 million provided by commercial banks.

**Table 9 DEBT INDICATORS**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>
Total debt	22,880	25,267	25,343
Net debt	11,840	15,544	15,966
Total debt / adjusted LTM EBITDA (x)	2.5	1.3	1.0
Adjusted LTM EBITDA / LTM interest expenses (x)	8.2	18.1	23.8
Total debt / EV (%)	14.4	14.4	13.2

**PERFORMANCE OF THE BUSINESS SEGMENTS****Bulk materials***Ferrous minerals*

Iron ore and pellets sales totaled 294.414 million metric tons in 2010, in line with 296.241 million metric tons in 2008, but showing a strong recovery from the 247.261 million metric tons shipped in 2009.

**Table of Contents****US GAAP****4Q10**

In 2010, the shipments of iron ore amounted to 254.902 million metric tons, 3.4% below the record sales volume in 2008. Shipment of pellets totaled 39.512 million metric tons in 2010, the highest level in Vale's history, surpassing the all-time high figure of 33.670 million reached in 2007.

Revenues from iron ore sales reached an all-time high, at US\$26.383 billion in 2010, being 48.4% above the value of US\$17.775 billion for 2008, a peak until then. By the same token, revenues from pellet shipments set a record, at US\$6.373 billion, surpassing the prior record mark of US\$4.245 billion in 2008 by 50.1%.

The performance of iron ore and pellet prices during the year, reflecting disequilibrium between global demand and supply, was the main cause for the significant growth in revenues. The new iron ore pricing system implemented by Vale brought several benefits to market participants, including flexibility, efficiency in price discovery, transparency and rewarding of superior quality, a hallmark of our products. In addition to the contribution to our performance, the new system is issuing the right signals, one of the most important roles played by market price mechanisms. These signals are leading us to invest a major amount of resources in the development of high quality production capacity to satisfy the needs of a modern global steel industry.

In 4Q10, volumes of iron ore and pellets shipments were 80.541 million metric tons, an increase of 2.4% compared to 3Q10, being the best sales performance of iron ore and pellets in Vale's history in a 4Q. Sales volumes of iron ore totaled 69.860 million metric tons, 2.7% higher than 3Q10, and pellets sales accounted for 10.681 million metric tons, slightly above the 10.585 million metric tons in the 3Q10, and a record high in Vale's history.

Sales revenues from iron ore and pellets, in 4Q10, totaled US\$10.394 billion, 3.8% less than the previous quarter, due to lower realized prices. Sales of iron ore and pellets were US\$8.476 billion and US\$1.918 billion, respectively, decreasing of 2.8% and 7.6% relative to 3Q10, respectively. In 4Q10, the average realized price of iron ore was US\$121.34 per metric ton, 5.4% lower than 3Q10. Average pellet price was US\$179.53 per metric ton, 8.5% lower than 3Q10.

Even increasing significantly capacity utilization of our iron ore operations, we were forced to reduce shipments to China, to 126.400 Mt from 140.396 Mt in 2009 in order to give room to satisfying the demand recovery in other markets, particularly in Brazil and Europe, where our shipments increased by 15.058 Mt and 27.735 Mt, respectively. Thereby, China's share in our sales of iron ore and pellets decreased to 42.9% in 2010 from 56.8% in 2009, while Europe's share increased to 20.7% from 13.4% in 2009, recovering some of the ground lost with the recession. Brazil accounted for 13.7% of volumes sold, from 10.2% in 2009, and Japan represented 10.5%, from 9.1% in the previous year.

It is worthwhile noting that reported revenues for iron ore and pellets are net of the costs of maritime freight, meaning that prices of cost and freight (CFR) sales are comparable to average FOB prices. In 4Q10, Vale sold 31.3 million metric tons of iron ore and pellets on a CFR basis, against 25.0 million metric tons in 3Q10. In 2010, sales volume of iron ore and pellets on a CFR basis amounted to 81.9 million metric tons.

In 2010, shipments of manganese ore reached 1.119 Mt, 47.4% above 2008, and sales volumes of ferroalloys totaled 401,000 metric tons, in line with the 396,000 metric tons reached in 2008. Manganese ore revenues amounted to US\$258 million, while those originated from ferroalloys totaled US\$621 million, lower than US\$1.073 billion in 2008, when their prices peaked.

In 4Q10, sales volumes of manganese ore were 352,000 metric tons, 51.1% higher than 3Q10, and revenues were US\$44 million, 34.0% lower than 3Q10, due to lower realized prices of US\$125.00 in the quarter. Sales volumes of ferroalloys were 109,000 metric tons in 4Q10, 21.1% higher than the previous quarter and sales revenues were US\$170 million, 6.5% higher than 3Q10, with the average realized prices of US\$1,559.63 per metric ton in 4Q10.

Gross revenues from ferrous minerals – iron ore, pellets, manganese and ferroalloys – were US\$33.739 billion in 2010, reaching all time high level in Vale's history, being 42.4% above the previous record of 2008. In 4Q10, gross revenues from ferrous minerals totaled US\$10.656 billion, 3.5% lower than 3Q10.

The adjusted EBIT margin for the ferrous minerals business was 65.7% in 4Q10, compared to 70.3% in 3Q10. In 2010, the operational margin was 64.3%, higher than 54.1% in 2008.



**Table of Contents****US GAAP****4Q10**

Adjusted EBITDA for the ferrous minerals operations totaled US\$7.978 billion in 4Q10, dropping 3.5% on a quarter-on-quarter basis. The decrease of US\$286 million was mainly due lower sales prices, which had a negative impact of US\$670 million on the cash flow, and was partly offset by higher sales volumes, with a contribution of US\$245 million.

In 2010, adjusted EBITDA reached US\$23.976 billion, a record figure, 72.7% higher than the previous record in 2008.

**Table 10 FERROUS MINERALS BUSINESS PERFORMANCE  
VOLUME SOLD BY DESTINATION IRON ORE AND PELLETS**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>%</b>	<b>2010</b>	<b>%</b>
<b>Americas</b>	<b>10,965</b>	<b>11,646</b>	<b>11,759</b>	<b>29,013</b>	<b>11.7</b>	<b>46,103</b>	<b>15.7</b>
Brazil	9,512	10,208	9,987	25,191	10.2	40,249	13.7
Steel mills and pig iron producers	8,526	8,991	8,930	24,205	9.8	36,003	12.2
JVs pellets	986	1,217	1,057	986	0.4	4,247	1.4
USA		226	233	150	0.1	459	0.2
Others	1,453	1,212	1,539	3,672	1.5	5,395	1.8
<b>Asia</b>	<b>42,917</b>	<b>51,097</b>	<b>48,690</b>	<b>179,843</b>	<b>72.7</b>	<b>178,702</b>	<b>60.7</b>
China	30,316	36,166	35,417	140,396	56.8	126,400	42.9
Japan	8,342	8,204	7,682	22,500	9.1	30,802	10.5
South Korea	2,436	3,805	4,455	10,909	4.4	13,971	4.7
Others	1,823	2,922	1,136	6,038	2.4	7,529	2.6
<b>Europe</b>	<b>12,502</b>	<b>13,868</b>	<b>17,202</b>	<b>33,142</b>	<b>13.4</b>	<b>60,877</b>	<b>20.7</b>
Germany	4,484	5,637	5,845	10,797	4.4	22,382	7.6
United Kingdom	949	1,480	1,131	4,291	1.7	7,208	2.4
France	1,914	1,188	3,109	4,370	1.8	5,903	2.0
Belgium	631	1,004	1,893	1,462	0.6	3,899	1.3
Italy	2,129	1,880	2,121	4,251	1.7	8,366	2.8
Others	2,395	2,679	3,102	7,971	3.2	13,118	4.5
<b>Rest of the World</b>	<b>2,026</b>	<b>2,017</b>	<b>2,891</b>	<b>5,263</b>	<b>2.1</b>	<b>8,733</b>	<b>3.0</b>
<b>Total</b>	<b>68,410</b>	<b>78,628</b>	<b>80,541</b>	<b>247,261</b>	<b>100.0</b>	<b>294,414</b>	<b>100.0</b>

**OPERATING REVENUE BY PRODUCT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Iron ore	3,458	8,724	8,476	12,831	26,383
Pellet plant operation services	7	7	10	19	30
Pellets	476	2,076	1,918	1,334	6,373
Manganese ore	64	67	44	145	258
Ferroalloys	114	160	170	353	621
Others	36	6	38	64	74
<b>Total</b>	<b>4,154</b>	<b>11,040</b>	<b>10,656</b>	<b>14,745</b>	<b>33,739</b>

**AVERAGE SALE PRICE**

<i>US\$/ metric ton</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Iron ore	55.86	128.21	121.34	55.99	103.50
Pellets	73.22	196.14	179.53	73.75	161.29
Manganese ore	166.23	285.91	125.00	147.06	230.22
Ferroalloys	1,781.25	1,774.27	1,559.63	1,395.26	1,547.84

**VOLUME SOLD**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Iron ore	61,909	68,043	69,860	229,174	254,902
Pellets	6,501	10,585	10,681	18,087	39,512
Manganese ore	385	233	352	986	1,119
Ferroalloys	64	90	109	253	401



**Table of Contents****US GAAP****4Q10****Coal**

Revenues from sales of coal products reached a record of US\$241 million in 4Q10, with a quarter-on-quarter increase of 11.3%. In 4Q10, revenues from shipments of metallurgical coal were US\$191 million, increasing 82.7% on a quarterly basis. But, on the other hand, thermal coal revenues were US\$51 million versus US\$113 million in 3Q10. The total revenue of US\$770 million in 2010 a record figure increased 52.6% vis-à-vis 2009. The better performance was mainly due to the higher volume sold of thermal and metallurgical coal, reaching 7,384,000 metric tons from 5,673,000 metric tons in 2009 and 4,087,000 metric tons in 2008.

The average sale price of metallurgical coal in 4Q10 was US\$172.33 per metric ton, 6.7% lower than 3Q10, and US\$63.96 per metric ton for thermal coal against US\$98.73 per metric ton in the previous quarter.

Adjusted EBITDA for the coal business was negative by US\$15 million in 4Q10, a decrease of US\$87 million from 3Q10, mainly due to the increase in SG&A expenses by US\$74 million. In 2010, adjusted EBITDA totaled US\$21 million, against negative US\$1 million in 2009.

**Table 11 COAL BUSINESS PERFORMANCE  
OPERATING REVENUE BY PRODUCT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Thermal coal	65	113	51	205	298
Metallurgical coal	72	104	191	299	472
<b>Total</b>	<b>137</b>	<b>217</b>	<b>241</b>	<b>505</b>	<b>770</b>

**AVERAGE SALE PRICE**

<i>US\$/metric ton</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Thermal coal	57.47	98.73	63.96	66.60	70.40
Metallurgical coal	96.67	184.60	172.33	115.55	149.96

**VOLUME SOLD**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Thermal coal	1,124	1,139	793	3,083	4,234
Metallurgical coal	747	565	1,106	2,590	3,150

**Table 12 BULK MATERIALS: SELECTED FINANCIAL INDICATORS**

	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
<b>Adjusted EBIT margin (%)</b>					
<b>Bulk materials</b>	<b>33.0</b>	<b>68.8</b>	<b>63.6</b>	<b>44.3</b>	<b>62.3</b>
Ferrous minerals	35.8	70.3	65.7	46.6	64.3
Coal	(51.1)	(4.6)	(25.7)	(20.8)	(21.9)
<b>Adjusted EBITDA (US\$ million)</b>					
<b>Bulk materials</b>	<b>2,073</b>	<b>8,336</b>	<b>7,963</b>	<b>8,394</b>	<b>23,997</b>
Ferrous minerals	2,101	8,264	7,978	8,395	23,976
Coal	(28)	72	(15)	(1)	21

**Base metals**

Shipments of nickel and its by-products, copper, cobalt and PGMs were negatively affected by the strike in our Canadian operations in Sudbury, Port Colborne and Voisey's Bay. On the other hand, prices have recovered in 2010, after falling in 2009.

Revenues from shipments of base metals recovered in 2010, reaching US\$8.2 billion, with a year-on-year increase of 22.8%. With the return to normalcy of the Canadian operations in 4Q10, there was a sharp improvement in the sales revenues, which climbed to US\$3.019 billion, increasing 57.3% over 3Q10.



**Table of Contents****US GAAP****4Q10**

In 4Q10, nickel revenues reached US\$1.437 billion, 61.2% higher than 3Q10 when it was US\$891 million. This increase of US\$546 million is due to both higher volumes, US\$456 million, and prices, US\$90 million. Sales volumes in 4Q10 were 63,000 metric tons, against 42,000 in 3Q10. The average nickel price in 4Q10 was slightly higher, US\$22,955 per metric ton in 4Q10 versus US\$21,366 in the previous quarter.

Copper revenues amounted to US\$753 million in 4Q10, up 90.7% compared to US\$395 million in 3Q10. Shipments reached 82,000 metric tons in 4Q10, 49.3% higher than the volume of 3Q10. In 4Q10, the average copper price increased to US\$9,134 per metric ton from US\$7,153 in 3Q10.

In 4Q10, PGMs produced revenues of US\$77 million from US\$10 million in 3Q10, influenced by the higher average platinum price in 4Q10, US\$1,674 per troy ounce, over US\$1,552 per troy ounce in the previous quarter.

Revenues from sales of bauxite, alumina and aluminum amounted US\$691 million in 4Q10 up 13.5% from 3Q10 due to increase in sales prices.

The average sales price of aluminum was US\$2,246 per metric ton in 4Q10 against US\$1,990 per metric ton in 3Q10, while the price of alumina, which is mostly indexed to the metal price, increased to US\$295.47 per metric ton in this quarter from US\$272.15 per metric ton in 3Q10.

In 4Q10, shipments of aluminum were 130,000 metric tons, compared with 97,000 metric tons in 3Q10. Sales of alumina amounted to 1.303 million metric tons versus 1.422 million metric tons in the previous quarter. Bauxite volume increased to 296,000 metric tons against 204,000 metric tons in 3Q10.

The adjusted EBIT margin of the base metals increased to 12.6% in 4Q10, from 11.7% in 3Q10. In 2010, operational margin was 8.0%.

Adjusted EBITDA surged to US\$978 million in 4Q10, increasing 87.7% against 3Q10. The increase was mainly due to higher sales volumes (US\$454 million) and higher sales prices (US\$394 million) which were partly offset by an increase in SG&A expenses (US\$195 million) and in COGS (US\$181 million).

In 2010, adjusted EBITDA totaled US\$2.294 billion, almost twice the figure for 2009, US\$1.159 billion.

**Table 13 BASE METALS BUSINESS PERFORMANCE  
OPERATING REVENUE BY PRODUCT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Nickel	741	891	1,437	3,260	3,835
Copper	328	395	753	1,131	1,608
PGMs	1	10	77	135	101
Precious metals	3	10	45	62	72
Cobalt	6	4	16	41	30
Aluminum	261	215	296	855	1,019
Alumina	347	387	385	1,188	1,507
Bauxite	4	7	10	7	28
<b>Total</b>	<b>1,691</b>	<b>1,919</b>	<b>3,019</b>	<b>6,679</b>	<b>8,200</b>
<b>AVERAGE SALE PRICE</b>					

<i>US\$/ metric ton</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Nickel	17,951.51	21,366.16	22,955.39	14,596.55	21,980.19
Copper	7,125.97	7,153.24	9,134.36	5,229.39	7,730.09
Platinum (US\$/oz)	998.21	1,551.85	1,674.12	1,073.98	1,661.20
Cobalt (US\$/lb)	13.21	13.61	36.11	10.03	20.53
Aluminum	1,976.92	1,989.69	2,246.15	1,686.87	2,181.02
Alumina	270.46	272.15	295.47	226.46	283.59
Bauxite	33.61	34.31	33.78	34.15	31.64



**Table of Contents****US GAAP****4Q10****VOLUME SOLD**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Nickel	41	42	63	223	174
Copper	46	55	82	216	208
Precious metals (oz)	31	199	468	1,287	919
PGMs (oz)	2	11	70	233	97
Cobalt (metric ton)	206	134	201	1,854	663
Aluminum	130	97	130	495	453
Alumina	1,283	1,422	1,303	5,246	5,314
Bauxite	119	204	296	205	885

**SELECTED FINANCIAL INDICATORS**

	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Adjusted EBIT margin (%)	(7.3)	11.7	12.6	(6.5)	8.0
Adjusted EBITDA (US\$ million)	288.0	521.0	978.0	1,159.0	2,294.0

**Fertilizer nutrients**

Total revenues from fertilizer nutrients were US\$769 million in 4Q10, slightly less than the US\$801 million for 3Q10. In 2010, sales revenues totaled US\$1.846 billion.

In 4Q10, potash produced revenues of US\$74 million, with a quarter-on-quarter decrease of 14.9%. Sales volumes were 174,000 metric tons in 4Q10, down from 217,000 metric tons in 3Q10. The average sales prices increased to US\$425.29, 6.1% higher than 3Q10, partly mitigating the effect of lower volume sales on revenues. In 2010, revenues from potash sales totaled US\$280 million, 32.2% less than in 2009. The decrease of US\$133 million from 2009 was due to diminished prices and sales volumes, with a negative impact of US\$76 million and US\$57 million, respectively.

Revenues from sales of phosphates products were US\$512 million in 4Q10, 10.6% lower than 3Q10. Total shipments of MAP were 305,000 metric tons (t), TSP 113,000 t, SSP 547,000 t, and DCP 114,000 t.

Sales of nitrogen fertilizers increased to US\$178 million in 4Q10, 35.4% higher on a quarterly basis. Sales of other related products amounted to US\$5 million in 4Q10.

The EBIT margin of the fertilizer nutrients business was -11.0% in 4Q10, against -2.0% in 3Q10. The main reason for the negative operating margin was the impact of the depreciation charges, which resulted from the fair value inventory adjustment of acquired fertilizer assets. If this effect of US\$99 million a non-recurring non-cash charge was excluded, the operating margin would have been of 2.4%.

Adjusted EBITDA for the fertilizers business totaled US\$86 million in 4Q10, 59.3% higher than 3Q10. Lower COGS made a positive contribution to cash generation of US\$103 million, but higher SG&A had a negative impact of US\$39 million. In 2010, adjusted EBITDA totaled US\$176 million.

**Table 14 FERTILIZER NUTRIENTS BUSINESS PERFORMANCE  
OPERATING REVENUE BY PRODUCT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Potash	108	87	74	413	280
Phosphates		573	512		1,211
Nitrogen		131	178		337
Others		10	5		18
<b>Total</b>	<b>108</b>	<b>801</b>	<b>769</b>	<b>413</b>	<b>1,846</b>



**Table of Contents****US GAAP****4Q10****AVERAGE SALE PRICE**

<i>US\$/metric ton</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Potash	406.02	400.92	425.29	521.46	410.56
Phosphates					
MAP		485.65	651.36		479.42
TSP		386.40	633.90		444.66
SSP		217.78	230.76		217.86
DCP		558.06	582.54		561.47
Nitrogen		393.05	547.85		450.84

**VOLUME SOLD**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Potash	266	217	174	792	682
Phosphates					
MAP		351	305		703
TSP		277	113		461
SSP		771	547		1,533
DCP		133	114		284
Nitrogen		335	325		746

**SELECTED FINANCIAL INDICATORS**

	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Adjusted EBIT margin (%)	20.8	(2.0)	(11.0)	45.6	(5.5)
Adjusted EBITDA (US\$ million)	50.0	54.0	86.0	255.0	176.0

**Logistics services**

Logistics services produced revenues of US\$1.460 billion in 2010, 32.5% greater than in 2009.

In 4Q10, revenues were US\$335 million, dropping US\$72 million from the US\$407 million earned in 3Q10.

Due to lower volumes of services, revenues from rail transportation of general cargo of US\$262 million fell US\$46 million when compared to the preceding quarter.

Vale railroads – Carajás (EFC), Vitória a Minas (EFVM), Norte-Sul (FNS) and Centro-Atlântica (FCA) – transported 5.790 billion ntk<sup>6</sup> of general cargo for clients in 4Q10.

The main cargoes carried by our railroads in 4Q10 were agricultural products (44.2%), steel industry inputs and products (36.6%), fuels (8.5%), building materials and forestry products (2.0%), and others (7.3%).

Port services revenues reached US\$73 million in 4Q10, totaling US\$353 million in 2010. Our ports and maritime terminals handled 4.579 Mt of general cargo, a volume 34.7% lower than the 7.010 Mt of 3Q10.

The demand for transportation of general cargo is seasonally weaker in the fourth quarter due to the end of the crop season in Brazil. In addition, there was an accident at the Praia Mole maritime terminal – used to unload coal imports made by the steel industry – caused by very strong winds, contributing to the loss of revenues. Railroad transportation volumes fell by 16.4% on a quarter-on-quarter basis, whereas the amount of cargo handled by our maritime terminals dropped by 41.4%.

In 2010, Vale’s railroads carried 25.283 billion ntk, with a 15.7% increase against 2009, and maritime terminals handled 23.319 million tons, increasing 8.6% year-on-year.

<sup>6</sup> Ntk=net ton kilometer





**Table of Contents****US GAAP****4Q10**

In 4Q10, adjusted EBIT margin was negative on -5.2%, from 18.2% in 3Q10, due to the large drop in services sold, some decrease in average prices and a cost increase of US\$38 million, mainly to higher spending with personnel.

Adjusted EBITDA for the logistics business was US\$56 million in 4Q10, 51.7% lower than the previous quarter, mainly due to higher COGS, US\$46 million, and lower transported volume, US\$33 million. In 2010, adjusted EBITDA totaled US\$ 345 million.

**Table 15 LOGISTICS BUSINESS PERFORMANCE  
OPERATING REVENUE BY PRODUCT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Railroads	218	308	262	838	1,107
Ports	86	99	73	264	353
Total	304	407	335	1,102	1,460

**VOLUME SOLD**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Railroads (million ntk)	4,815	7,050	5,790	21,849	25,283

**SELECTED FINANCIAL INDICATORS**

	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Adjusted EBIT margin (%)	0.0	18.2	(5.2)	10.1	10.0
Adjusted EBITDA (US\$ million)	57.0	116.0	56.0	295.0	345.0

**FINANCIAL INDICATORS OF NON-CONSOLIDATED COMPANIES**

For selected financial indicators of the main companies not consolidated, see our quarterly financial statements on [www.vale.com/Investors/Financial Performance / SEC Reports](http://www.vale.com/Investors/Financial%20Performance/SEC%20Reports).

**CONFERENCE CALL AND WEBCAST**

Vale will hold a conference call and webcast on February 25, 2011, at 12:00 p.m. Rio de Janeiro time, 10:00 am Eastern Standard Time, 3:00 p.m. British Standard Time, 4:00 p.m. Paris Time, 11:00 p.m. Hong Kong Time. To connect the webcast, please dial:

Participants from Brazil: (55 11) 4688-6341

Participants from USA: (1-800) 860-2442

Participants from other countries: (1-412) 858-4600

Access code: VALE

Instructions for participation will be available on the website [www.vale.com/Investors](http://www.vale.com/Investors). A recording will be available on Vale's website for 90 days from February 25, 2011.

**Table of Contents****US GAAP****4Q10****IFRS RECONCILIATION WITH USGAAP**

Since December 2007, significant modifications have been made to Brazilian GAAP as part of a Convergence project with International Financial Reporting Standards (IFRS). By the end of 2010, the convergence of the full year financial statements will be completed and therefore the IFRS will be the accounting standard adopted in Brazil. During the intermediate periods of 2010, we already adopted all pronouncements issued by the Brazilian Accounting Practice Committee (CPC) which are in conformity with the IFRS.

The net income reconciliation between the 4Q10 net income according to Brazilian rules (in conformity with the IFRS) and USGAAP is as follows:

**NET INCOME RECONCILIATION**

<i>US\$ million</i>	<b>4Q10</b>
<b>Net income CPC / IFRS</b>	<b>5,908</b>
Depletion of assets on business acquired	(43)
Income tax	(9)
Pension plan	64
Other adjustments	(3)
<b>Net income US GAAP</b>	<b>5,917</b>

**Depletion of assets on business acquired:** Refers to additional depletion of the adjustments to fair value of property, plant and equipment on business acquired before the new rules issued by CPC in respect of business combinations. This difference will cease by the end of the useful life of these assets.

**Pension Plan:** This adjustment reflects the return on the overfunded plans, which under IFRS are only recorded if there is a clear evidence of their realization.

**Other adjustments:** Refers basically to the adjustment to present value of interest on mandatorily convertible notes due to the bifurcation approach.

**Income tax:** Income tax related to the previously described adjustments.

**Table of Contents***US GAAP**4Q10***ANNEX 1 FINANCIAL STATEMENTS****Table 16 INCOME STATEMENTS**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
<b>Gross operating revenues</b>	<b>6,541</b>	<b>14,496</b>	<b>15,207</b>	<b>23,939</b>	<b>46,481</b>
Taxes	(208)	(394)	(278)	(628)	(1,188)
<b>Net operating revenue</b>	<b>6,333</b>	<b>14,102</b>	<b>14,929</b>	<b>23,311</b>	<b>45,293</b>
Cost of goods sold	(3,995)	(5,113)	(6,040)	(13,621)	(18,814)
<b>Gross profit</b>	<b>2,338</b>	<b>8,989</b>	<b>8,889</b>	<b>9,690</b>	<b>26,479</b>
Gross margin (%)	36.9	63.7	59.5	41.6	58.5
Selling, general and administrative expenses	(378)	(418)	(647)	(1,130)	(1,701)
Research and development expenses	(296)	(216)	(301)	(981)	(878)
Others	(561)	(519)	(774)	(1,522)	(2,205)
<b>Operating profit</b>	<b>1,103</b>	<b>7,836</b>	<b>7,167</b>	<b>6,057</b>	<b>21,695</b>
Financial revenues	65	56	117	381	290
Financial expenses	(548)	(741)	(926)	(1,558)	(2,646)
Gains (losses) on derivatives, net	296	500	473	1,528	631
Monetary variation	17	257	51	675	344
Gains on sale of affiliates	(190)			40	
Discontinued operations		8			(143)
Tax and social contribution (Current)	583	(2,589)	(1,549)	(2,084)	(4,996)
Tax and social contribution (Deferred)	173	443	412	(16)	1,291
Equity income and provision for losses	71	305	303	433	987
Minority shareholding participation	(51)	(37)	(131)	(107)	(189)
<b>Net earnings</b>	<b>1,519</b>	<b>6,038</b>	<b>5,917</b>	<b>5,349</b>	<b>17,264</b>
<b>Earnings per share (US\$)</b>	<b>0.29</b>	<b>1.15</b>	<b>1.13</b>	<b>1.03</b>	<b>3.29</b>
<b>Diluted earnings per share (US\$)</b>	<b>0.28</b>	<b>1.13</b>	<b>1.12</b>	<b>1.00</b>	<b>3.25</b>

**Table 17 FINANCIAL RESULTS**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Gross interest	(236)	(337)	(343)	(894)	(1,186)
Debt with third parties	(236)	(334)	(343)	(890)	(1,183)
Debt with related parties		(3)		(4)	(3)
Tax and labour contingencies	(33)	(46)	(22)	(82)	(161)
Others	(279)	(358)	(561)	(582)	(1,299)
<b>Financial expenses</b>	<b>(548)</b>	<b>(741)</b>	<b>(926)</b>	<b>(1,558)</b>	<b>(2,646)</b>
<b>Financial income</b>	<b>65</b>	<b>56</b>	<b>117</b>	<b>381</b>	<b>290</b>
<b>Derivatives</b>	<b>296</b>	<b>500</b>	<b>473</b>	<b>1,528</b>	<b>631</b>
<b>Exchange and monetary gain (losses), net</b>	<b>17</b>	<b>257</b>	<b>51</b>	<b>675</b>	<b>344</b>
<b>Financial result, net</b>	<b>(170)</b>	<b>72</b>	<b>(285)</b>	<b>1,026</b>	<b>(1,381)</b>

**Table 18 EQUITY INCOME BY BUSINESS SEGMENT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<i>%</i>	<b>2010</b>	<i>%</i>
Ferrous minerals	39	304	341	272	62.8	952.0	96.5
Coal	14	(31)	57	56	12.9	58.0	5.9
Base metals	(39)	18	(5)	(30)	(6.9)	4.0	0.2
Logistics	65	26	32	143	33.0	94.0	9.5
Steel	(8)	(12)	(76)	(8)	(1.8)	(73.0)	(7.4)
Others			(46)			(48.0)	(4.7)
<b>Total</b>	<b>71</b>	<b>305</b>	<b>303</b>	<b>433</b>	<b>100.0</b>	<b>987.0</b>	<b>100.0</b>

**Table of Contents***US GAAP**4Q10***Table 19 BALANCE SHEET**

<i>US\$ million</i>	<b>12/31/2009</b>	<b>9/30/2010</b>	<b>12/31/2010</b>
<b>Assets</b>			
Current	21,294	31,489	31,791
Long-term	7,590	9,003	8,481
Fixed	73,395	84,803	88,867
<b>Total</b>	<b>102,279</b>	<b>125,295</b>	<b>129,139</b>
<b>Liabilities</b>			
Current	9,181	15,017	17,912
Long term	33,332	38,131	39,498
Shareholders' equity	59,766	72,147	71,729
Paid-up capital	24,250	27,046	25,914
Reserves	29,882	41,341	42,051
Non controlling interest	2,831	2,826	2,830
Mandatory convertible notes	2,803	934	934
<b>Total</b>	<b>102,279</b>	<b>125,295</b>	<b>129,139</b>

**Table of Contents****US GAAP****4Q10****Table 20 CASH FLOW**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
<b>Cash flows from operating activities:</b>					
Net income	1,570	6,075	6,048	5,456	17,453
Adjustments to reconcile net income with cash provided by operating activities:					
Depreciation, depletion and amortization	799	696	1,073	2,722	3,260
Dividends received	243	283	629	386	1,161
Equity in results of affiliates and joint ventures and change in provision for losses on equity investments	(71)	(305)	(303)	(433)	(987)
Deferred income taxes	(173)	(443)	(412)	16	(1,291)
Loss on sale of property, plant and equipment	113	229	248	293	623
Gain on sale of investment	190	(8)		(40)	143
Exchange and monetary losses	(37)	(150)	(72)	(1,095)	(301)
Net unrealized derivative losses	(248)	(403)	532	(1,404)	594
Net interest payable	2	225	(43)	(25)	187
Others	(5)	(17)	(27)	20	58
Accounts receivable	327	(776)	(639)	616	(3,800)
Inventories	(128)	(441)	404	530	(425)
Recoverable taxes	(791)	142	(70)	108	42
Others	(277)	(467)	709	(455)	307
Suppliers	559	876	(445)	121	928
Payroll and related charges	108	160	204	159	214
Income tax	(696)	1,093	(93)	(234)	1,311
Others	(74)	110	(35)	395	192
<b>Net cash provided by operating activities</b>	<b>1,411</b>	<b>6,879</b>	<b>7,708</b>	<b>7,136</b>	<b>19,669</b>
Cash flows from investing activities:					
Short term investments	815		(1,793)	(1,439)	1,954
Loans and advances receivable	(18)	(18)	(17)	(199)	(58)
Guarantees and deposits	(55)	(27)	96	(132)	(94)
Additions to investments	(806)		(36)	(1,947)	(87)
Additions to property, plant and equipment	(2,755)	(3,852)	(4,742)	(8,096)	(12,647)
Proceeds from disposals of investment	158			606	
Net cash used to acquire subsidiaries		(1,018)		(1,952)	(6,252)
<b>Net cash used in investing activities</b>	<b>(2,661)</b>	<b>(4,915)</b>	<b>(6,492)</b>	<b>(13,159)</b>	<b>(17,184)</b>
Cash flows from financing activities:					
Short-term debt, net issuances (repayments)	(56)	17	82	31	101
Loans	1	7	(20)	(357)	(1)
Long-term debt	1,537	2,017	891	3,104	4,436
Mandatorily convertibles				934	
Repayment of long-term debt	(48)	(1,288)	(958)	(307)	(2,629)

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Treasury stock		(341)	(1,655)	(9)	(1,996)
Transactions of noncontrolling interest		660			660
Interest attributed to shareholders	(1,469)		(1,750)	(2,724)	(3,000)
Dividends to minority interest	(47)		(81)	(47)	(140)
<b>Net cash used in financing activities</b>	<b>(82)</b>	<b>1,072</b>	<b>(3,491)</b>	<b>625</b>	<b>(2,569)</b>
Increase (decrease) in cash and cash equivalents	(1,332)	3,036	(2,275)	(5,398)	(84)
Effect of exchange rate changes on cash and cash equivalents	167	452	136	2,360	375
Cash and cash equivalents, beginning of period	8,458	6,235	9,723	10,331	7,293
<b>Cash and cash equivalents, end of period</b>	<b>7,293</b>	<b>9,723</b>	<b>7,584</b>	<b>7,293</b>	<b>7,584</b>
Cash paid during the period for:					
Interest on short-term debt		(2)	(2)	(1)	(5)
Interest on long-term debt	(289)	(242)	(314)	(1,113)	(1,097)
Income tax	(973)	(705)	(1,100)	(1,331)	(1,972)
Non-cash transactions					
Interest capitalized	77	24	38	266	164

**Table of Contents****US GAAP****4Q10****ANNEX 2 VOLUMES SOLD, PRICES, MARGINS AND CASH FLOWS****Table 21 VOLUME SOLD MINERALS AND METALS**

<i>000 metric tons</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Iron ore	61,909	68,043	69,860	229,174	254,902
Pellets	6,501	10,585	10,681	18,087	39,512
Manganese ore	385	233	352	986	1,119
Ferroalloys	64	90	109	253	401
Thermal coal	1,124	1,139	793	3,083	4,234
Metallurgical coal	747	565	1,106	2,590	3,150
Nickel	41	42	63	223	174
Copper	46	55	82	216	208
Precious metals (oz)	31	199	468	1,287	919
PGMs (oz)	2	11	70	233	97
Cobalt (metric ton)	206	134	201	1,854	663
Aluminum	130	97	130	495	453
Alumina	1,283	1,422	1,303	5,246	5,314
Bauxite	119	204	296	205	885
Potash	266	217	174	792	682
Phosphates					
MAP		351	305		703
TSP		277	113		461
SSP		771	547		1,533
DCP		133	114		284
Nitrogen		335	325		746
Railroads (million ntk)	4,815	7,050	5,790	21,849	25,283

**Table 22 AVERAGE SALE PRICES**

<i>US\$/ton</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Iron ore	55.86	128.21	121.34	55.99	103.50
Pellets	73.22	196.14	179.53	73.75	161.29
Manganese ore	166.23	285.91	125.00	147.06	230.22
Ferroalloys	1,781.25	1,774.27	1,559.63	1,395.26	1,547.84
Thermal coal	57.47	98.73	63.96	66.60	70.40
Metallurgical coal	96.67	184.60	172.33	115.55	149.96
Nickel	17,951.51	21,366.16	22,955.39	14,596.55	21,980.19
Copper	7,125.97	7,153.24	9,134.36	5,229.39	7,730.09
Platinum (US\$/oz)	998.21	1,551.85	1,674.12	1,073.98	1,661.20
Cobalt (US\$/lb)	13.21	13.61	36.11	10.03	20.53
Aluminum	1,976.92	1,989.69	2,246.15	1,686.87	2,181.02
Alumina	270.46	272.15	295.47	226.46	283.59
Bauxite	33.61	34.31	33.78	34.15	31.64
Potash	406.02	400.92	425.29	521.46	410.56
Phosphates					
MAP		485.65	651.36		479.42
TSP		386.40	633.90		444.66
SSP		217.78	230.76		217.86
DCP		558.06	582.54		561.47



Nitrogen

393.05

547.85

450.84

32

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Table of Contents*US GAAP**4Q10***Table 23 OPERATING MARGINS BY SEGMENT (EBIT ADJUSTED MARGIN)**

<i>%</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
<b>Bulk materials</b>					
Ferrous minerals	35.8	70.3	65.7	46.6	64.3
Coal	(51.1)	(4.6)	(25.7)	(20.8)	(21.9)
<b>Base metals</b>	<b>(7.3)</b>	<b>11.7</b>	<b>12.6</b>	<b>(6.5)</b>	<b>8.0</b>
<b>Fertilizer nutrients</b>	<b>20.8</b>	<b>(2.0)</b>	<b>(11.0)</b>	<b>45.6</b>	<b>(5.5)</b>
<b>Logistics</b>	<b>0.0</b>	<b>18.2</b>	<b>(5.2)</b>	<b>10.1</b>	<b>10.0</b>
<b>Total</b>	<b>17.4</b>	<b>55.6</b>	<b>48.0</b>	<b>26.0</b>	<b>47.9</b>

**Table of Contents****US GAAP****4Q10****ANNEX 3 RECONCILIATION OF US GAAP and NON-GAAP INFORMATION****(a) Adjusted EBIT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Net operating revenues	6,333	14,102	14,929	23,311	45,293
COGS	(3,995)	(5,113)	(6,040)	(13,621)	(18,814)
SG&A	(378)	(418)	(647)	(1,130)	(1,701)
Research and development	(296)	(216)	(301)	(981)	(878)
Other operational expenses	(561)	(519)	(774)	(1,522)	(2,205)
<b>Adjusted EBIT</b>	<b>1,103</b>	<b>7,836</b>	<b>7,167</b>	<b>6,057</b>	<b>21,695</b>

**(b) Adjusted EBITDA**

EBITDA defines profit or loss before interest, tax, depreciation and amortization. Vale uses the term adjusted EBITDA to reflect exclusion, also, of: monetary variations; equity income from the profit or loss of affiliated companies and joint ventures, less the dividends received from them; provisions for losses on investments; adjustments for changes in accounting practices; minority interests; and non-recurrent expenses. However our adjusted EBITDA is not the measure defined as EBITDA under US GAAP, and may possibly not be comparable with indicators with the same name reported by other companies. Adjusted EBITDA should not be considered as a substitute for operational profit or as a better measure of liquidity than operational cash flow, which are calculated in accordance with GAAP. Vale provides its adjusted EBITDA to give additional information about its capacity to pay debt, carry out investments and cover working capital needs. The following table shows the reconciliation between adjusted EBITDA and operational cash flow, in accordance with its statement of changes in financial position:

**RECONCILIATION BETWEEN ADJUSTED EBITDA AND OPERATIONAL CASH FLOW**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Operational cash flow	1,411	6,879	7,708	7,136	19,669
Income tax	(583)	2,589	1,549	2,084	4,996
FX and monetary losses	20	(107)	(76)	420	(140)
Financial expenses	185	(40)	476	(326)	1,635
Net working capital	972	(697)	(35)	(1,240)	1,231
Other	140	191	(753)	1,091	(1,275)
<b>Adjusted EBITDA</b>	<b>2,145</b>	<b>8,815</b>	<b>8,869</b>	<b>9,165</b>	<b>26,116</b>

**(c) Net debt****RECONCILIATION BETWEEN Total debt AND NET DEBT**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Total debt	22,880	25,267	25,343	22,880	25,343
Cash and cash equivalents	11,040	9,723	9,377	11,040	9,377
Net debt	11,840	15,544	15,966	11,840	15,966

**(d) Total debt / LTM Adjusted EBITDA**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Total debt / LTM Adjusted EBITDA					
(x)	2.5	1.3	1.0	2.5	1.0
Total debt / LTM operational cash flow (x)	3.2	1.9	1.3	3.2	1.3

**(e) Total debt / Enterprise value**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
Total debt / EV (%)	14.42	14.36	13.18	14.42	13.18
Total debt / total assets (%)	22.37	20.17	19.62	22.37	19.62

*Enterprise value = Market capitalization + Net debt*

**(f) LTM Adjusted EBITDA / LTM interest payments**

<i>US\$ million</i>	<b>4Q09</b>	<b>3Q10</b>	<b>4Q10</b>	<b>2009</b>	<b>2010</b>
LTM adjusted EBITDA / LTM interest payments (x)	8.23	18.07	23.79	8.23	23.79
LTM operational profit / LTM interest payments (x)	5.44	14.57	19.76	5.44	19.76

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***US GAAP***

***4Q10***

This press release may include statements that present Vale's expectations about future events or results. All statements, when based upon expectations about the future and not on historical facts, involve various risks and uncertainties. Vale cannot guarantee that such statements will prove correct. These risks and uncertainties include factors related to the following: (a) the countries where we operate, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM), the French Autorité des Marchés Financiers (AMF), and The Stock Exchange of Hong Kong Limited, and in particular the factors discussed under *Forward-Looking Statements* and *Risk Factors* in Vale's annual report on Form 20-F.

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**Signatures**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Vale S.A.  
(Registrant)

By: /s/ Roberto Castello Branco  
Roberto Castello Branco  
Director of Investor Relations

Date: February 24, 2011