

3 December 2018

MENA INDUSTRIALS

ISSUER-SPONSORED RESEARCH

Price (BHD)	0.60
Current valuation metrics	
2018f PE	10.4
2018f P/BV	0.8
2018f EV/EBITDA	15.7
Market cap (mn)	845
Market cap (US\$m)	2,247
Avg. daily volume (US\$k)	283

Market performance (BHD)

YTD return (%)	-1.0%
3-month return (%)	-5.6%
1-yr return (%)	-1.0%

Share price performance



Contact:

Vahaj Ahmed
+971 4447 9207
vahaj.ahmed@exotix.com

Folasade Obilomo

Capacity-driven earnings growth on the cards

- Aluminium Bahrain (Alba) is one of the largest aluminium smelters in the world.** The company has a 1.0mtpa primary aluminium facility and produces a range of products, such as billets, liquid metal, rolling slabs, foundry alloys and standard ingots. Alba is currently adding its sixth potline (Line-6) with a capacity of 540 kilotonnes (kt) for an investment of cUS\$3bn. The Line-6 Expansion Project (The Project) is on track to start production in January 2019 and will make Alba the largest single-site aluminium smelter in the world. The stock's valuations do not appear challenging, at 2019f PE of 6.4x and EV/EBITDA of 7.3x (versus its peers' 9.2x and 6.0x, respectively).
- Alba's new capacity could be absorbed given tight global supply.** The clamp-down on illegal aluminium production in China and US sanctions on Rusal (the world's second-largest aluminium company) have led to tighter supply in the global aluminium market. On the other hand, there has been lower production of alumina (the key raw material for smelters) in 2018, which pushed the alumina price to a five-year high of US\$490/tonne (Australia FOB) in Q3. Around 40% of smelters could be losing cash at this price (according to the CRU Group) and the shortage of alumina might force smelter closures in 2019. These factors should help absorb Alba's new capacity and we believe the company will remain profitable owing to its relatively efficient energy consumption (versus the global average).
- We expect higher realised prices and more efficient indigenous power to expand margins in 2019f.** Given the global supply tightness, we expect Alba's realised prices to hover around US\$2,350/tonne in 2018f-19f (c10% higher than 2017). The higher realised prices are also a result of the higher premiums achieved on US value-added sales in light of the US tariffs on Chinese aluminium. Alba is building a 1,792MW gas-fired power plant (known as PS-5) to energise Line-6. This new capacity will have a 54% efficiency rate (as compared with the existing capacity's 40% efficiency) and will lower total energy consumption by c11% (in terms of kilowatt hours per tonne – kWh/tonne – of aluminium). These factors should improve Alba's EBITDA margin to 20.2% in 2019f from 12.5% in 2018f.
- Lower aluminium and higher alumina prices are the key risks to our thesis.** Various supply factors have affected the aluminium market in 2018, but aluminium and alumina prices matter the most to smelters. Any improvements in primary aluminium supply from China and/or Russia could have a material impact on aluminium prices and, in turn, on Alba's profits. On the other hand, any further cuts in global alumina production could be negative.

This report has been commissioned by Aluminium Bahrain (Alba) and independently prepared and issued by Exotix Capital LLP for publication. All information used in the publication of this report has been compiled from information provided to us by Alba and publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report. Opinions contained in this report represent those of the research department of Exotix Capital at the time of publication. The sponsor has had no editorial input into the content of the note, and Exotix Capital's fees are not contingent on the sponsor's approval of the research.

Three key factors drive Alba's investment case:

- 1) Favourable global aluminium outlook
- 2) Double-digit revenue growth
- 3) Cost-efficient production

Investment case

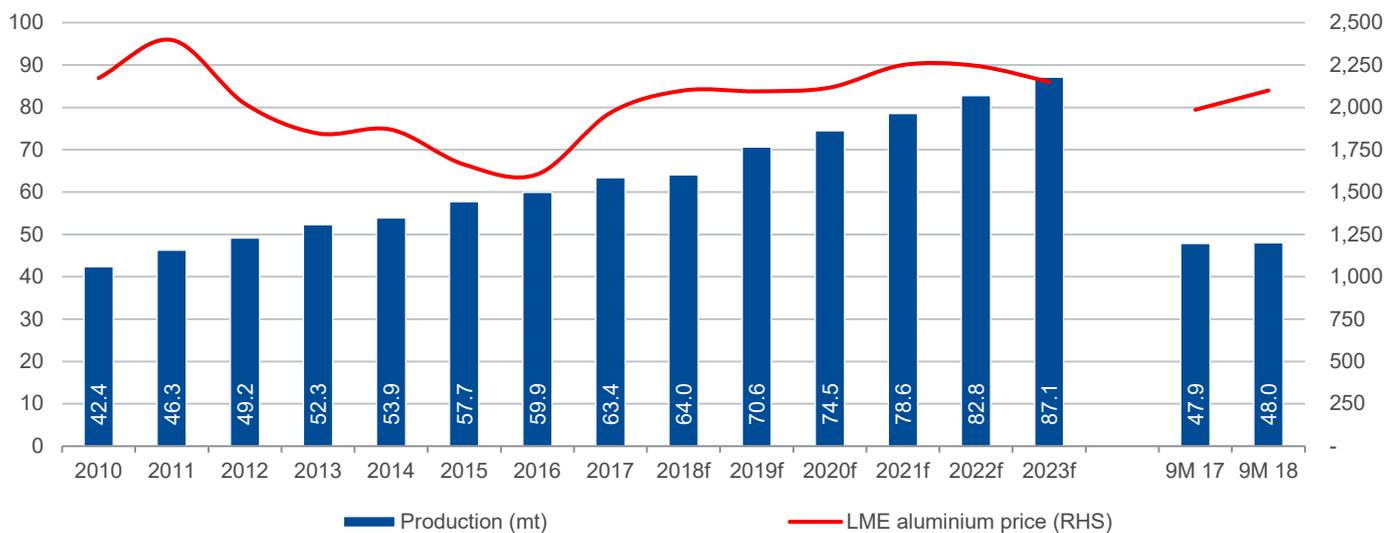
We expect Alba's net income to grow at a 22% compound annual growth rate (CAGR) over 2019-23 and identify three key factors that are likely to drive its investment case: 1) the favourable global aluminium outlook; 2) Alba's double-digit revenue growth; and 3) the company's cost-efficient production.

Favourable global aluminium outlook

The clamp-down on illegal aluminium production in China and US sanctions on Rusal (the world's second-largest aluminium company) have led to tighter supply in the global aluminium market. On the downside, there has been lower production of alumina (the key raw material for smelters) in 2018, which pushed its price to a five-year high of US\$490/tonne (Australia FOB) in Q3. Some 40% of smelters could be losing cash at this price level (according to the CRU Group) and the alumina shortage might force smelter closures in 2019.

According to the International Aluminium Institute (IAI), primary aluminium production grew by only 0.3% yoy in 9M 18. This was due to a 0.7% yoy decline in Chinese production. China's push for lower air pollution in 28 cities has, in fact, had a significant impact on its aluminium industry since H2 17, with the government shutting down illegal capacity in the two largest aluminium-producing provinces, Shandong and Xinjiang. These provinces are either close to indigenous coal reserves (which helps save energy costs) or to ports (providing easy access to imported raw materials, such as alumina).

Figure 1: Global primary aluminium production (mt) vs. LME aluminium price (US\$/tonne)

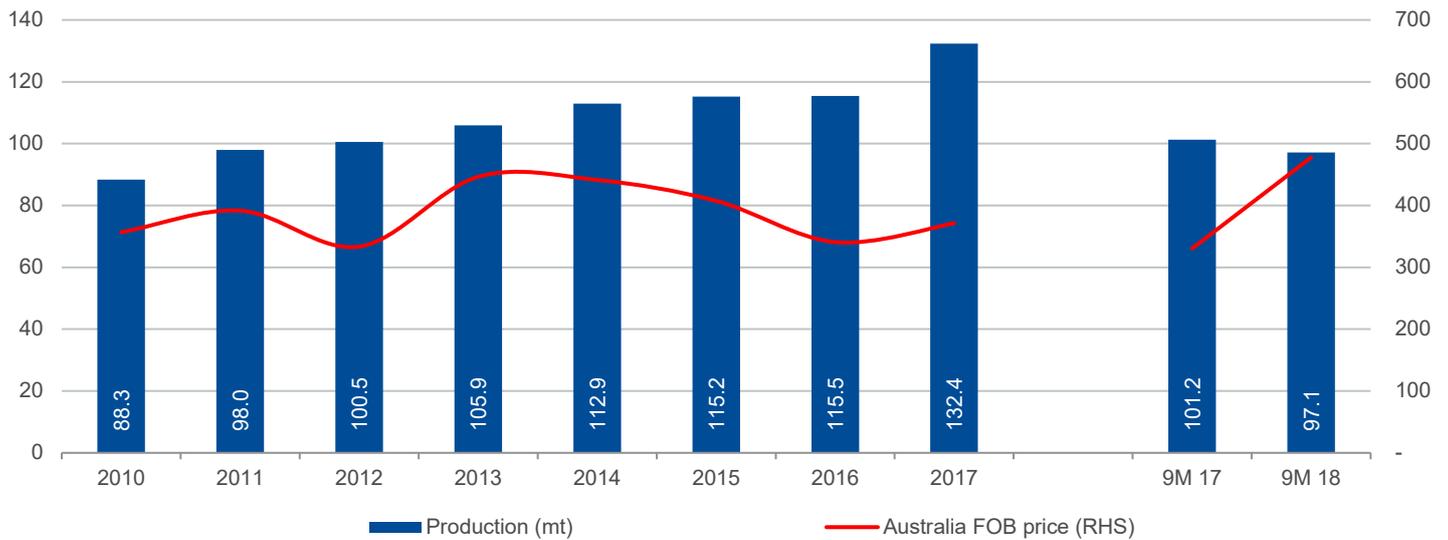


Source: International Aluminium Institute (IAI), Exotix Research

On the other hand, supply disruptions in Brazil (the partial shutdown of Norsk Hydro's Alunorte refinery), Australia (short-term labour issues at Alcoa's mines and refineries) and Western Europe (US sanctions affecting Rusal's refining capacity) lowered alumina output to 97.1mt in 9M 18 (down by 3% yoy) and drove the alumina price to a five-year high of US\$490/tonne (Australia FOB) in Q3.

Alumina production has since increased, though, and prices have now fallen to US\$420/tonne.

Figure 2: Alumina production (mt) vs. alumina price (US\$/tonne)



Source: International Aluminium Institute (IAI), Exotix Research

The overall global aluminium outlook remains favourable to absorb Alba’s new capacity and we think the company will be able to remain profitable owing to its efficient energy consumption (versus the global average).

Double-digit revenue growth

We expect Alba’s revenues to grow at 10% CAGR over 2019-23. According to the company’s management, a full ramp-up of Line-6 will be achieved in Q2 19 and we expect Alba’s sales volumes to grow by 35% yoy to 1,351kt in 2019 (versus 1,001kt in 2018f), assuming Line-6 is ramped-up (and fully utilised) from May 2019. We expect volumes to grow by 14% yoy to 1,540kt in 2020.

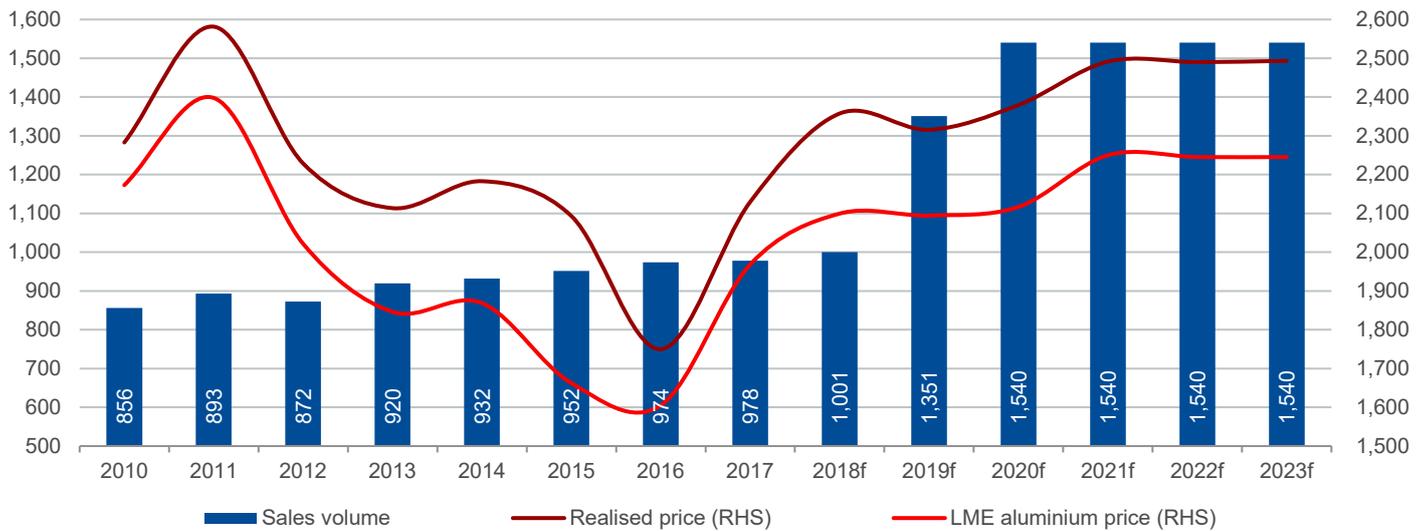
Given the global supply tightness, we expect Alba’s realised prices¹ to hover at cUS\$2,350/tonne in 2018-19 (c10% higher than 2017) and increase further to cUS\$2,400/tonne in 2020-23. The higher realised prices are also due to better premiums achieved on US sales in light of the US tariffs on Chinese aluminium.

Alba’s realised price is a sum of the London Metal Exchange (LME) aluminium price and the premium. Our LME price assumptions are based on Bloomberg’s commodity price forecasts, and we assume that the premiums² achieved in Q3 will remain unchanged. As a result, we estimate an average blended premium of US\$244/tonne in 2019-23, which is 8% lower than the five-year average of US\$264/tonne (range: US\$145-431/tonne).

¹ Based on Bloomberg’s commodity price forecasts and assuming the Q3 18 premium (over LME prices) remains unchanged. We estimate an average blended premium of US\$244/tonne in 2019-23, which is 8% lower than the five-year average of US\$264/tonne.

² Q3 18 premiums over LME aluminium price: US\$132/tonne in Asia & MENA (five-year range: US\$89-371/tonne); US\$158/tonne in Europe (five-year range: US\$129-417/tonne); US\$455/tonne in the US (five-year range: US\$168-437/tonne).

Figure 3: Alba's sales volumes (kt), realised prices (US\$/tonne) vs. LME aluminium price



Source: Company accounts, Bloomberg, Exotix Research

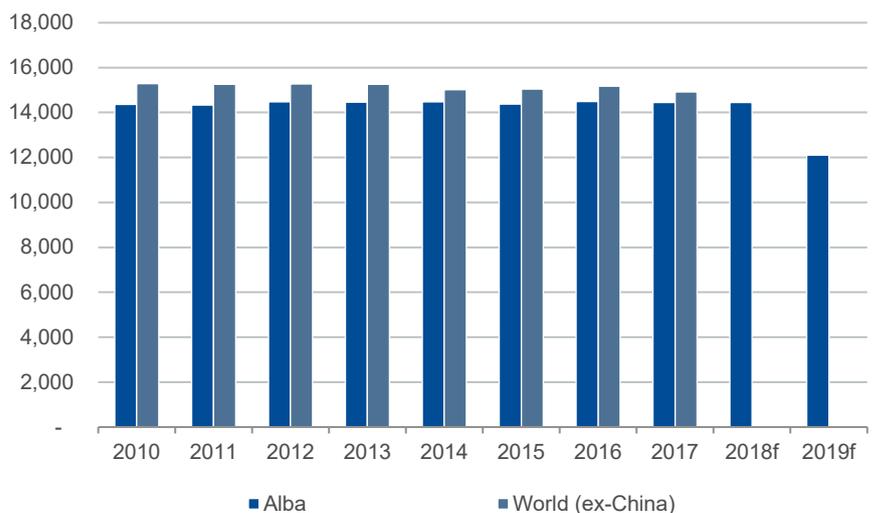
More cost-efficient production

The aluminium smelting process is highly energy-intensive, and Alba can support its production through indigenous gas-fired power plant with an installed capacity of 2,249MW; the existing power plants (PS-1, PS-2, PS-3 and PS-4) have an average efficiency of 40%. The company is building a fifth power station (PS-5) – a 1,792MW gas-fired plant – to energise Line-6.

In 2017, the company consumed 14,454kWh/tonne of aluminium. With the addition of the more efficient PS-5 (and the phase out of the least efficient PS-1 and PS-2), we expect Alba's overall power efficiency to increase to 49.5%, which will lead to a reduction in the power/electricity cost to 12,884kWh/tonne (c11% lower).

We expect Alba's cash cost of production to average US\$1,741/tonne in 2019 (c13% lower than the US\$1,991/tonne in 2018f).

Figure 4: Alba's energy consumption (KWh/tonne) is lower than global average



Source: Company accounts, IAI, Exotix Research

Valuation

Our December 2019 fair value for Alba is based on a discounted cash flow (DCF) valuation and net cash. The key parameters in our DCF are:

- 1) A risk-free rate of 2.5%;
- 2) An equity risk premium of 5.0%;
- 3) A cost of debt of 3.5%.

Table 1: WACC estimate

Risk-free rate	2.5%
Equity risk premium	5.0%
Beta	1.0
Cost of equity	7.5%
Corporate debt premium	1.0%
Effective tax rate	1.1%
Cost of debt	3.5%
Debt (2020f-30f average)	18%
WACC	6.8%

Source: Exotix Research

Table 2: Equity value contribution

	BHDmn
Sum of PV FCF	1,560
PV of terminal value	723
Enterprise value	2,283
Net debt (2019f)	885
Equity value	1,398
Number of shares (mn)	1,420
Implied price (BHD)	0.99

Source: Exotix Research

Table 3: Discounted cash flow valuation

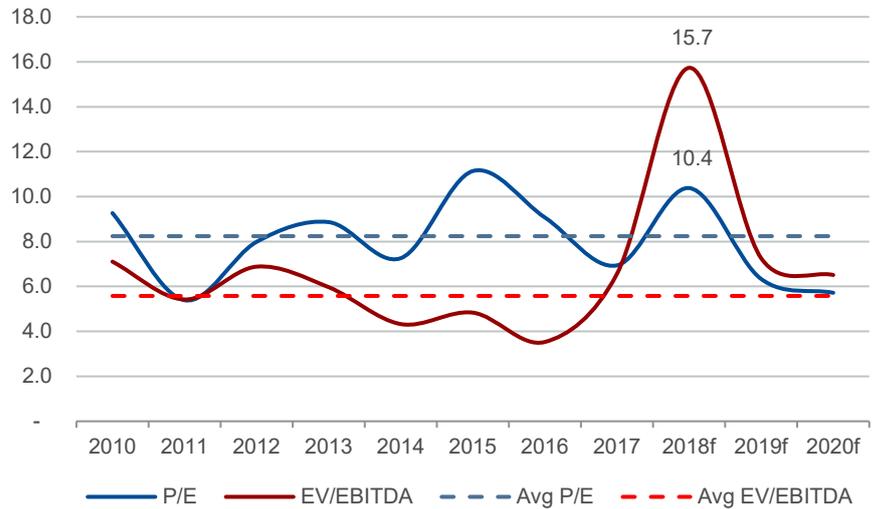
	Units	2019f	2020f	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Capacity	kt	1,351	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540
Output	kt	1,351	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540
Utilisation	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realised price	US\$/t	2,316	2,379	2,491	2,490	2,493	2,400	2,404	2,408	2,412	2,416	2,421	2,426
Revenue	BHDmn	1,176	1,378	1,443	1,442	1,444	1,390	1,392	1,394	1,396	1,399	1,402	1,405
EBITDA	BHDmn	238	293	338	319	303	263	248	232	217	201	186	171
Tax	BHDmn	(2)	(2)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(4)	(4)	(4)
Change in working capital	BHDmn	(58)	(47)	(13)	(1)	(1)	11	(1)	(1)	(1)	(1)	(1)	(2)
Operating cash flow	BHDmn	178	244	322	316	299	271	243	227	212	196	181	166
Capex	BHDmn	(41)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)	(46)
Free cash flow	BHDmn	137	198	275	269	253	225	197	181	166	150	135	119
Forecast year	x		1	2	3	4	5	6	7	8	9	10	11
Discount factor	x		0.94	0.88	0.82	0.77	0.72	0.67	0.63	0.59	0.55	0.52	0.49
Discounted free cash flow	BHDmn		185	242	221	194	162	133	114	98	83	70	58

Source: Exotix Research

Historical trading ranges

Since its listing in 2010, Alba shares have traded at an average of 8.2x PE and 1.9x EV/EBITDA. The stock now trades at a 2018f PE of 10.4x and EV/EBITDA of 15.7x, and we expect these multiples to normalise following the full ramp-up of Line-6.

Figure 5: Historical valuation multiples



Source: Bloomberg, Exotix Research

Peer multiples

In the table below, we compare valuation multiples for Alba with its key global peers. The stock's valuations do not appear challenging, at 2019f PE of 6.4x and EV/EBITDA of 7.3x (versus its peers' 9.2x and 6.0x, respectively).

Table 4: Peer comparison

Company	Ticker	Country	MC (US\$m)	1Y ADV (US\$k)	PE (x)		P/BV (x)		EV/EBITDA	
					TTM	2019f	TTM	2019f	TTM	2019f
Alcoa Corp	AA US Equity	UNITED STATES	5,925	158,530	7.5	8.0	1.1	1.0	3.7	3.0
Alumetal SA	AML PW Equity	POLAND	184	58	9.8	8.6	1.4	1.3	8.7	6.7
Aluminum Corp of China Ltd	2600 HK Equity	CHINA	7,144	12,064	27.8	11.9	0.7	0.8	8.9	8.3
AMAG Austria Metall AG	AMAG AV Equity	AUSTRIA	1,452	95	21.7	19.5	2.1	2.0	10.8	9.3
Century Aluminum Co	CENX US Equity	UNITED STATES	786	23,254	23.6	17.6	0.9	1.0	7.0	6.1
China Hongqiao Group Ltd	1378 HK Equity	CHINA	5,377	7,716	6.2	3.9	0.7	0.5	4.3	3.6
Egypt Aluminium	EGAL EY Equity	EGYPT	533	299	4.4	9.0	1.2	1.0	2.7	5.0
Granges AB	GRNG SS Equity	SWEDEN	765	2,395	10.1	8.5	1.9	1.6	7.2	5.9
Grupa Kety SA	KTY PW Equity	POLAND	852	452	13.0	12.2	2.4	2.2	8.9	8.2
Hindalco Industries Ltd	HNDL IN Equity	INDIA	7,283	34,669	8.3	7.8	0.9	0.8	6.5	5.3
Kaiser Aluminum Corp	KALU US Equity	UNITED STATES	1,608	11,926	19.1	13.1	2.1	1.9	9.4	7.8
Le Belier	BELI FP Equity	FRANCE	238	199	6.3	6.6	1.4	1.1	3.6	3.5
Nippon Light Metal Holdings	5703 JP Equity	JAPAN	1,386	8,130	8.1	8.0	0.9	0.8	6.0	5.7
Norsk Hydro ASA	NHY NO Equity	NORWAY	9,742	36,472	9.8	10.2	1.0	0.9	4.8	4.8
Press Metal Aluminium Holdings	PMAH MK Equity	MALAYSIA	4,498	3,020	29.8	18.7	6.3	5.4	16.4	11.7
Shanghai Haishun	300501 CH Equity	CHINA	263	2,962	27.7	14.6	3.0	2.4	19.8	10.4
UACJ Corp	5741 JP Equity	JAPAN	1,011	4,599	14.8	9.4	0.6	0.5	8.5	7.6
United Co RUSAL PLC	486 HK Equity	RUSSIA	4,233	4,079	2.1	2.3	0.8	0.6	5.2	4.8
Peer group median					10.0	9.2	1.1	1.0	7.1	6.0
Aluminium Bahrain BSC	ALBH BI Equity	BAHRAIN	2,241	283	8.3	6.4	0.8	0.7	10.0	7.3
(Discount)/premium vs. peers					-17%	-31%	-32%	-29%	42%	21%

Source: Bloomberg, Exotix Research. Prices as at 30 November 2018.

Risks to our valuation

Lower aluminium and higher alumina prices are the key risks to our thesis. Various supply factors have affected the aluminium market in 2018, but smelters care the most about aluminium and alumina prices. Any improvements in primary aluminium supply from China and/or Russia could have a material impact on aluminium prices and, in turn, Alba's profits. On the other hand, any further cuts in global alumina production could be negative.

Sensitivity to aluminium and alumina prices

We estimate a December 2019 fair value of BHD0.99/share. The key factors affecting our valuation are: 1) a long-term LME aluminium price assumption of US\$2,150/tonne; and 2) a long-term all-in delivered alumina price assumption of US\$420/tonne (US\$400/tonne Australia FOB plus US\$20/tonne for insurance and freight).

Below, we provide the sensitivity analysis of Alba's fair value for different assumptions of the above factors.

Table 5: Fair-value sensitivity

			Aluminium price (US\$/t)				
			-10%	-5%	Base	5%	10%
			1,935	2,043	2,150	2,258	2,365
-10%	378		0.56	0.99	1.43	1.87	2.30
-5%	399		0.33	0.77	1.21	1.65	2.08
Alumina	Base	420	0.11	0.55	0.99	1.42	1.86
(US\$/t)	5%	441	(0.12)	0.32	0.76	1.20	1.64
	10%	462	(0.35)	0.10	0.54	0.98	1.41

Source: Exotix Research

Company profile

Alba is one of the largest aluminium smelters in the world. The company has a 1.0mtpa primary aluminium facility and produces a range of products, such as billets, liquid metal, rolling slabs and standard ingots.

Alba is currently adding its sixth potline (Line-6) with a capacity of 540kt for an investment of cUS\$3bn. The Line-6 expansion project is on track to start production from January 2019 and will make Alba the largest single-site aluminium smelter in the world.

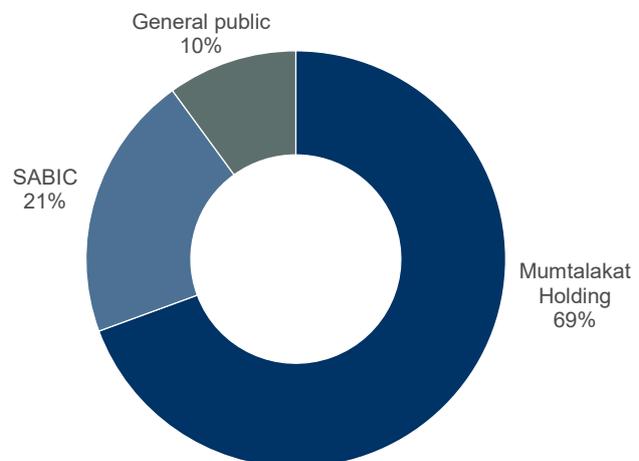
Background

Alba was established in the Kingdom of Bahrain in 1968 and commenced operations in 1971 as a 120kt per annum smelter. In 2017, Alba achieved a record high production of 981kt of the highest-grade aluminium. As of 31 December 2017, close to 42% of its total output was supplied to Bahrain's downstream aluminium industry, while the rest was exported to Asia, Europe and the Americas. Alba is a major contributor to Bahrain's socioeconomic development and employed over 2,700 people at end-17, of which c85% were Bahraini nationals.

Shareholders

Mumtalakat Holding Company (the sovereign wealth fund of Bahrain) holds c69% of Alba. The other key shareholder of the company is Saudi Basic Industries Corporation (SABIC, c21%), and the remaining 10% is free float. As of 30 November 2018, the market capitalisation was US\$2.2bn.

Figure 6: Ownership structure



Source: Company accounts

Board of Directors and executive management

The main Board of Directors consists of 10 members, all of whom are non-executive. In the tables below, we present Alba's Board of Directors and executive management.

Table 6: Board of Directors

Name	Title	Time at Alba	Profile
Shaikh Daij Bin Salman Bin Dail Al Khalifa	Chairman	4 years	Chairman of Arab Shipbuilding and Repair Yard Company (Bahrain), ex-Vice Chairman of United Arab Shipping Company (UAE)
Yousif Taqi	Director	11 years	Chairman of Manara Developments Company (Bahrain), ex-CEO of Al Salam Bank (Bahrain), ex-Partner at Ernst & Young (Bahrain)
Osama Arrayedh	Director	12 years	Board Member in the Gulf Organization for Industrial Consultancy since 2008
Dr. Mohamed Kameshki	Director	4 years	Board Member in the Gulf Organization for Industrial Consultancy since 2008
Suha Karzoon	Director	3 years	CFO of Mumtalakat Holding Company (Bahrain)
Mutlaq Al Morished	Independent Director	15 years	Chief Executive of National Industrialization Company (Saudi Arabia)
Uwaidh Al-Harethi	Director	2 years	EVP Innovation & Business Development at SABIC (Saudi Arabia)
Ali Al Shamrani	Director	2 years	CEO Business Support & Executive Affairs SABIC (Saudi Arabia)
Ahmed Al Jabr	Director	1 year	President, Saudi Arabia Fertilizer Company
Yaser Humaidan	Director	1 year	Ex-Head of Investment at Gulf International Bank (Bahrain)

Source: Company reports

Table 7: Executive management

Name	Title	Time at Alba	Profile
Tim Murray	CEO	11 years	Joined Alba in 2007; serving as CEO since October 2012
Ali Al Baqali	Deputy CEO & Chief Supply Chain Officer	20 years	Joined Alba in 1998; served as CFO during 2013-17
Adnan Hashim	CFO	< 1 year	Joined Alba in 2018; ex-CFO at NCB Capital (Saudi Arabia)
Khalid Latif	Chief Marketing Officer	29 years	Joined Alba in 1989; serving as CMO since September 2015
Amin Sultan	Chief Power Officer	21 years	Joined Alba in 1997; served as COO during 2016-17
Waleed Tamimi	Chief Admin Officer	6 years	Joined Alba in 2012; serving as CAO since September 2017

Source: Company reports

Table 8: ALBA BH – financial summary (year-end, December)

	2015	2016	2017	2018f	2019f	2020f	2021f	2022f
Profit & loss (BHDmn)								
Revenue	767	670	858	916	1,176	1,378	1,443	1,442
EBITDA	133	120	158	115	238	293	338	319
Operating profit	59	49	91	51	162	218	265	247
Profit before tax	60	49	93	83	134	195	247	236
Profit after tax	60	48	92	81	133	193	245	233
EPS (BHD)	0.042	0.034	0.065	0.057	0.094	0.136	0.173	0.165
DPS (BHD)	0.006	0.021	0.026	0.023	0.038	0.055	0.069	0.066
Revenue growth (%)	-6.7%	-12.6%	28.1%	6.8%	28.4%	17.1%	4.7%	-0.1%
EBITDA growth (%)	-25.4%	-9.4%	31.9%	-27.5%	106.9%	23.2%	15.4%	-5.5%
EPS growth (%)	-37.9%	-19.2%	90.5%	-12.1%	63.3%	45.3%	26.7%	-4.7%
Balance sheet (BHDmn)								
Current assets	367	322	440	431	512	580	647	681
Cash	116	66	77	32	24	15	65	94
Non-current assets	816	852	1,246	1,838	1,803	1,775	1,749	1,723
Total assets	1,182	1,174	1,686	2,269	2,316	2,355	2,395	2,404
Current liabilities	200	178	178	260	338	368	372	375
Short-term debt	56	45	22	85	131	131	131	131
Non-current liabilities	34	8	456	911	780	650	519	388
Long-term debt	33	6	454	909	778	648	517	386
Minorities interest								
Shareholders' equity	948	988	1,052	1,097	1,197	1,337	1,505	1,640
Book value per share (BHD)	0.671	0.701	0.744	0.775	0.846	0.945	1.063	1.159
Cash flow statement (BHDmn)								
Net cash from operating activities	174	103	76	129	150	221	304	304
Net cash from investing activities	(48)	(108)	(464)	(655)	(41)	(46)	(46)	(46)
Net cash from financing activities	(77)	(45)	399	482	(118)	(184)	(208)	(229)
Net increase/(decrease) in cash	49	(50)	11	(45)	(8)	(10)	50	30
Key ratios								
Gross profit margin (%)	13.5%	12.3%	15.7%	11.3%	18.4%	20.2%	22.6%	21.5%
EBITDA margin (%)	17.3%	17.9%	18.5%	12.5%	20.2%	21.2%	23.4%	22.1%
Net profit margin (%)	7.8%	7.2%	10.8%	8.9%	11.3%	14.0%	17.0%	16.2%
Return on invested capital (%)	5.7%	4.7%	6.0%	2.5%	7.8%	10.4%	12.4%	11.6%
Return on average equity (%)	6.4%	5.0%	9.1%	7.6%	11.6%	15.2%	17.2%	14.8%
PE (x)	11.1	9.1	6.9	10.4	6.4	4.4	3.5	3.6
P/BV (x)	0.7	0.4	0.6	0.8	0.7	0.6	0.6	0.5
Dividend yield (%)	1.2%	6.7%	5.7%	3.9%	6.3%	9.1%	11.6%	11.0%
EV/EBITDA (x)	4.8	3.5	6.6	15.7	7.3	5.5	4.2	4.0
Net debt/EV (%)	-4.2%	-3.5%	38.3%	53.2%	51.2%	47.5%	40.8%	33.3%
EBITDA/finance costs (x)	41.8	48.0	73.7	71.8	6.8	9.5	13.8	17.5

Source: Company accounts, Exotix Research

DISCLOSURES

Analyst Certification

This report is independent investment research as contemplated by COBS 12.2 of the FCA Handbook and is a research recommendation under COBS 12.4 of the FCA Handbook. Where it is not technically a research recommendation because the subject of the research is not listed on any European exchange, it has nevertheless been treated as a research recommendation to ensure consistent treatment of all Exotix Capital's research. This report has been produced by Vahaj Ahmed who is the Analyst (the "Analyst").

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