

# P2015

## Positive signals for aluminium

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Weak global demand pulled down aluminium prices over 10% in 2014 due to weak global economic sentiment which kept investment on infrastructure low. The trend is unlikely to reverse in 2015 as the United States Fed Chair Janet Yellen maintained “caution” on much hyped interest rate hike in the first quarter. While analysts await a clear direction in its scheduled meeting in the last week of January, broad expectations are that the Fed is unlikely to raise interest rate in a hurry unless the US economy shows a concrete growth direction. Currently, the US economy shows a fluctuating signal with growth in one month followed by weak in another.

The 3-month aluminium price hit a floor of USD1,677/t at the beginning of March 2014, before peaking at USD2,107/t in September 2014. The all-in aluminium price (including the regional premium) peaked at the same time at a price of USD2,538/t. The combination of robust global demand and producer discipline has provided the foundations for the recovery in aluminium prices, with the degree of global annual surpluses being significantly reduced. Aluminium price remained highly volatile in 2014. In spot trade on the LME, aluminium moved up to \$2120 before falling to \$1671 and recovering marginally to close the year at \$1859.

The aluminium forward curve has been in a consistent contango for most of the period since the beginning of 2012. However, since August this year, both near-term and longer-term spreads have tightened with the market currently in a near-term (3-month) backwardation. The current near-term backwardation and tightening of longer-term spreads makes the holding of physical metal more expensive. This may prompt market participants to allow financing trades to unwind, ensuring more physical metal is available in the market.

### China the king

In 2012 and 2013, the aluminium market was characterized by a surplus in China and a deficit market in the world ex-China. The

global balance however, was still in a modest surplus. Metal exports in the form of semi-fabricated products helped “balance” the market in the world ex China. This broad dynamic will continue over the next three to four years. However, the deficit to be far more significant in 2014 and 2015, and due to the slowdown of new capacity additions in China, the China surplus is forecast to diminish. The net impact is a global aluminium market deficit for 2014 – 2016. Post 2016, global capacity additions (both in China and the world ex-China) is set to accelerate once more, leading to a modestly oversupplied Chinese market, a balanced Rest-of-the-World market and a modest global balance.



The Chinese market will remain roughly balanced over the longer-term, with surpluses being opportunistically exported depending on the prevailing tax regime and the arbitrage between the SHFE and LME prices. We do not think that the Chinese aluminium producers will set themselves up as an export focused industry, due to the uncertainty of “anti-dumping” measures from the rest of the world and possible tax changes imposed by the Chinese government.

The arbitrage or more correctly the profit and loss of a Chinese producer, exporting either primary aluminium, attracts an export tax of 15%, or semi-fabricated products, which attracts a 13% rebate. The US Mid West premium in the received price calculation for a Chinese exporter and the Shanghai CIF premium on ingots are also being worked out.

There is no further conversion premium arbitrage is expected, and that shipping costs are negligible. Essentially, semi-fabricated products are merely exported as a relief valve for the primary aluminium market. It is clear that since the beginning of 2009, it was mostly unprofitable to export primary aluminium, whilst the opposite is the case for semi-fabricated products where it is almost always economic to export semi-fabricated products. The profitability of the trade has increased by \$500/t since the beginning of the year.

The arbitrage SHFE to LME clearly drives the behavior of Chinese exports. As the arbitrage has increased so too have the monthly China aluminium exports. The level of Chinese semi-fabricated products is expected to continue rising, albeit slowly over the course of the next eighteen months. A deluge of exports however is not expected. Although the Rest of the World deficit is forecast to remain above 500,000, China's surplus will shrink, especially in 2015 and 2016. Simply put, the deficit in the Rest-of-the-World will continue to draw metal out of China, but the tighter domestic market will in turn constrain the flow.

Meanwhile, Xinjiang province in China with a total capacity of 5.09 million tonnes in 2014 will see a total fresh capacity addition of 1.47 million tonnes in 2015, 1.5 million tonnes in 2016. With steady increase, total capacity is expected to increase to 9.4 million tonnes by 2018. Xinjiang province contributes to over 80% of all capacity additions in 2014 and 2015. Although, the rate of additions is forecast to slow and hence the contribution of Chinese capacity additions to decline, there is an upside expected to this region, at the expense of other regions. The relatively low water consumption in a dry region, is a good way to leverage the provinces vast coal resources. The resource is effectively a “stranded” power source.

China's aluminum smelting operating capacity is expected to rise to 31 million mt in 2015, up 7% from 29 million mt in 2014, the Henan Nonferrous Metals Industry Association said. The report said 2015 alumina operating capacity will be 58 million mt, without giving this year's figure. It said

alumina supply and demand would be balanced next year if imports hit 5 million mt. The National Statistics Bureau estimates China's 2014 refined aluminum output at 24.5 million mt and expects it to rise 6-7% next year. The report said further weakness in China's economy would cut domestic aluminum demand next year. It said the country's possible implementation of a relaxed monetary policy and increased affordable housing construction would stabilize aluminum demand from the construction sector next year. Aluminum demand by the power and auto sectors is expected to be stronger. The report said China expects to add 3.8 million mt/year of new aluminum smelting capacity in 2015, with around 1.5 million-2 million mt/year capacity scheduled to gradually start by the end of Q1 to early Q2.

A Deutsche Bank report estimates that the peak in regional premiums, modestly rising Chinese semis exports and continued supplier discipline will be the main points of debate over the next eighteen months. How these aspects evolve, will determine the outcome of aluminium pricing. Supply discipline, both in China and the world ex-China, assisted by strong demand growth has ensured a balanced market in 2014. The bank forecasts this trend to continue, resulting in a deficit market for 2015, which will support prices at the current level. We see modestly easing premiums offset by rising LME prices. The tighter market in 2015, should see upside to current levels, but price \$200 – 300 a tonne higher will lure metal out of

storage and encourage restarts, capping the upside.

#### Positive forecast

Morgan Stanley boosted its aluminum price forecast for next year by 8 percent as increasing use of the lightweight metal in U.S. car manufacturing leads global demand growth while producers continue to cut output. The industrial metal will rise to \$2,072 a metric ton in 2015, analyst Joel Crane wrote in a report today. This year's forecast was also increased by 3 percent to \$1,893 a ton, it said. Prices on the London Metal Exchange have averaged about \$1,870 a ton so far this year. Aluminum, used in everything from cars to airplanes to window frames, has risen 8.6 percent this year on the LME as demand expanded while smelters outside China curtailed output. A global surplus will narrow to 310,000 tons in 2015 and 280,000 tons in 2016 from 620,000 tons in 2014 before swinging to a deficit of 230,000 tons in 2017, according to today's report. "The positive momentum has been sustained on the back of solid demand growth, but more importantly as a result of producer discipline" outside of China, Crane said in the report. Broad-based demand strength led by the U.S. is "a tailwind," they wrote.

Global demand will climb 6.6 percent this year and 7.4 percent next year as carmakers, mostly in the U.S., increase use of the metal and growing consumption in China, the bank said. The increased use of aluminum in Ford Motor Co.'s new F150 is a "boon for aluminum demand" and Toyota Motor Corp. plans to use

more of the metal in its 2018 Camry, it said.

The aluminium market will be dominated broadly by the following themes over the next eighteen to twenty four months:

\* Premiums are expected to peak in 2015 and to erode slowly over the course of the year, but perhaps not quite to levels considered historically normal. Chinese aluminium exports will follow the example of steel, and increase modestly over the course of 2015. However, the threat of anti-dumping legislation and Chinese government policy combined with a tighter domestic balance, will constrain these exports to a steady stream, as opposed to a deluge.

\* Modest supply growth over the next few years in both China and the world ex-China is expected. Although many of the smelter closures have been permanent, there is idle capacity which could be restarted, capping some of the upside in pricing.

#### End of peak premiums

The steadily rising premiums to record levels have been driven by the increasing physical tightness in the aluminium market. Simply put, it's becoming harder to obtain prompt delivery metal. This rise was, and is being caused by a confluence of factors, and not a single factor. The current "two hemisphere structure" of the industry with China accounting for roughly 50% of the market and the return of work the other 50% is also the prime reason as to why this physical tightness has manifested itself in the premium

### Aluminium production curtailment

Company	Smelter	Recent output (KT)	Curtailement (KT)	Effective date
Alcoa, Canada	Baie Comeau	390	105	Aug 13
Ormet, USA	Hannibal	270	90	Aug 13
Alcoa, USA	Massena E	125	40	Sept 13
Alcoa, Brazil	Pocos de Caldes	96	32	Sept 13
Alumar, Brazil	San Luis	447	92	Sept 13
Rusal, Russia	Russia - multiple	0	350	Sept 13
Rusal, Russia	Russia - multiple	0	297	Oct 13
Ormet, USA	Hannibal	270	90	Oct 13
Rio Tinto, Canada	Shawinigan	100	100	Nov 13
Klesch Group, Netherlands	Aldel	100	100	Dec 13
Alcoa, USA	Massena E	84	84	Mar 14
Rusal, Sweden	Granges	135	25	Mar 14
Nippon, Japan	Kambara	7	7	Mar 14
Alcoa, Brazil	Pocos de Caldes	96	64	Apr 14
Alumar, Brazil	San Luis	360	200	Apr 14
HBP Billiton, South Africa	San Luis	360	200	Apr 14
Alcoa, Australia	Pt Henry	190	190	Aug 14
Hindalco, Brazil	Qurto Preto	50	50	Dec 14

Source : Deutsche Bank

market, and not in the underlying aluminium price. The rise in physical premiums started in the US, and was evident in the Mid West premium specifically. However, other regional premiums soon followed, as an attractive arbitrage developed. The combination of improving demand in the US and a number of concurrent smelter closures, created a significant regional deficit. The smelter closures were due to poor profitability. The persistent contango in the market has meant that the holding cost of physical aluminium is very low, or in some instances even a profitable enterprise. This has restricted the flow of aluminium from inventories, both on and off-exchange is expected in coming months.

Also, the current LME load out rules (a maximum load out of 3,000 tonnes for a warehouse location with over 900kt of metal) exacerbated the physical tightness by creating queues. This allowed warehouse companies to offer incentives in order to keep inventories locked up, in order to maximize revenue.

When considering all of the factors which have contributed to high premiums, the conditions in 2015 will not be as favourable as in 2013 or indeed most of 2014. Industry profitability has improved through a combination of higher prices and lower costs. At the current all-in price of \$2,500/t, most of the aluminium industry is cash positive. Average industry costs have declined due to weaker producer currencies, price linked input cost reductions and general efficiency improvement measures from management teams, which has led to a flattening and lowering of the industry cost curve.

The industry can now tolerate lower premiums from a profitability perspective. Given our view that both the US market and the overall market balance will be in a deficit, the downside risk to the all-in price is limited and this extends to the premiums as well. US production is expected to remain stable over the course of 2015, before accelerating in 2016 and 2017 as capacity is restarted. Due to the continuing regional market deficit, a collapse in premiums is unlikely however.

#### LME's move to control aluminium

The LME has been responsive to criticism about the building queues in some of its warehouses (Detroit and Vlissingen in the case of aluminium), and in 2010 commissioned Europe Economics to prepare an assessment on the adequacy of LME load-out rates. Based on the outcome of these findings, the LME

increased minimum load-out rates from 1,500 t/day to a schedule based on absolute tonnages in the warehouse:

- <300kt = 1,500t/day
- 300kt – 600kt = 2,000t/day
- 600kt – 900kt = 2,500t/day
- >900kt = 3,000t/day

Subsequently, the LME introduced additional requirements on warehouse companies to load-out a minimum quantity of a low volume metal (500 tonnes) stored alongside a dominant metal. This rule was introduced so that metals such as copper, nickel, tin and lead were not trapped in a queue behind aluminium and zinc for instance.

The new proposal, (originally proposed in July 2013) is effectively a Linked Load-In / Load-Out rule and seeks to address queues specifically by focusing on off-warrant (cancelled warrant) metal, whilst still imposing minimum load-out rates based on absolute warehouse stocks. The “newly” proposed regulations will impact warehouses with queues greater than 100 days. These affected warehouses will have to load out 0.5x any new metal placed on warrant in a day up to the normal daily load-out rate plus any new metal placed on warrant over and above the normal daily minimum load-out rate, in addition to the normal minimum load-out rate. So if the normal load-out rate is 3,000/day, and the average load-in rate is 3,500t/day, the warehouse will have to load out  $(3,000 + 0.5 \times 3,000 + (3,500 - 3,000)) = 5,000$  t/d in the next quarter.



Absolute inventories peaked in January 2014, but cancelled warrants have also increased to nearly 100% of the inventory. Subsequently, the queue length has fallen in line with falling inventories. Part of the reduction in inventories has been due to robust US demand, but also the pre-emption of the likely warehousing rule change on the LME, subsequent to the successful high court challenge. Whilst there has been a reasonable correlation between the US Mid West premium and the implied queue premium (ie the cost of drawing metal out of the Detroit warehouse), this correlation has broken down since the middle of this year. This suggests that queue length has become less of an influencing factor on premiums.

The market conditions for high premiums are easing, but that the deficit market in the US and the world ex China will ensure that premiums remain well supported. Thus,

premiums are expected to remain around the \$500/t level until the end of 2014 and into the early part of 2015, but then to decline over the course of the year to below \$400/t.

#### Producers' discipline

Producer discipline, especially by the larger producers in the world ex-China has contributed significantly to the steady rise in regional premiums and the welcome recovery in the LME price. The steady recovery in producer margins is likely to encourage continued supply discipline from the larger producers such as Alcoa and RUSAL. The average industry EBITDA margin is expected to improve from the low of \$200/t in 2012 to \$400/t in 2014. It is further forecast to continue at 500/t in 2015. The growth in aluminium supply in the world ex-China is expected to commence after three years of declines or flat production. New capacity in the Middle East and India will start to offset the 3Mt of voluntary supply cuts since the end of 2011. There is some downside risk (i.e. upside risk to the rest of the world or ROW deficit) to the ramp-up of Indian production given the widespread coal block allocation. Many of these coal blocks had been earmarked for captive power plants in the aluminium industry. So far company commentary has suggested that capacity will continue to ramp up.

The aluminium industry responded very well to the weak price environment, with a total of 3Mt in supply cuts in the World ex China. The critical masses in announcements were from August 2013, with the larger producers Alcoa and in particular UC Rusal being at the forefront of the closures. Key regions for closures are Brazil, the USA and Russia, with some older uneconomic capacity in Europe being closed permanently. We estimate the capacity closure in the US is close to 800,000 tonnes.

Analysts, however, argue that there is an equivalent capacity of potential restarts, ie 3Mt. Although some of the closures that have been announced are permanent, there are other facilities that have latent capacity. Most of the restarts, will depend on pricing (both LME and premiums), favourable power contract terms and in some cases financing.

#### Conclusion

Although aluminium demand growth is expected to slow in 2015, the actual demand of the metal will remain above the 5% growth level. Supplier discipline from many of the established producers in 2013 and 2014, has created the market conditions for an all-in price, which looks sustainable at \$2,500. However, significant upside is not expected from these levels, with price rallies limited to \$300.