E.I.M. CAPITAL MANAGERS

**PortfolioDirect***/resources*

*Resource sector portfolio construction for independent investors*

# Alumina Limited (AWC:AU) Rating Review

This review of Alumina Limited has been prepared in accordance with the **PortfolioDirect** stock rating framework described on pages 2-4.

**PortfolioDirect/***resources* offers strategy and portfolio recommendations for independent investors. The rating framework has been developed to assist investors and their advisers to grade individual stock risk so as to better match stocks in their own portfolios with their personal risk profiles and to take account of the differing risk characteristics of potential investments when structuring their portfolios.

A **PortfolioDirect** stock rating is not intended as a forecast of future share price movements. Share prices will be influenced by a range of factors including, significantly, macroeconomic conditions and the current cyclical positioning of the sector which are not taken into account in determining a stock rating. The **PortfolioDirect** analytical framework separates the view about market direction from the stock risk analysis contained in this review.

The most important driver of a stock rating for a company being reviewed is an assessment whether the company to likely to meet its exploration and development targets within the timeframes sought by investment markets and, when development has occurred, its ability to maintain positive value momentum over future years.

## The Investment Decision

| | | |
|---|---|---|
| **Commodity Exposure** | *What is the mineral to which the company is principally exposed?* | Alumina |
| **Location** | *Is the development or exploration site in or near an established mineral province?* | The company operates from multiple sites in locations with established infrastructure |
| **Focus** | *Is the company involved in single or multiple commodities or projects requiring capital rationing?* | Strong - single commodity with multiple operating sites but adequately capitalised with access to management and technical skills |
| **Time horizon** | *Do investment returns depend on (i) a reduction in risk over the medium term, (ii) specific near term events or (iii) a future change in cyclical conditions?* | Investment returns are likely to depend on improved commodity prices or improved equity market cyclical conditions |
| **Investment proposition** | *Can potential investment returns compensate for the amount of capital and time required?* | Investment returns may prove adequate after taking account of the gains in a future price cycle whose timing remains uncertain |
| **Portfolio positioning** | *What roles could the company play in a portfolio? Are other companies able to fulfill these roles more effectively?* | The company offers a unique exposure to the global aluminium market for portfolios with a long term orientation |
| **Liquidity** | *How easily can buyers or sellers of the stock be accommodated?* | There is sufficient liquidity for most classes of investor |

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12 March 2015

**Important Information Regarding the Preparation of this Report**

This report is not intended as an offer or solicitation with respect to the purchase or sale of a security. Nothing in this report should be taken as a recommendation. Alumina has been rated without taking into account the particular objectives, financial circumstances or needs of any particular investor. Before taking any decision based on this communication, an investor should assess his or her own circumstances and seek professional advice.

This report is based on information disclosed publicly by Alumina at the date of the report, information otherwise available in the public domain at that time and analysis and technical inferences drawn by the staff of E.I.M. Capital Managers Pty Ltd, the publisher of **PortfolioDirect**.

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Alumina has not had an opportunity to comment on the report or request any amendments prior to its publication.

**Trading in PortfolioDirect Rated Stocks by E.I.M. Capital Managers**

Stocks rated in accordance with the criteria outlined in this communication may be bought or sold by E.I.M. Capital Managers on behalf of clients or funds whose investments are managed by the firm. Specific investment objectives and individual portfolio considerations may result in transactions by E.I.M. Capital Managers that are not consistent with **PortfolioDirect** ratings for individual stocks.

## Stock Rating Criteria

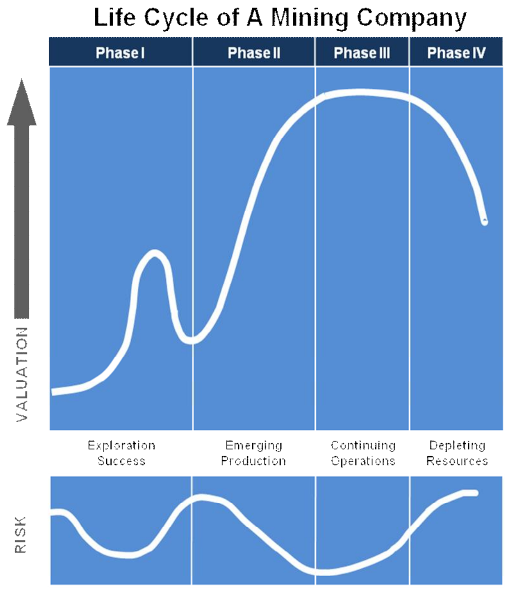
E.I.M. Capital Managers categorises sector investments based on the four phases in the life cycle of mining and oil and gas companies.

**Phase I:** the exploration phase during which relatively small amounts of capital may be deployed with the prospect of a high return but when investors also risk losing all the funds subscribed prior to the company having an agreed development plan.

**Phase II:** the emerging production phase in which companies are able to demonstrate access to a commercial resource and add value by meeting key development milestones along an agreed development path.

**Phase III:** the phase of continuing operations in which organic volume growth is limited and commodity price movements become the dominant driver of earnings and value.

**Phase IV:** a period typically characterised by falling ore grades and rising costs requiring additional capital to prevent output contracting.




Phase I companies will be scored (on a five point scale) on their potential to confirm a commercially viable development within an acceptable investment market timeframe. The duration of the investment horizon might vary from time to time depending on market conditions but will usually extend to a period of up to 24 months. Judgements will be based on publicly available information, including clarifying conversations with company management, and the resulting geological inferences drawn by E.I.M. Capital Managers analysts.

Phase II companies will be scored on a five point scale on their capacity to deliver positive value momentum (i.e. the ability to generate increasing fundamental value over future years without any reliance on higher commodity prices).

Since Phase III companies, by definition, no longer have any material organic growth prospects, they will generally fail the 'positive value momentum' test. A Phase III company may still play an important portfolio role depending on its relative financial strength, its capacity to withstand periods of cyclical weakness due to the competitiveness of its cost structure and its potential, arising from a large resource base, to operate through multiple economic cycles. Phase III companies will be scored on a five point scale on their absolute value proposition and how they meet these additional criteria.

No inferences about share price performance should be drawn from the rating of an individual stock. Investment returns will be influenced by a range of factors, some of which are included among the **PortfolioDirect** rating criteria, as well as investment market expectations about a range of macroeconomic variables. The **PortfolioDirect** rating does not take account of macroeconomic or investment market conditions that play a role in setting the price levels of securities.

There may be points in the cycle when stocks assessed by **PortfolioDirect** as being relatively risky and given a relatively low score on the **PortfolioDirect** rating scale are capable of producing relatively strong investment returns. This may arise, for example, because of strong leverage to changes or expected changes in market conditions among stocks with unusually depressed share prices or very small current market values.

## Significant Investment Risks

In addition to general equity market risks reflecting unexpected changes in global economic or political conditions, investors in the resources sector may incur further risks specific to investments in the sector.

**Commodity market risk:** Resources sector investment returns are generally more volatile than returns from other equity market sectors due to the earnings of resources companies being exposed to commodity price and foreign exchange movements. Commodity prices can be influenced by a range of factors including economic events, which might affect the volume of commodities used, monetary policies which might affect levels of speculation and changes in output reflecting levels of industry exploration, investment and production disruptions.

**Operational risk:** Companies may fail to meet their development goals as a result of unexpected external influences, including political conditions and natural phenomena, as well as the skill base and operational capabilities of company management. Companies engaged in exploration activities may fail to locate or define mineral deposits of a sufficient size to be commercially viable.

**Funding risk:** Since companies in the resources sector require ongoing funding for development, expansion and maintenance of output, changes in financial market conditions can affect the value of investments adversely through the cost or availability of capital.

**Regulatory risk:** The value of investments in the sector may be affected adversely by changes in government policies relating to the conditions under which mine developments are permitted, including the need for more stringent environmental controls, higher taxation or royalty rates or requirements for local equity participation.

**Small companies risk:** Small or early stage companies generally have less diversified income streams, less stable funding sources and weaker bargaining positions with their counterparties than larger companies. The securities of small companies may also be less liquid than those of larger companies making the purchase or sale of securities more difficult or costly to complete, possibly with an adverse impact on portfolio performance.

### How does PortfolioDirect rate a Phase III or IV company?

Phase III and Phase IV companies have limited organic growth opportunities. Commodity price movements become the dominant influence on earnings. A Phase IV company is at the most mature end of the corporate life cycle and faces the prospect of falling output or rising costs resulting in a declining value profile.

Established profitability and cash flows will generally result in Phase III companies being regarded as safer investments than companies in the earlier stages of the development cycle. The rating for a Phase III company will depend on how it measures up against the following criteria:

- a sufficiently large resource base to enable the extension of mine life through multiple cycles;
- low costs relative to the industry segment in which its operates;
- a capacity to sustain dividend payments; and,
- ability to maintain capital spending at a level that prevents declining future production rates.

Positive conclusions about each of these measures will imply a greater capacity to survive cyclical conditions. Phase III companies will generally display moderate market risk and low milestone risk.

Phase IV companies have entered one of the most risky parts of the development cycle. Their investment returns will depend on the extent to which cyclical conditions can compensate for falling production or rising costs. Phase IV companies will generally display above average market and milestone risks. The most highly regarded Phase IV company will receive a relatively low rating to reflect the strategic weaknesses confronting a company at this stage of development.

# A Guide to the PortfolioDirect Rating Report

Each **PortfolioDirect** company rating report addresses questions affecting business outcomes and potential investment standing under five separate headings.

**Primary Development Assets**

- What are the most important geological or operational attributes of the company?
- Where are the assets located and what is the availability of local infrastructure?
- What potential impact does location have on business outcomes?
- How was ownership achieved - corporate exploration, acquisition or farm-in - and what obligations remain to the vendors or partners?
- Do historical outcomes on or near these exploration properties say anything about likely mineral characteristics on the company's own assets?
- Are there identifiable technical issues that need addressing before further work can be completed?

**Regulatory Standing**

- What approvals have been received?
- What additional approvals will be necessary to meet business goals?
- Has the company been in breech of any regulatory requirements at this site or elsewhere on any previous occasion?
- Can the company show a commitment to environmental and social needs?

**Project Potential**

- What scale of development is anticipated or, if judgements about this cannot be made presently, what must happen before such a judgement can be made?
- What operational or market constraints might affect the project potential?
- What is the likely range of project capital needs in the event of development?

**Capacity to Meet Targets**

- What skills does the company currently have available?
- What additional or alternative skills will be needed for the next stage of activities?
- How does the track record of the existing management impact current judgements about the capacity of the company to meet its targets?
- What financial resources are currently available? Are they adequate for the targets being set?
- Are there unresolved technical, financial or regulatory matters that could impact the achievement of business targets?

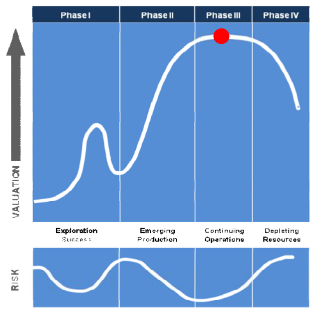
**Rating Discussion**

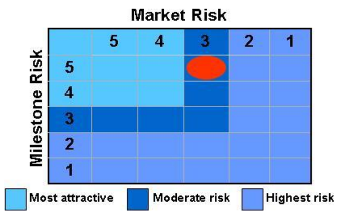
- Into which development phase has the company been classified?
- What are the key criteria against which the company is being benchmarked?
- How does the company stand against the rating criteria for a company at this stage of development?
- Are there criteria which have been more or less important in coming to a rating decision?
- Are there matters which might affect the rating in the future?
- Are there any special attributes displayed by the company that might impact on its role in a portfolio?
- How have historic investment returns affected judgements about current and future market risk?

# Company Rating Review
# Alumina Limited (AWC:AU)

NR 1 1+ 2 2+ 3 3+ 4 4+ 5

**Selection Criteria: E.I.M. Momentum Model**




| Statistical Risk Measures | |
|---|---|
| **Deviation from** | |
| • **15 week moving average** | -5% |
| • **25 week moving average** | -2% |
| • **50 week moving average** | +8% |
| **Historical return ranking (1-100)** | |
| • **2011-June 2013** | 29 |
| • **Since 1 July 2013** | 19 |
| **Return volatility**[1] | 0.5X |
| **Liquidity**[2] | 150% |

1. Relative to sector median
2. Turnover for 12 months as % of current shares

**Recent Company Events**

- The company reported a net loss for the 12 months ended December 2014 of US$98.3M after one-off charges of US$106.5M from a loss on the sale of the Jamalco refinery and restructuring costs of US$90.8M at the Port Henry smelter in Victoria, Australia.
- Cash flow from the AWAC joint venture was US$119.2M (compared with US$110.3M in 2013) predominantly from capital returns rather than dividends. The company declared a dividend of US$1.6c. There was no dividend for 2013.
- Operating margins at the AWAC joint venture improved due to a greater proportion of third party sales at spot prices combined with better alumina market conditions and ongoing cost management. The joint venture reported a lift in operating margins to US$85/t in the December quarter, up from US$45/t reported for 2013.
- Alcoa has recently announced a strategic review of smelting and refining assets, seeking higher returns on invested capital.

**Primary Development Assets**
Alumina was listed on the ASX in December 2002 following the demerger of the alumina interests of WMC Limited (Western Mining Corporation). At the time of the demerger, Alumina held a 40% interest in Alcoa World Alumina and Chemicals (AWAC). Alcoa retained a 60% interest in the joint venture which owned and operated a suite of bauxite mines, alumina refineries, aluminium smelters and alumina-based chemical businesses worldwide.

AWAC assets include a 99.25% interest in Alcoa of Australia operating bauxite mines in southwest Western Australia (Huntly, Willowdale), refineries at Kwinana, Pinjaarra and Wagerup and an aluminium smelter at Portland in Victoria. At listing, the company held a 100% interest in alumina refinery assets at Port Comfort Texas, a 37% interest in Halco, a bauxite mining consortium in Guinea, mining and refining assets in Suriname and Jamaica, and a growing portfolio of mining and refining assets in Brazil. At the time of listing, the AWAC joint venture had combined alumina

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production capacity of 13Mtpa. It reported output of 11.9Mt for 2011. In 2002, the company accounted for 25% of global alumina production.
At the time, the company articulated three growth initiatives: brownfield expansions of existing businesses, cost management and acquisition of selected under-performing assets subject to better operational performance. The company grew its production base in the years following the demerger from WMC Limited but volumes have stabilised since some operating assets have been closed or sold. In 2014, the company closed the Port Henry smelter in Victoria and sold its interest in the Jamalco bauxite mine and alumina refinery. The Suralco mine and refinery is currently the subject of a "strategic review".

In 2014, the company reported a 0.6% increase in alumina production to 15.902Mt. For 2015, the company has forecast alumina production of 15.2Mt after sale of the Jamalco business.

Alumina Limited derives its operational cash flow from dividends and capital returns from the AWAC joint venture entities, offset by company general administrative and finance costs. In 2013, the company received US$107.3M in dividends and US$3.0M in capital returns. In 2014, the company received US$20.3M in dividends and US$98.9M in capital returns.

*AWAC Joint Venture, Alumina Limited 40%, Alcoa 60%*
AWAC owns or has an interest in bauxite mines located in five countries, primarily feeding company alumina refineries.

In 2014, the business consumed 40Mt of bauxite from its own mines, purchased a further 7Mt of bauxite and sold 1.6Mt of bauxite to external parties (ASX 26 February 2015). The company reported alumina production of 15.9Mt in 2014 which was a 0.6% increase on the prior year. Shipments of alumina in 2014 were 0.2Mt (1.24%) lower than in the prior year.

AWAC has continued to transition the pricing of third party alumina sales to spot, reporting 68% spot sales in 2014, up from 54% reported in 2013 and 15% reported in 2011. The company is targeting some 84% of 2016 third party sales to be sold at spot pricing rather than at prices linked to London Metal Exchange aluminium (LME) prices. The company has referred to LME prices as being "weighed down" by a range of factors including a general weakness in commodities and a reduction in contango.

The company reported an average alumina price of US$310/t for 2014 which was up 0.6% on 2013 levels. The ratio of spot to LME aluminium increased from 17% to 17.6% on the prior year. (ASX 26 February 2015).

In its December 2014 report, the company noted that average mine costs on a per tonne basis were lower than in 2013 primarily due to changes in currency cross rates and, in particular, a weakening Australian dollar and Brazilian Real. The company reported an overall decline in alumina production costs from US$258/t to US249/t primarily due to lower input costs (caustic soda, energy) and other conversion costs.

The company has reported capital expenditure of US$234.9M in 2014 compared to US$322.6M in 2013. Capital expenditure has been estimated at US$260M for 2015 of which US$230M is for sustaining capital.

**Regulatory Standing**
The operating assets of the company are held on granted mining leases or permitted licence areas.

**Project Potential**
Alumina Limited through its holding in the AWAC joint venture is already operating close to its potential. Despite the likely longer term growth in aluminium metal consumption, there appears very limited appetite within the Alcoa grouping for significant investment in the upstream part of the aluminium value chain.

As things stand, AWAC and, through it, Alumina is a key alumina industry participant with a

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portfolio of long life assets. With Alcoa as the principal buyer of alumina, customer risks are minimal.
The company is part way through a major refocus of the business, aimed at reducing the cost base of mining and refining assets. AS a commodity producer this is likely to be an ongoing exercise with new costs containment exercises to follow those that have been completed.

Dividends from AWAC will continue from the profitable Australian operations but returns from the loss-making Brazilian assets will flow as capital returns. In time, capital returns from offshore assets are likely to exceed dividend payments to Alumina Limited. This will impact the level of franking credits available for future distribution.

**Capacity to Meet Targets**
The assets of the company are managed by people who are among the best operators of alumina refining assets in the world drawing on low cost and high quality bauxite mining operations.

Financial and operating outcomes are hindered, in some cases by legacy issues. Aging assets based on historical energy prices have required some restructuring of the business but Alcoa has responded to these challenges as it has sought to align its global activities to deliver aluminium end products competitively to global markets.

Since the demerger from WMC Limited in 2002, production growth has largely ceased as underperforming assets are sold or closed. The ongoing emphasis will be on efficiency improvements. AWAC has the skills to be able to maintain operations at world's best practice.

At the end of December 2015, the company held cash and equivalents of US$24.9M with debt of US$111.5M. The company has appreciable undrawn debt facilities. In November 2014, the company issued a A$125M 5.5% fixed note which matures on 19 November 2019.

**Rating Discussion**
**PortfolioDirect** has classified Alumina Limited as a Phase III company. A company at this stage of the development life cycle has passed its primary growth phase. Without significant organic growth potential, it must rely on higher commodity prices for an earnings uplift. In some cases, it will need higher commodity prices simply to sustain profitability in the face of rising costs.

A Phase III company may still play an important portfolio role depending on its relative financial strength, its capacity to withstand periods of cyclical weakness due to the competitiveness of its cost structure and its potential, arising from a large resource base, to operate through multiple economic cycles.

Phase III companies often display less volatile return profiles than the bulk of the stocks in the sector. These characteristics often lead to Phase III companies being regarded as safer investments than companies in the earlier stages of the development cycle. Being able to pay a dividend supports this positioning. The converse of these attributes may be less leverage to a cyclical recovery than other stocks in the sector.

The Phase III companies with the highest **PortfolioDirect** ratings will have attractive valuations, above average production life and cost structures able to withstand cyclically low prices.

Alumina Limited has one of the longest life resource bases in the mining industry and a cost structure capable of withstanding cyclically low prices. Any valuation for the company warrants application of a discount rate at the low end of the range that might apply to stocks in the sector in recognition of these characteristics. Its commercial and technical linkages to Alcoa also reduce the risk profile of the company. However, even taking account of those features, the company is expensive.

The **PortfolioDirect** valuation is carried out within a neutral commodity price environment so does not attribute any value uplift to future higher prices. Almost inevitably, over the future life of the AWAC operations, one or more cycles will enhance the currently anticipated financial returns. To that extent, an investor will have better than usual certainty that at some point in

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time the market value of Alumina will reflect improved cyclical conditions. However, those are likely to be circumstances in which investment returns will have improved more generally without offering investors in Alumina any relative advantage. Alumina is likely to show less leverage to a cyclical recovery than other stocks in the sector.

From a portfolio structuring standpoint, Alumina offers a unique opportunity in the Australian market to invest in operating aluminium market related assets. Although the company has taken steps to dissociate as far as possible the pricing of its external alumina sales from daily traded aluminium metal prices, the economic connection is likely to remain strong.

Several companies are currently seeking to develop parts of Australia's extensive bauxite endowment increasing the number of alternative opportunities for investors in the sector but none will have the extent of Alumina’s vertical integration within the industry. ■

# Abbreviations and Symbols

| | | | |
|---|---|---|---|
| lb | pound | cif | cost, insurance and freight |
| oz | troy ounce | fob | free on board |
| Koz | 1,000 troy ounces | fot | free on truck |
| Mlbs | million pounds | g/t | grams per tonne |
| kg | kilogram | ppm | parts per million |
| t | tonne | RC | reverse circulation |
| kt | 1,000 tonnes | RAB | rotary air blast |
| Mt | 1,000,000 tonnes | $U_3O_8$ | yellowcake (uranium) |
| Mtpa | million tonnes per annum | Fe/FeO | iron/iron ore |
| kL | kilolitre (1,000 litres) | $SiO_2$ | silica |
| ML | megalitre (one million litres) | $Al_2O_3$ | alumina |
| GL | gigalitre (one billion litres) | P | phosphorus |
| ha | hectare | $TiO_2$ | titanium dioxide |
| m | metre | $ZrO_2$ | zirconium dioxide |
| $m^3$ | cubic metre | LOI | loss on ignition |
| km | kilometre | mg/l | milligrams per litre |
| A$ | Australian dollar | Mj/kg | mega joules per kilogram |
| $M | million dollars | EBITDA | earnings before interest, tax, depreciation & amortisation |
| US$ | United States dollar | EBIT | earnings before interest & tax |
| MG/GW | megawatt/gigawatt | ROM | run of mine |
| ct | carat | LOM | life of mine |
| bbl | barrel | MOU | memorandum of understanding |
| mbd | million barrels a day | VTEM | Versatile Time Domain Electromagnetic |
| MBOE | million barrels of oil equivalent | | |


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|---|---|
| **Publisher** | E.I.M. Capital Managers |
| **Chief Investment Strategist** | John A Robertson<br>john.robertson@eimcapital.com.au |
| **Head of Stock Research** | Tony Wiggins<br>tony.wiggins@eimcapital.com.au |
| **Joint Portfolio Manager** | Doug Goodall<br>doug.goodall@eimcapital.com.au |
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