

Vedanta Limited Valuation Report

Company Overview

Vedanta Limited has emerged over the years as a global leader in diversified natural resources. With a significant presence in Oil & Gas, Zinc, Lead, Silver, Copper, Iron Ore, Steel, and Aluminum, Vedanta has made its mark in mineral exploration, extraction, and metal production. Their integrated approach covers the entire industry value chain, right from exploration to extraction, processing, and smelting. Their operations span across India, South Africa, and Namibia.

Vedanta's commitment to sustainable development, employee welfare, and strong corporate governance practices underlines its aim to balance economic prosperity, environmental stewardship, and societal progress. Through various operational units in India and abroad, Vedanta aims to serve the community by fulfilling the growing demand for raw materials, energy, and new age technologies.

Competition

The natural resources sector is fiercely competitive. Vedanta Limited's main rivals include multinational giants such as BHP Group, Rio Tinto, and Glencore. These companies, along with Vedanta, battle for market share in the global commodities market, especially in regions abundant in natural resources.

In addition to these well-established companies, Vedanta also faces competition from emerging companies and national mining corporations in countries with significant mineral reserves. These corporations, backed by governmental support, can provide stiff competition in terms of access to reserves and pricing power.

Local Indian peers include of Hindustan Zinc Ltd, Hindustan Copper Ltd, Gravita India Ltd, Bharat Wire Ropes Ltd, Ram Ratna Wires Ltd, Nile Ltd, Bhagyanagar India Ltd, Shalimar Wires Industries Ltd, Cubex Tubings Ltd, Bonlon Industries Ltd, Poojawestern Metaliks Ltd, Southern Magnesium & Chemicals Ltd, MFS Intercorp

Management

Vedanta Limited is helmed by CEO Sunil Duggal, who brings with him a wealth of experience in the resources industry. Prior to his current role, he had a successful tenure as the CEO of Hindustan Zinc Limited, a Vedanta Group company, where he effectively drove growth and efficiency measures. With over 35 years of experience across different sectors, his broad industry knowledge has proved instrumental in steering Vedanta through volatile market conditions.

Under Duggal's leadership, Vedanta has seen a significant increase in its operational efficiency, profitability, and a further strengthening of its global footprint. His commitment to ethical business practices and sustainable development has also placed Vedanta as a leading player in the resources industry in terms of its environmental, social, and governance (ESG) measures.

Anil Agarwal is the founder and Chairman of Vedanta Resources Limited. Anil Agarwal is known for his entrepreneurial spirit and has played a significant role in the Indian natural resources industry. He has been instrumental in India's growth story and has often voiced his desire to see India become self-reliant in natural resources.

Vedanta's commitment to transparency, ethical business practices, and good corporate governance, as outlined in their annual report, suggests a corporate culture that values integrity. This culture is often a reflection of the values of the company's leadership, including the chairman.

Anil Agarwal has also been involved in various philanthropic activities, including pledging 75% of his family's wealth to charitable causes, which could be seen as a testament to his personal integrity and commitment to social good.

Under their leadership, the company has consistently grown its revenue and expanded its global presence.

Regarding integrity, the company has made it one of their core values. This suggests that the management team is committed to upholding high ethical standards in all their business dealings. They believe in transparency and integrity in line with their values, and they are committed to disclosing relevant information pertaining to their material issues with the highest standards of transparency and integrity.

The company also emphasizes good governance as an imperative. They are committed to responsible business decisions and actions that safeguard the best interests of their stakeholders and promote social good. This commitment to good governance, transparency, and ethical business practices is a strong indicator of the management team's integrity.

Valuation

"All the numbers mentioned are either taken from <https://finance.yahoo.com/> or <https://www.screener.in/>."

Step 1: Joel Greenblatt's Magic Formula [1]

I implemented Joel Greenblatt's Magic Formula on Indian Stocks with Market Capitalization of over INR 5000 Crore

- Calculate each company's earnings yield ($\text{EBIT} \div \text{Enterprise Value}$).
- Calculate each company's return on invested capital [$\text{EBIT} \div (\text{Net Fixed Assets} + \text{Working Capital})$].
- Rank selected companies by earnings yields and return on invested capital.
- Rank the summation of ranks of earning yields and return on invested capital from highest to lowest.
- Select the top 30 ranked stocks.

To summarize, find top 30 stocks based on combination of Cheap and Wonderful.

Below is the table of Top 30 Magic Formula stocks that have Market Capitalization > INR 5000 Crore as of July 10, 2023

| Name | EARNINGS_YIELD | ROIC | Earnings_Yield_rank | ROIC_rank | Magic_Formula_rank |
|------------------|----------------|--------------|---------------------|------------|--------------------|
| Oil India | 32.66 | 43.45 | 560 | 523 | 565 |
| C P C L | 48.16 | 37.97 | 564 | 512 | 564 |
| G M D C | 31.86 | 40.73 | 559 | 516 | 563 |
| Angel One | 13.22 | 53.5 | 527 | 533 | 562 |
| Coal India | 35.67 | 30.54 | 562 | 489 | 561 |
| NMDC | 26.02 | 30.84 | 553.5 | 492 | 560 |
| Fusion Microfin. | 9.77 | 88.66 | 495 | 549 | 559 |
| L&T Fin.Holdings | 9.88 | 68.68 | 498.5 | 541 | 558 |
| NBCC | 9.05 | 331.07 | 478 | 560 | 557 |
| REC Ltd | 8.91 | 291.35 | 473 | 559 | 556 |
| Hindustan Zinc | 10.49 | 42.32 | 508 | 520 | 555 |
| Deepak Fertiliz. | 18.48 | 29.01 | 547 | 478 | 554 |
| Castrol India | 9.5 | 58.76 | 488 | 536 | 553 |
| GHCL | 27.36 | 27.72 | 556 | 467 | 552 |
| G R Infraproject | 13.49 | 30.85 | 529 | 493 | 551 |
| Motil.Oswal.Fin. | 14.93 | 29.33 | 537 | 480 | 550 |
| Coromandel Inter | 10.58 | 32.45 | 511.5 | 495.5 | 549 |
| Aditya AMC | 7.6 | 345.4 | 442 | 561 | 547.5 |
| Godfrey Phillips | 9.02 | 45.4 | 476 | 527 | 547.5 |
| Vedanta | 16.47 | 26.13 | 539 | 461 | 546 |
| Engineers India | 7.86 | 89.17 | 447.5 | 550 | 545 |
| Life Insurance | 11.82 | 27.84 | 521 | 469 | 544 |
| Apar Inds. | 9.07 | 36.19 | 480 | 509 | 543 |
| H.G. Infra Engg. | 11.1 | 28.66 | 513 | 475 | 542 |
| Mazagon Dock | 9.03 | 36.21 | 477 | 510 | 541 |
| Archean Chemical | 9.11 | 34.2 | 482 | 503 | 540 |
| PNC Infratech | 9.86 | 29.52 | 497 | 484 | 539 |
| Brightcom Group | 42.71 | 22.31 | 563 | 417 | 538 |
| Supreme Petroch. | 8.47 | 40.98 | 460 | 517 | 537 |

I found that Vedanta was one of the Blue-Chip stocks and decided to further pursue more research into it.

Step 2: DCF Analysis of the picked stock Vedanta [7]

Vedanta has grown about 20% on average in the past 5 years. Based on that, I have used very conservative growth rates (5% and 3%) and terminal value (12) for the calculation.

| Inputs | | | | | | | |
|----------------------------------|--------------|--|--|--|--------|-------------|--------|
| Growth Rate (yrs 1 -5) | 5% | | | Year | FCF | PV | |
| Growth rate (yrs 6 - 10) | 3% | | | 1 | 19411 | 16879 | Crores |
| Discount Rate | 15% | | | 2 | 20382 | 15411 | Crores |
| Terminal Value (multiple of FCF) | 12 | | | 3 | 21401 | 14071 | Crores |
| Year 1 Free Cash Flow | 19411 Crores | | | 4 | 22471 | 12848 | Crores |
| Excess Capital (Cash) | 18344 Crores | | | 5 | 23594 | 11730 | Crores |
| Debt | 66628 Crores | | | 6 | 24302 | 10506 | Crores |
| Shares Outstanding | 371 Crores | | | 7 | 25031 | 9410 | Crores |
| Stock Ticker | VEDL | | | 8 | 25782 | 8428 | Crores |
| | | | | 9 | 26555 | 7549 | Crores |
| | | | | 10 | 27352 | 6761 | Crores |
| | | | | 10 | 328226 | 81132 | Crores |
| | | | | Present Value of Future Cash Flows/ Enterprise Value | | INR 194,727 | Crores |
| | | | | Equity value | | INR 146,443 | Crores |
| | | | | Value of Stock | | INR 395 | |

As of July 11, 2023 - the stock price is INR 277.55 which is about 42.3 % cheaper than the above DCF valuation resulting in a good margin of safety.

Step 3: Relative Value (Ranking Vedanta with its peers)

Based on Magic Formula:

| Company | Earnings_Yield | ROIC | Earnings_Yield_rank | ROIC_rank | Magic_Formula_rank |
|------------------------------------|----------------|--------|---------------------|-----------|--------------------|
| Southern Magnesium & Chemicals Ltd | 0.184 | 0.534 | 14 | 13 | 14 |
| Hindustan Zinc Ltd | 0.104 | 0.423 | 11 | 11 | 12 |
| MFS InterCorp | 0.0949 | 0.472 | 10 | 12 | 12 |
| Vedanta Ltd | 0.166 | 0.261 | 13 | 9 | 12 |
| Nile Ltd | 0.14 | 0.121 | 12 | 6 | 10 |
| Shalimar Wires Industries Ltd | 0.0917 | 0.126 | 9 | 7 | 9 |
| Hindustan Copper Ltd | 0.0362 | 0.991 | 1 | 14 | 8 |
| Gravita India Ltd | 0.0591 | 0.266 | 4 | 10 | 7 |
| Bharat Wire Ropes Ltd | 0.0814 | 0.106 | 8 | 5 | 5.5 |
| Ram Ratna Wires Ltd | 0.0632 | 0.137 | 5 | 8 | 5.5 |
| Bhagyanagar India Ltd | 0.0755 | 0.0568 | 6 | 3 | 3.5 |
| Cubex Tubings Ltd | 0.0799 | 0.0501 | 7 | 2 | 3.5 |
| Poojawestern Metaliks Ltd | 0.0547 | 0.0712 | 3 | 4 | 2 |
| Bonlon Industries Ltd | 0.0486 | 0.0271 | 2 | 1 | 1 |

Based on Price to Book Value (P/B):

| Company | PB | PB_rank |
|---------------------------------------|-----------|----------------|
| Hindustan Zinc Ltd | 10.8 | 14 |
| Bharat Wire Ropes Ltd | 7.23 | 13 |
| Gravita India Ltd | 7.14 | 12 |
| Hindustan Copper Ltd | 5.52 | 11 |
| Southern Magnesium & Chemicals Ltd | 4.84 | 10 |
| MFS Intercorp | 4.21 | 9 |
| Ram Ratna Wires Ltd | 4.13 | 8 |
| Poojawestern Metaliks Ltd | 2.65 | 7 |
| Vedanta Ltd | 2.62 | 6 |
| Shalimar Wires Industries Ltd | 2.5 | 5 |
| Bhagyanagar India Ltd | 1.18 | 4 |
| Nile Ltd | 1.16 | 3 |
| Cubex Tubings Ltd | 0.79 | 2 |
| Bonlon Industries Ltd | 0.59 | 1 |

Based on Price to Earnings (P/E):

| Company | PE | PE_rank |
|------------------------------------|-----------|----------------|
| Shalimar Wires Industries Ltd | 157 | 14 |
| Hindustan Copper Ltd | 38.9 | 13 |
| Poojawestern Metaliks Ltd | 30.8 | 12 |
| Ram Ratna Wires Ltd | 28.7 | 11 |
| Bonlon Industries Ltd | 26.8 | 10 |
| Gravita India Ltd | 20.9 | 9 |
| Bharat Wire Ropes Ltd | 20.7 | 8 |
| Cubex Tubings Ltd | 19.2 | 7 |
| Bhagyanagar India Ltd | 17.2 | 6 |
| MFS Intercorp | 14.4 | 5 |
| Hindustan Zinc Ltd | 13.3 | 4 |
| Nile Ltd | 10.2 | 3 |
| Vedanta Ltd | 9.66 | 2 |
| Southern Magnesium & Chemicals Ltd | 8.77 | 1 |

Based on Price to Free Cash Flow (CMP/FCF):

| Company | PFCF | PFCF_rank |
|---------------------------------------|-------------|------------------|
| Gravita India Ltd | 143 | 14 |
| MFS Intercorp | 112 | 13 |
| Ram Ratna Wires Ltd | 29.2 | 12 |
| Southern Magnesium & Chemicals Ltd | 19.2 | 11 |
| Hindustan Copper Ltd | 17 | 10 |
| Hindustan Zinc Ltd | 14.2 | 9 |
| Nile Ltd | 9.72 | 8 |
| Vedanta Ltd | 5.05 | 7 |
| Shalimar Wires Industries Ltd | 5 | 6 |
| Bonlon Industries Ltd | -1.26 | 5 |
| Bhagyanagar India Ltd | -3.89 | 4 |
| Cubex Tubings Ltd | -7.46 | 3 |
| Bharat Wire Ropes Ltd | -25.3 | 2 |
| Poojawestern Metaliks Ltd | -37.4 | 1 |

Based on 5 Year Return on Equity (ROE 5 Year):

| Company | ROE_5Yr | ROE_5Yr_rank |
|------------------------------------|---------|--------------|
| Southern Magnesium & Chemicals Ltd | 0.342 | 14 |
| Gravita India Ltd | 0.311 | 13 |
| MFS Intercorp | 0.286 | 12 |
| Hindustan Zinc Ltd | 0.256 | 11 |
| Vedanta Ltd | 0.214 | 10 |
| Ram Ratna Wires Ltd | 0.132 | 9 |
| Nile Ltd | 0.11 | 8 |
| Poojawestern Metaliks Ltd | 0.0617 | 7 |
| Bhagyanagar India Ltd | 0.0491 | 6 |
| Hindustan Copper Ltd | 0.0478 | 5 |
| Cubex Tubings Ltd | 0.0251 | 4 |
| Bonlon Industries Ltd | 0.0246 | 3 |
| Bharat Wire Ropes Ltd | -0.0335 | 2 |
| Shalimar Wires Industries Ltd | -0.189 | 1 |

Relative Value Analysis:

- Vedanta Ranks 2nd highest based on Magic Formula and 5th highest based on 5 Year Return on Equity.
- Vedanta Ranks 2nd cheapest based on P/E, 6th based on P/B and 7th based on P/ FCF.
- Out of the list Bharat Wire Ropes Ltd, Hindustan Copper Ltd, Ram Ratna Wires Ltd, Vedanta Ltd, Hindustan Zinc Ltd, Gravita India Ltd are only 7 companies feasible for investment based on Liquidity Risk and Market Capitalization. The other 8 stocks are in either single, double- or triple-digit crore market capitalization and illiquid. This only improves the above relative rankings of Vedanta further.

Back tests show Low P/B, Low P/E, Low P/FCF [3,4,5], High ROE [2] have outperformed the market over the long term and tend to lose less than the market during poor overall market.

Depending on the business, Greenblatt uses some combination of four standard valuation techniques. [8]

Method 1: he performs a discounted cash flow analysis, calculating the net present value of the company's estimated future earnings.

Method 2: he assesses the company's relative value, comparing it to the price of similar businesses.

Method 3: he estimates the company's acquisition value, figuring out what an informed buyer might pay for it.

Method 4: he calculates the company's liquidation value, analyzing what it would be worth if it closed and sold its assets.

I have chosen to use Method 1 and Method 2 here. I believe it is difficult to estimate the current value of assets and therefore, did not choose to go with either acquisition value or liquidation value method.

Risk

Investing in any company, including Vedanta, comes with a variety of risks. Here are some of the risks associated with investing in a company like Vedanta, which is a natural resources company with operations in metals and mining, oil & gas, and power sectors.

1. **Commodity Price Volatility:** The revenues and profitability of companies like Vedanta are closely linked to commodity prices. Any fall in prices of commodities such as zinc, aluminum, copper, iron ore, oil, etc. could severely impact their bottom line. Conversely, rising prices could boost profitability.
2. **Regulatory Risks:** Mining and natural resources companies are subject to a vast array of regulations related to environmental impact, worker safety, taxes, royalties, and other factors. Any changes in these regulations could impact operations and profitability. Additionally, non-compliance with regulations can lead to fines, penalties, and even suspension of operations.
3. **Geopolitical Risks:** Vedanta operates in various parts of the world. Political instability, regulatory changes, and societal unrest in any of these regions could adversely impact operations. This risk is magnified if a significant portion of their operations or revenue comes from politically unstable regions.

4. **Operational Risks:** Any issues related to the operation of mines or other facilities, such as accidents, equipment failures, labor strikes, or natural disasters, could halt production and affect revenues.
5. **Legal Risks:** Vedanta, like other corporations, is subject to legal actions that could impact its financial health. For example, the company has previously faced legal issues related to environmental and human rights concerns.
6. **Financial Risks:** Like any other company, Vedanta faces financial risks related to its capital structure, interest rates, and exchange rates. A significant amount of debt can increase the company's risk in case of a downturn.
7. **Sustainability and ESG Risks:** Environmental, Social, and Governance (ESG) factors are becoming increasingly important to investors. Companies in the natural resources sector often face scrutiny due to the environmental impact of their operations, labor practices, and governance issues. Failure to meet ESG expectations can affect the company's reputation and stock price.

Even though the commodity business is fraught with multiple risks, the use of prudent forecasting and the incorporation of a substantial safety margin should effectively balance and mitigate these risks.

References

1. The Little Book That Beats the Market, Book by Joel Greenblatt
2. The Little Book That Builds Wealth, Book by Pat Dorsey
3. 100 Baggers: Stocks That Return 100-to-1 and How to Find Them, Book by Christopher W. Mayer
4. 100 to 1 in the Stock Market: A Distinguished Security Analyst Tells How to Make More of Your Investment Opportunities, Book by Thomas William Phelps
5. Contrarian investment strategy, Book by David Dreman
6. The Dhandho Investor: The Low-Risk Value Method to High Returns, Book by Mohnish Pabrai
7. Intrinsic Value Video - <https://www.youtube.com/watch?v=cl8ZSf0nkFs&t=3s>
8. Richer, Wiser, Happier: How the World's Greatest Investors Win in Markets and Life, Book by William Green