THIRD WAVE SOLUTIONS

Opinion: Hindalco Industries

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KEY INFORMATION

Company: Hindalco Industries Limited
Sector: Metal
Ticker Symbol: HINDALCO
Current Price: 128
P/E: 6.9 P/B: 0.8

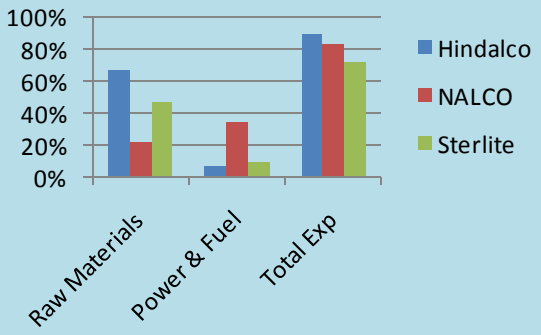
Peer Comparison

	Hindalco	NALCO	Sterlite Industries
Turnover (Cr.)	80,815	6,616	41,185
Market Cap	22,789	12,538	39,779
Dividend Yield	1.3%	2%	1.7%
P/E	6.4	14.7	5.12
P/B	0.75	1.07	0.86
ROE	11.7%	7.43%	17.7%

* Sterlite Industries is currently selling at a low multiple due to its impeding merger with SesaGoa.

	Novelis	ALCOA
Turnover (USD million)	11,063	24,951
Profit	90	614
Equity	284	17,195
ROE	31.69%	3.57%
Price	-	$8.91
P/E	-	15.36
P/B	-	0.69

Expenses/Total Income



Please refer to the last page for important disclosures.

Overview

Hindalco Industries Limited is the flagship company of the Aditya Birla Group. It is an industrial leader in aluminium and copper: world's largest aluminium rolling company (through its subsidiary Novelis) and it is also one of the biggest producers of primary aluminium in India. Hindalco also has a copper smelter which happens to be the largest in India. The company was established in 1958 by the Aditya Birla Group and 4 years later, their first aluminium facility was commissioned in Renukoot (Uttar Pradesh). For the past financial year (2011-2012), the consolidated turnover stood at around Rs. 80,000 Cr. and the standalone turnover was around Rs. 27,000 Cr. Hindalco acquired a controlling stake in INDAL (Indian Aluminium) in 2000. Hindalco also has copper mines in Australia (Nifty & Mt. Gordon) under its subsidiary: Aditya Birla Minerals Ltd.

In 2007, Hindalco acquired Novelis for a total of $6.2 billion (at the rate of 40.5 Rupees to the dollar, this amounts to Rs. 25,000 Cr.). Out of this $6.2 billion, $3.4 billion was paid for the shares of Novelis and Hindalco assumed Novelis' debt of worth $2.8 billion. The latter was done through a SPV (Special Purpose Vehicle) and the debt is repaid by Novelis' Cash Flow. However, Novelis recently paid $1.7 billion to Hindalco as a return of capital, out of which $1 billion was used to repay part of the acquisition loan. The rationalization given by Hindalco for the acquisition "was to de-risk the business model and geographical footprints of Hindalco" and that Hindalco has "a product portfolio which is a natural hedge against the volatility of aluminium prices". Hindalco has a total of 19,975 employees, whereas Novelis has a work force of 11,600. At the time of acquisition, Novelis was twice Hindalco's size in terms of revenue.

Novelis has a strong presence in 4 continents and is a leader in aluminium rolled products. They produce sheet and light gauge products and serve to various industries such as packaging (including beverage and food cans), transportation, electronics, construction etc. Novelis is known for its recycling operations using used beverage cans (UBCs). Nearly 61% of their rolled products are used for beverage and food cans. Novelis has 29 operating plants, out of which 12 have recycling operations. They also produce small amounts of primary aluminium (31 kilo tonnes per annum). Almost all their power is derived from gas-based power plants and some based on hydroelectricity.

Shareholding Pattern

Category	% share holding
Promoters	32
FIIs and NRIs	29
Indian Public	9
Banks/Govt	12
MF/Corporate/GDR	18

Source: Company

Business Description

Hindalco

Hindalco's primary business is the making of primary aluminium and its value added products, alumina and copper.

The company mines for bauxite ores (which contain about 25% aluminium) and it is refined to produced alumina (or aluminium oxide), with the help of caustic soda. From the alumina produced, the company either further treats it to produce high grade alumina which is used for several purposes such as in the making of abrasive and cutting tools. But the primary use of alumina is to produce primary aluminium. In fact, almost 90% of the alumina in the world is used for producing primary aluminium. Alumina is dissolved in molten cryolite and then through electrolysis, aluminium is produced. The whole process consumes a lot of electricity: approximately 15,000 units for each tonne of aluminium. Around 4 tonnes of bauxite is required to produce 1 tonne of aluminium.

The aluminium produced in this process is mostly cast into ingots. For the purpose of end-use aluminium is usually either rolled into sheets, foils, plates etc. or alloyed with other materials for specialized usage. Aluminium rolled products (or flat rolled products) are used for:

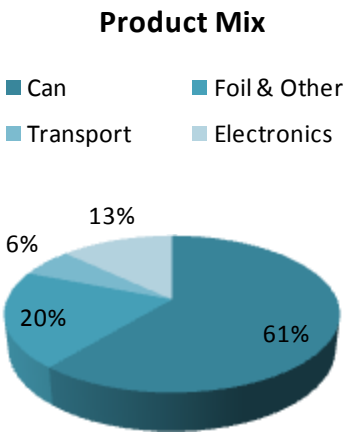
- Foils & Packaging
- Transportation
- Electronics
- Architecture or construction
- Industrial and other.

Over 40% of the produced metal is transferred to our downstream plants for value-addition. The rest is sold to customers in India and to export markets.

Within each end-use market, aluminium rolled products is manufactured with a variety of alloy mixtures; a range of tempers (hardness), gauges (thickness) and widths; and various coatings and finishes. Large customers typically have customized needs resulting in the development of close relationships with their supplying mills and close technical development relationships.

Hindalco's other side of the business comes from its copper complex at Dahej. Hindalco gets part of its raw material (the copper concentrates) from its mines in Australia and purchases the rest. It has a smelter in Dahej (with a captive power plant) which is uses to produce Copper Cathodes. Additionally, in the process of producing copper, several by-produces are also produced such as fertilizers and acids. Hindalco owns copper mines in Australia through its 51% owned subsidiary Aditya Birla Minerals Ltd.

Novelis



Source: Company

The primary business of Novelis is the production of aluminium sheets and light gauge products and recycling aluminium for used beverage cans (UBCs). The aluminium rolled products market represents the global supply of and demand for aluminium sheet, plate and foil produced either from sheet ingot or continuously cast roll-stock in rolling mills operated by independent aluminium rolled products producers and integrated aluminium companies alike.

Aluminium rolled products are semi-finished aluminium products that constitute the raw material for the manufacture of finished goods ranging from automotive body panels to food and beverage cans.

There are two major types of manufacturing processes for aluminium rolled products differing mainly in the process used to achieve the initial stage of processing: starting with a sheet ingot (hot mill) or converting molten directly (continuous casting). Both processes require subsequent rolling, called cold rolling, and finishing steps such as annealing, coating, levelling or slitting to achieve the desired thicknesses, width and metal properties. Most of their customers receive shipments in the form of aluminium coil, a large roll of metal, which can be fed into their fabrication processes.

There are two sources of input material: primary aluminium, such as molten metal, re-melt ingot and sheet ingot; and recycled aluminium, such as recyclable material from fabrication processes, which is referred to as recycled process material, used beverage cans (UBCs) and other post-consumer aluminium.
Primary aluminium and sheet ingot is generally purchased at prices set on the London Metal Exchange (LME), plus a premium that varies by geographic region of delivery, alloying material, form (ingot or molten metal) and purity.

Recycling aluminium requires only 5% of the energy needed to produce primary aluminium from bauxite.

Recycled aluminium is also an important and growing source of input material. Aluminium is infinitely recyclable and recycling it requires approximately 5% of the energy needed to produce primary aluminium. As a result, in regions where aluminium is widely used, manufacturers and customers are active in setting up collection processes in which UBCs and other recyclable aluminium are collected for re-melting and reuse. Manufacturers may also enter into agreements with customers who return recycled process material and pay to have it re-melted and rolled into the same product again.

Hindalco Production Capacity (Standalone)

Hindalco has a production capacity of 5 ktpa (kilo tonne per annum) of primary aluminium. Out of this, 345 ktpa capacity is in the Renukoot plant and 161 ktpa capacity is at the Hirakud plant.

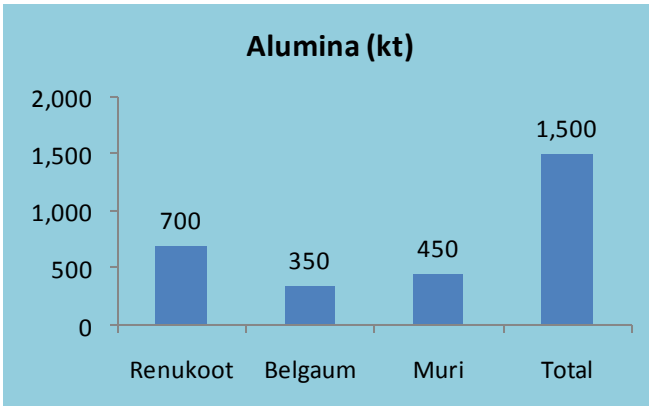
Hindalco is the largest aluminium producer in India and the third largest in the whole of Asia.

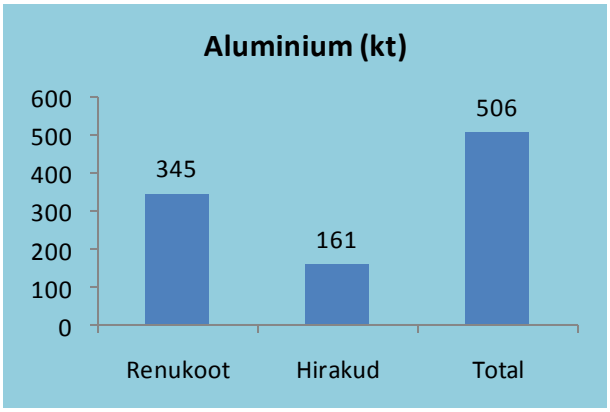
The Aluminium rolling Capacity of the company is about 205 ktpa. Their rolling facilities include those at Renukoot (80 ktpa), Belur (45 ktpa), Taloja (50 ktpa), Mauda (30 ktpa).

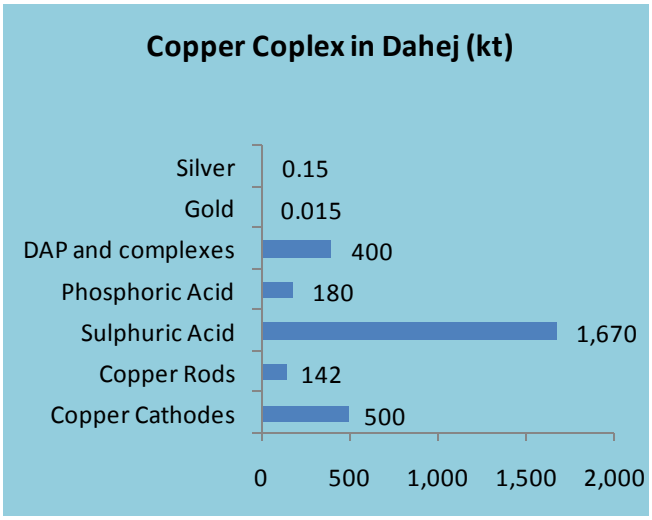
As far as alumina is concerned, the company has a capacity of 1.5 mtpa, out of which, 700 ktpa is at the Renukoot facility, 350 ktpa at the Belgaum facility and 450 ktpa at the Muri facility.

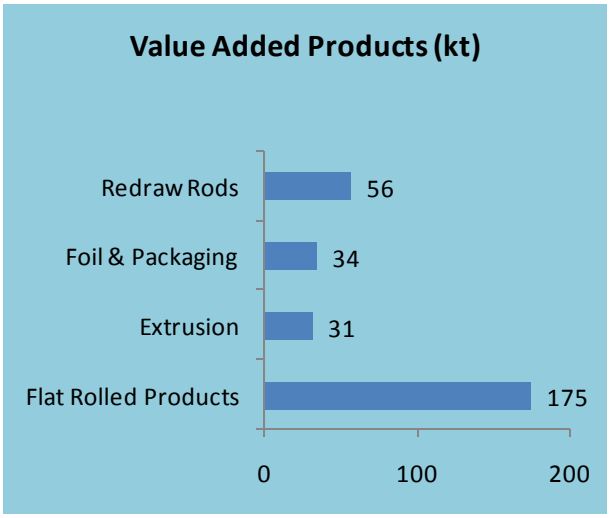
Apart from aluminium related products, 0.5 mtpa capacity of copper, which is operated under the name Birla Copper (Hindalco's Copper division). It is situated in Dahej, Gujarat and is the only copper smelter Hindalco owns.

Captive Power Plants: Renusagar (742MW), Hirakud (367MW), Renukoot (84 MW Cogen), Muri (30 MW).









Hindalco Expansion Plans:

Under the Aluminium division, Hindalco currently has several projects under implementation, ranging from refineries to smelters to rolling facilities. Hindalco is aggressively trying to increase its total capacity. Three new Aluminium Smelters and two new Alumina Refineries are being set up in the states of Odisha, Madhya Pradesh and Jharkhand. The estimated cost for all the projects in the pipeline currently amounts to a total of 50,000 Cr.

The Mahan and Aditya Aluminium Projects (in MP and Odisha respectively) both include a smelter capable of increasing the primary aluminium production capacity by 359,000 tpa each. It even has a captive power plant of 900 MW, which in turn, has its own captive coal block. The power plant is capable of producing sufficient power to supply to both the smelters. The Mahan Aluminium Project is expected to commission shortly and Aditya Aluminium Project next year in 2013.

There is expansion of the Hirakud (Odisha) facility as well where the capacity of smelter is being increased from 161,000 tpa to 213,000 tpa – an increase of 52,000 tpa. The Flat Rolled Products (FRP) project at Hirakud itself is also underway, extending Hindalco's rolling capacity by 135,000 tpa.

Additionally, there is expansion of the alumina division under the project names Utkal Alumina International Limited (which is near completion and has a 90 MW captive co-generation plant) and Aditya Alumina (expected to complete in 2014). Both of the projects are in Odisha and have captive Bauxite mines. Utkal Alumina will be capable of producing enough Alumina to supply to both Mahan and Aditya Aluminium smelters.

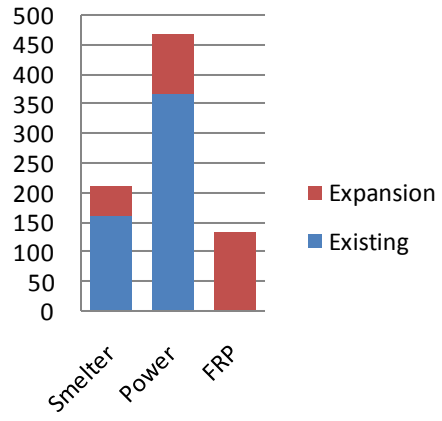
Lastly, there is another aluminium smelter with the capacity of around 400,000 tpa in the pipeline in Jharkhand, which is expected to commission in the year 2015. The project is currently is in the land acquisition process. Combining the 3 aluminium smelters, the production capacity will increase to around 1.7 mtpa.

Mahan Aluminium Project Ramp-up Schedule (kt)

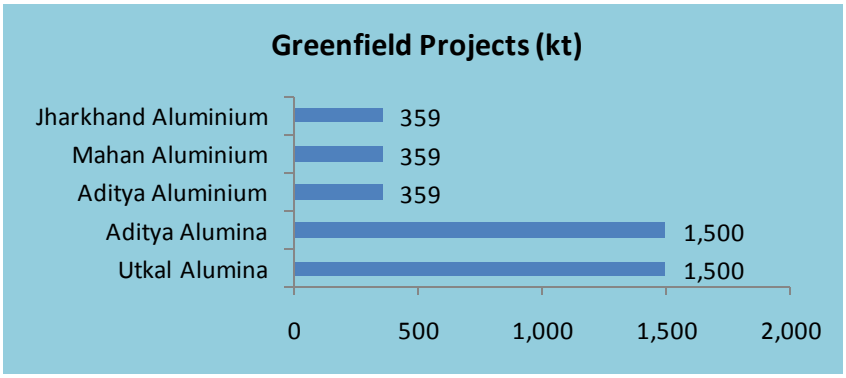
FY 12	FY 13	FY 14	FY 15
5	204	350	359

Source: Company

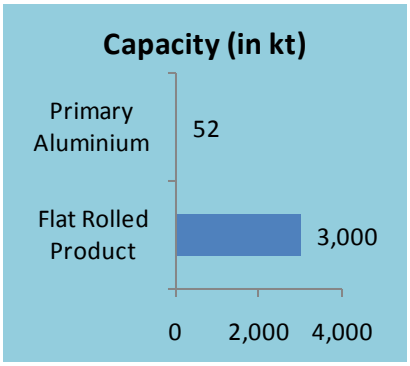
Hirakud Brownfield Project



FRP – Flat Rolled Products
Source: Annual Reports



Source: Annual Reports



Source: Company

Novelis Production Capacity

Novelis' main business involves the supply of Flat Rolled Rolled Aluminium – 3,000 ktpa. Their plants operate at almost full capacity and Novelis produced a total of 2,838 ktpa. Novelis currently has around 20% global market share in aluminium flat rolled products.

Novelis owns a single smelter in Brazil and its capacity is 51 ktpa. The smelter is integrated with the rolling facility and a recycling plant.

Novelis Expansion Plans

Novelis is heavily in increasing capacity, particularly in high growth emerging markets like Asia and South America in order to tap into the electronics and beverage cans market potential in these places.

There is a growing demand for their products in South America and for that, they are expanding their aluminium rolling operations in Brazil to increase capacity to approximately 600 kt of aluminium sheet per year. They are also installing a new coating line for beverage can end stock and expanding our recycling capacity in the Pindamonhangaba (Pinda) facility in Brazil.

In response to the light-weighting trend in the automotive industry, they are increasing their North American rolling capacity by approximately 200 kt per year for the automotive end-use market.

In May 2012, Novelis confirmed a decision to invest $250 million at their Nachterstedt, Germany plant to build a fully integrated recycling facility. The facility will have an annual capacity of 400 kt.

Novelis is expanding its rolling and recycling capabilities in South Korea in response to the growing demand in the broader Asian region. The rolling expansion, which will include investments in both hot rolling and cold rolling operations, is expected to increase capacity in South Korea by over 50% to approximately 1,000 kt of aluminium sheet per year. The expansion will also include the construction of an integrated state-of-the-art recycling center primarily for used aluminium beverage cans.

In April 2012, they announced plans to invest $100 million into an aluminium automotive sheet heat treatment plant in China. Construction of the new facility is expected to begin in the fall of 2012 and the plant to be operational beginning in late calendar year 2014 and have capacity of approximately 120 kt per year.

It is expected that their capital expenditure cost for the next year (2012-2013) will be around $150 million. Their overall plan to increase capacity from 3 mtpa to 4 mtpa will cost them around $1.5 billion (or Rs. 8000 Cr. approximately)

	Current capacity (kt)	After Expansion (kt)	Capex (USD million)
North America	1,100	1,360	200
South America	400	650	300
Europe	900	990	N.A.
Asia	600	1,120	500
Total	3,000	4,120	1,000

In addition to all the above expansion plans, Novelis is also planning on increasing its production capacity through de-bottlenecking projects in a few of their plants, including:

- 60 ktpa de-bottlenecking in North America
- 30 ktpa de-bottlenecking in South America
- 90 ktpa de-bottlenecking in Europe
- 50 ktpa de-bottlenecking in Asia

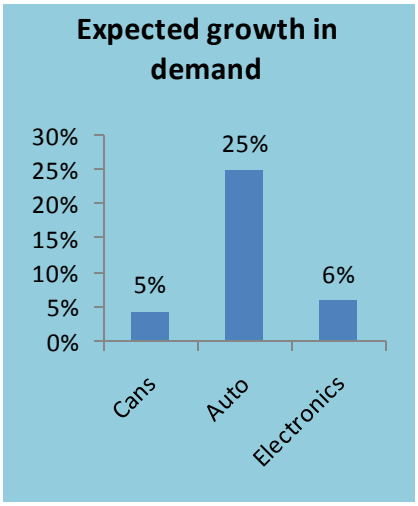
Around 150 billion cans are recycled every year in the world. Novelis alone recycled a total of 40 billion cans in the last year.

Apart from expansion of rolling capacities, Novelis is also actively expanding their recycling operations. Around 83,000 cans are used to make a tonne of aluminium. In 2011, Novelis recycled a total of 40 billion cans (around 25% of the total cans recycled in the world). This translates to 500 kt. Recycling aluminium uses only 5% of the energy required to produce primary aluminium from its ore, bauxite. Thus, up to 95 % of greenhouse gas emissions that would have occurred otherwise are avoided.

Country	Capacity Addition (kt)	Expected Completion
Italy	15	2012
Korea	256	2013
Brazil	190	2013
Germany	400	2015

Novelis had a joint venture with Alcoa in North America for procuring used beverage cans (UBCs), which are used for recycling. However, in 2012, Novelis decided to end the joint venture and now plans to start its own UBC Procurement Organisation for its plants in North America. Novelis has a long-term plan (by 2020) to source 80% of their aluminium needs from recycled materials.

Industry Analysis

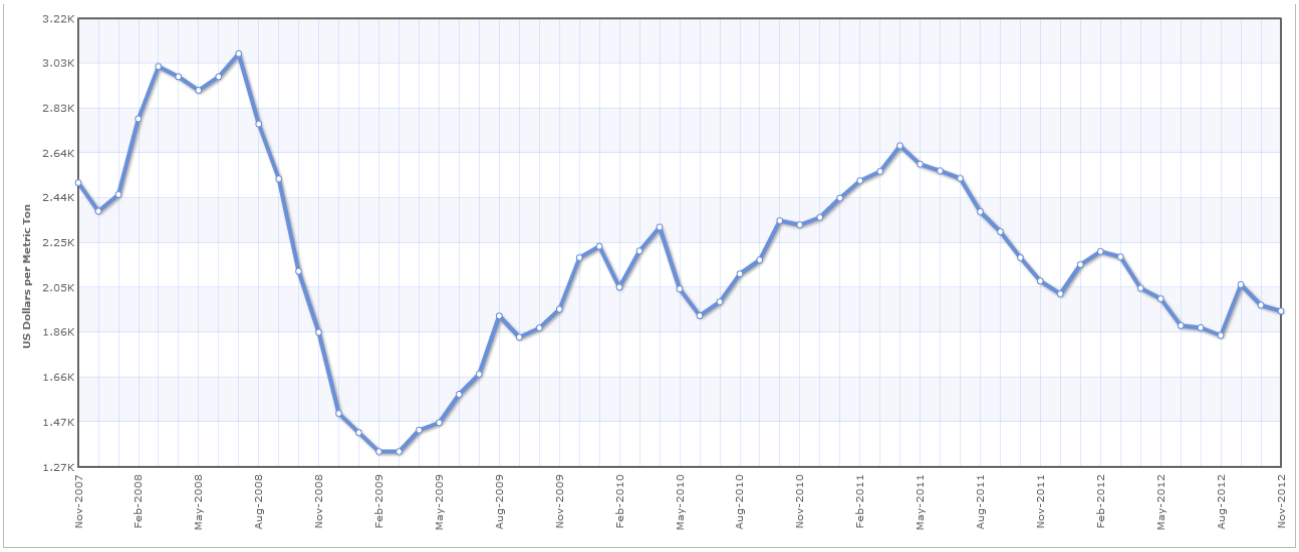


Source: Industry Reports

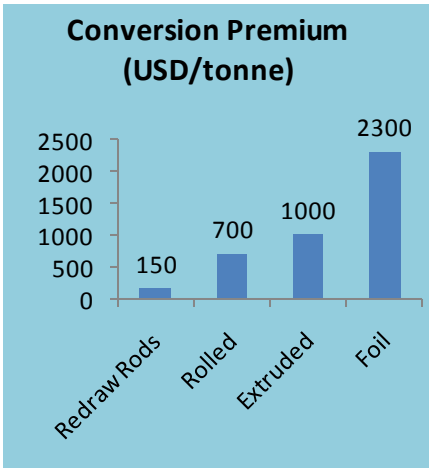
The major demand drivers for aluminium products are economic events such as national industrial growth, global financial crises, recession and inflation. Economic growth is the single largest driver of aluminium rolled products demand. In mature markets, growth in demand has typically correlated closely with growth in industrial production.

Aluminium demand grew by 9.6% in 2011 and 5.3% in 2012. The decrease in demand was mostly due to the economic uncertainty and, to some extent, customer destocking.

Asia and South America have high growth potential in areas such as beverage cans and electronics. Additionally, there is strong automotive growth potential worldwide due to several government regulations forcing manufacturers to increase the aluminium content in cars.



Source: www.indexmundi.com



Source: Industry Reports

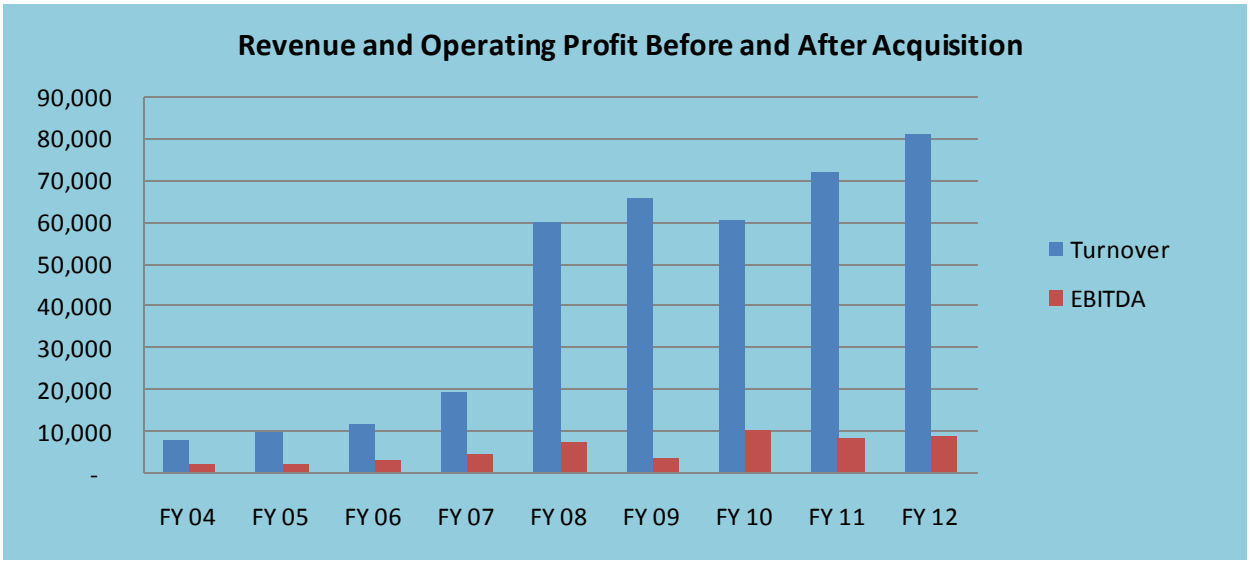
Above is the price chart for monthly Aluminium spot price on the LME (London Metal Exchange). Aluminium prices have been volatile in the recent past and have fluctuated between price levels of $1,860 to $2,640 per tonne.

Value added products manufacturing company like Novelis purchases primary aluminium at the LME price which it passes through to the customer. The manufacturing company then charges a premium on top for the conversion of the primary aluminium into the specialized product. This premium is adjusted periodically based on market factors. For the past year, this premium has been relatively favourable for Novelis, compared to previous years.

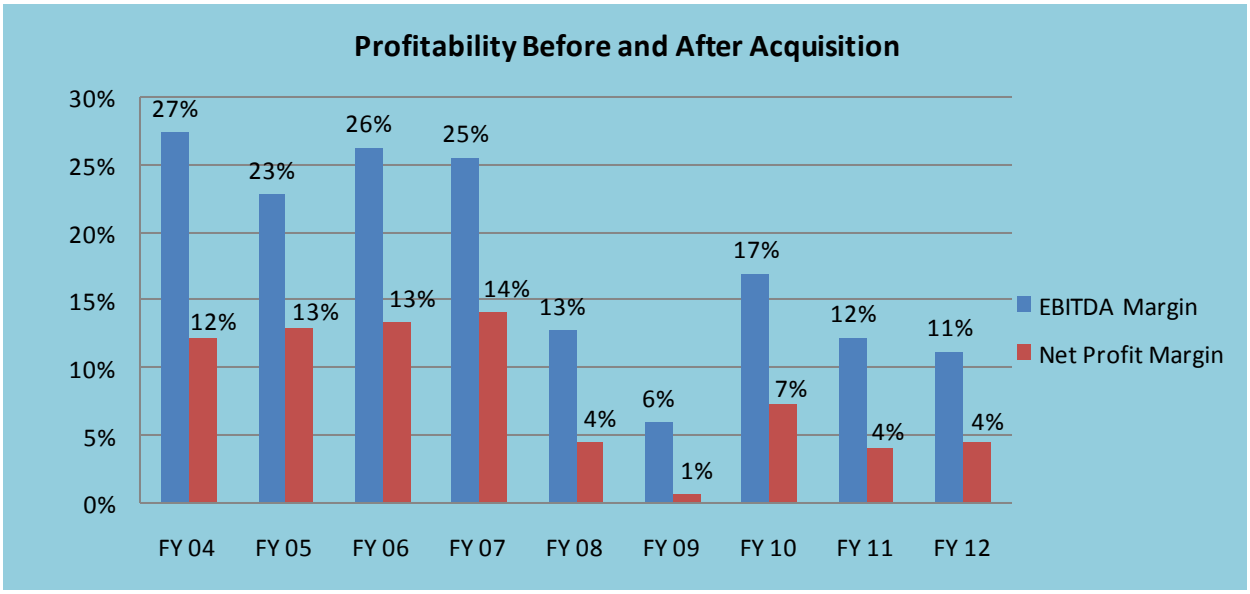
Changes in Hindalco Financials after Acquisition

Acquiring Novelis has made Hindalco a much bigger company in terms of geographical reach and total turnover (as evidenced by the huge bump in the turnover chart). As the acquisition took place, the profitability of the company plummeted. From a pre-acquisition net profit margin of 13%, post-acquisition margin has been merely 4%, on average.

Similar is the trend with the Return on equity, which has halved post the acquisition from attractive levels of 20% to the less attractive 10%, on average. This 10% is at a higher leverage too: increasing from around 2 to around of 3.5.



Source: Company Reports



Source: Company Reports

Novelis Strategy

Novelis is headquartered in Atlanta, Georgia and as of March 31, 2012, they have operations in 11 countries, which include 29 operating plants, out of which 12 have recycling operations.

The focus at Novelis is to try and achieve top line growth. Even though this is usually not the best strategy for the investor, Novelis is trying to do it in a smart way. The company seeks to capture relatively newer markets such South America and Asia (where aluminium demand is on the rise), and at the same time curbing down its rolling operations in Europe. In the last quarter of of FY-2012, Novelis announced the sale of three European Aluminium foil and packaging plants including the operations in France, Luxembourg and Germany.

Novelis is Hindalco's second tier subsidiary: Hindalco's subsidiary in Netherlands AV Minerals BV owns AV Minerals Inc in Canada, which owns Novelis. The loan taken for acquisition is on the balance sheet of AV Minerals.

But these developed nations have an advantage over the developing ones in terms of recycling aluminium cans and Novelis is working towards increasing it recycling plant capacity in Europe.

The demand of aluminium rolled products is directly proportional to the economic activity. As we all know, Europe has been in recession for a while, and its future (in terms of growth) is nowhere as bright as that of Asia's or South America's.

At the time of acquisition, the management said that "Hindalco and Novelis have identified and worked upon several areas where the two companies complement each other. The integration activities are proceeding smoothly and the acquisition is expected to significantly enhance shareholder value". But despite Hindalco producing a sizeable amount of primary aluminium, Novelis purchases aluminium from external sources. Almost half the primary aluminium is purchased from Alcan, its once, parent company. Novelis was formed in 2005 when Alcan took over the French aluminium company Pechiney and US and European Anti-trust laws forced Alcan to divest its rolling business: resulting in Novelis. More Importantly, Novelis inherited a huge debt of $2.9 billion, and also on the wrong side of a contract with Alcan because of which it cannot compete with Alcan in a few end-use markets.

In addition to UBCs and primary aluminium, Novelis obtains its raw materials from its can making customers – around 20% of the aluminium sheets are not converted into the final product. This 20% is returned back to Novelis as part of a closed-loop system. These aluminium scraps are again fed back in the hot rolling process.

Hindalco's Advantage

Hindalco is one of the lowest cost producers of aluminium in the world. Through its complete integration, it has been able to avoid several auxiliary expenses.

Nearly 40% of the cost for producing Primary Aluminium is electricity. For all its aluminium and alumina facilities, Hindalco has captive power plants. Additionally all the captive power plants are coal based (cheapest fuel) and have their own captive coal block (cheapest source of obtaining the fuel).

Second highest cost of production is the raw materials. Hindalco's aluminium smelters are fed alumina produced from several of the company's alumina facilities. These alumina facilities all have their own captive bauxite mines at several places. Additionally, Hindalco's 54.65% owned subsidiary Aditya Birla Chemicals (India) Ltd (ABCIL) is a producer of caustic soda – a chemical used in the production of alumina. ABCIL recently acquired a huge plant in Renukoot – the place where Hindalco's first Aluminium facility is also situated.

Hindalco's subsidiary Aditya Birla Chemicals India Ltd (ABCIL) produces caustic soda, one of the important raw materials required in the production of alumina.

Hindalco owns copper mines in Australia (Mount Gordon and Nifty). The ore is concentrated and the copper concentrate is shipped to India for Hindalco's copper smelter. Unfortunately, their mines are currently not capable of producing enough copper to feed the smelter alone and Hindalco is forced to buy atleast 80% of their copper concentrates – an expensive affair. In the FY 11-12, Hindalco (standalone) spent a total of 17,843 Cr on raw materials, out of which 15,245 Cr (85.4%) was on copper concentrates. Hindalco management is well aware of the benefits of integration as they strive to increase the production of their mines and continue exploring for new copper mines. An exception to the complete integration is the coal they import for their Dahej captive power plant.

Hindalco mined a total of around 250kt of copper concentrate, which has up to 40% copper.

Furthermore, the Dahej copper facility has been integrated to produce several by-products of the process such as fertilizers (such as DAP & NPK), sulphuric acid and phosphoric acid. There is even a precious metals recovery plant at Dahej and the company manages to extract a little bit of silver and gold, which is a tiny part of to the copper mineral. Hindalco has a harbour with 4.5 mmt solid cargo capacity and a captive jetty which is solely for the copper business at Dahej. Copper is sold to markets abroad through the harbour or to Indian customers on a CIF basis.

Potential Uncertainties

Despite all the positive points about Hindalco, there are a few issues that lead us to believe that the road ahead shall not be a smooth one. One of the biggest problems is the Project Execution Risk. Even though Hindalco is expecting to commission their projects in the near future, this has been the case for the past few years. The Utkal Alumina Project was initially planned to be completed in Jan 2011, but this has been delayed due to the bauxite mining problems in Odisha. Hindalco's operations in Mali Hill have been shut down due to protests by the local tribal. Due to a delay in the alumina, the Aditya Aluminum project is also delayed by two years.

There have been constant delays in the completion of Hindalco's projects. Not too much blame can be put on the company since most delays are due to environmental or forest clearances and other time-consuming regulatory processes.

Furthermore, the Mahan Aluminium project was supposed to have commissioned by July 2011, but delays over the Mahan coal block and other clearances have delayed it. Fortunately, Hindalco has recently been cleared to mine, although, it would still take a few months to set it up. It would also take a couple of years to ramp up the production in the smelter. Due to these delays, the interest cost is bearing down on Hindalco.

There are also some minor issues such as raw materials uncertainty for the copper division; the global market (or demand) for aluminium may slow down as China changes from export driven to internal demand driven. Hindalco is also affected by exchange rate risk for eg. Last year saw a 10.5% appreciation of AUD vs USD. Even though copper prices were higher in USD terms, they were lower in AUD terms, which is unfavourable for Hindalco. There has also been a decline in mine grade at Nifty and it affected output in the past year. Additionally, ramp up of Mt Gordon fell short of expectations.

Novelis too, has its shortcomings. The company is in a very competitive business and does not have much bargaining power. They may not be able to pass on their costs (excluding the metal prices) on to their customers. 50% of their revenue comes for top ten of their customers, who they have been supplying to for over 20 years.

Nearly 60% of their employees are represented by labor unions and hence they cannot lay them off without a hitch. Novelis' financial leverage is 28.7. This is because the equity has been eaten by losses in the past and the $1.7 billion that Novelis paid to Hindalco in FY 2010-2011 as a return of capital. The problem is that this may increase Novelis's borrowing cost. Furthermore, policy changes in the past year have aided Novelis to show a profit of around Rs. 450 Cr.; without which the net profit would have reduced by Rs. 715 Cr.

Novelis changed its accounting policy for preparation of the consolidated financial statements relating to actuarial gains or losses arising out of actuarial valuation of long term employee benefits and post employment benefits.

Conclusion

Hindalco has a very good business strategy as far as the integration is concerned and how it has resulted in the company becoming one of the lowest cost producers of aluminium and copper in the world.

Novelis has a strategy which focuses on top line expansion, instead of cost-saving. It is often said that top line is vanity and bottom is sanity. Novelis works in a very competitive environment and on very low margins. Consequently, it makes sense to increase the profit or earnings through expansion.

There is still uncertainty over the Odisha bauxite mines, and an unfavourable outcome seems likely.

Novelis is also caught up in several law and regulation issues since it uses hazardous chemicals and materials (like every other aluminium rolling company) in the rolling process. This has created problems in nearby communities of some of their plants.

There is still uncertainty over the Odisha bauxite mines, and an unfavourable outcome (which seems likely here, since even Vendanta has been forced to shut down their plant due to lack of bauxite), can result in increased costs for Hindalco in terms of sourcing raw materials and uncertainty of incessant supply.

Hindalco has been accorded environmental clearance to mine at their Mahan coal block in Madhya Pradesh by the Ministry of Environment and Forests MoEF).

The good news is that Hindalco has been given a go-ahead for its coal block. This ensures that the Mahan Aluminium smelter shall be slowly ramped up once the mine is ready to supply coal. The only major issue holding Hindalco back is the bauxite mining in Odisha. If a solution for that is found at a lower cost than purchasing bauxite, perhaps another bauxite mine or increasing production in the other mines Hindalco owns, it would really improve the outlook.

For an investor with a long term horizon, it makes sense to accumulate Hindalco when available at P/E multiple of around 6-7 or cheaper. Hindalco has traditionally traded between multiples of 1x-20x. We believe that in the long term, Hindalco will be able to find a solution to its problems, since few people know the value of integration more than Hindalco's management.

Additionally, there is reason to believe that Novelis will soon stabilize as a business and with the European outlook improving; its profits will be back on track, adding to Hindalco's bottom line.

We are bullish about Hindalco's medium to long term future based on the company's intelligent growth plans which are finally set to commission. Hence we recommend buying Hindalco at the current price and hold with a medium term perspective.

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