

**Polish Coal : low cap.ex; low op.ex**

**BMB has 3 projects; PFS values first project at \$415m.**

Recommendation

**BUY; High Risk**

Price

**1.7c**

Risked Asset Valuation

Base case : **\$1,126m**

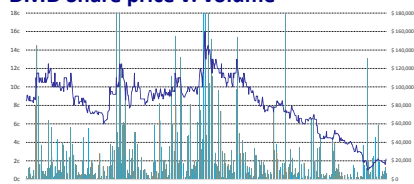
Spot prices : **\$487m**

- The PFS for BMB's Mariola thermal coal advised project capital of US\$ 79m to sell 2.7Mt/yr of RoM thermal coal at an all in cost of \$45/t. The PFS gives a project NPV of US\$ 313m, after-tax, un-g geared.
- In our view, this valuation is conservative in terms of coal quality, mine life, gearing, operating costs and projected coal prices.
- BMB has 2 more projects each of which add significant value at current coal prices, after allowing for feasibility costs and time, taxes and other requirements.
- BMB is trading at less than 2% of our base case valuation of the Mariola project. It has 2 major, supportive shareholders, so to preserve value, management is seeking to de-list from the ASX.

**Snapshot**

|                            |             |
|----------------------------|-------------|
| Market Cap                 | \$10.6m     |
| Shares on Issue            | 626.6m      |
| Cash on hand (31 Dec 2014) | \$2.05m     |
| 52 Week High               | 14.50c      |
| 52 Week Low                | 0.5c        |
| 1 month / 6 month VWAP     | 1.9c / 2.5c |

**BMB Share price v. volume**



BMB acquired Nowa Ruda in July 2013 by award of exploration rights. Nowa Ruda was an operating mine closed in 1996, producing about 1Mt/yr of coking coal.

BMB has since acquired the Mariola thermal coal project. BMB announced a PFS valuing the project at US \$313m.

BMB acquired the Sawin exploration lease in July 2014. Sawin is adjacent to Prairie Metals (PDZ.ASX)'s Lublin project, which is adjacent to the operating Bogdanka mine.

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**Mariola PFS: 2.7Mt/yr of thermal coal, all-in costs of \$45/t**

BMB announced the PFS results on 4 March 2015. The PFS gave a value of US\$ 313m, un-g geared, after-tax, at about current coal prices.

In Beer & Co's view, this valuation is conservative in terms of coal quality, mine life, operating costs and capital costs.

**BMB has 2 other valuable projects, at Nowa Ruda and Sawin**

Nowa Ruda is a coking coal operation that was mined until 1995. Recent drilling has shown thick intercepts of high quality, hard coking coal. Beer & Co's analysis shows that Nowa Ruda adds value at current coal prices, even after allowing for the time and cost of feasibility studies, with a much higher value at base case prices.

Sawin is near PDZ's Lublin project and the operating Bogdanka mine. BMB has announced a Resource of 1,200Mt of a high energy thermal coal / semi-soft coking coal. Due to its depth, capital costs will be significant, but Beer & Co's analysis shows a strongly positive NPV using today's prices.

**Management to preserve value by de-listing.**

BMB's current market cap is less than 2% of Beer & Co's base case value of the Mariola project, using current spot prices. The company has 2 major, supportive, shareholders, and BMB management will seek to preserve value by de-listing from the ASX and operating as a private company for a time, and seek a re-listing at a later time, when value is more clearly seen.

**Buy recommendation, despite de-listing**

Investors will have very limited liquidity for about 18 months, but in our view there is significant value for shareholders who can be patient.

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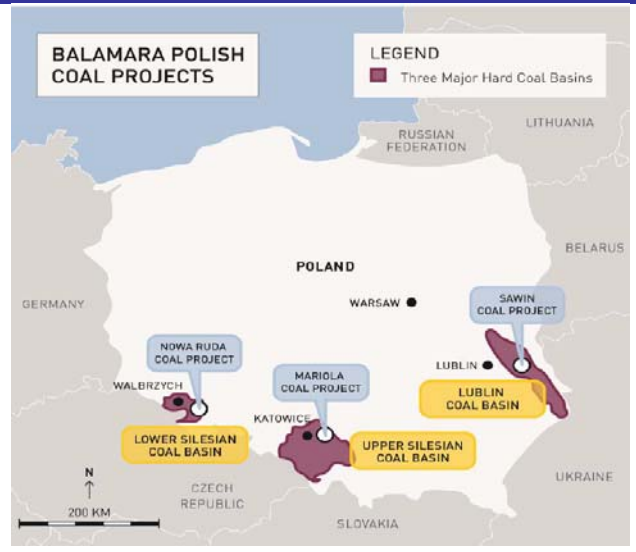
# BMB : BUY, despite de-listing

## Description

While BMB has interests in 3 base and precious metals exploration projects, its focus is on 3 coal projects in Poland, as shown in Figure 1, one in each of the three major coal basins in Poland.

**BMB has 3 coal projects in Poland, one in each of the three major Polish coal producing basins.**

**Figure 1 : BMB's coal projects, in Poland**

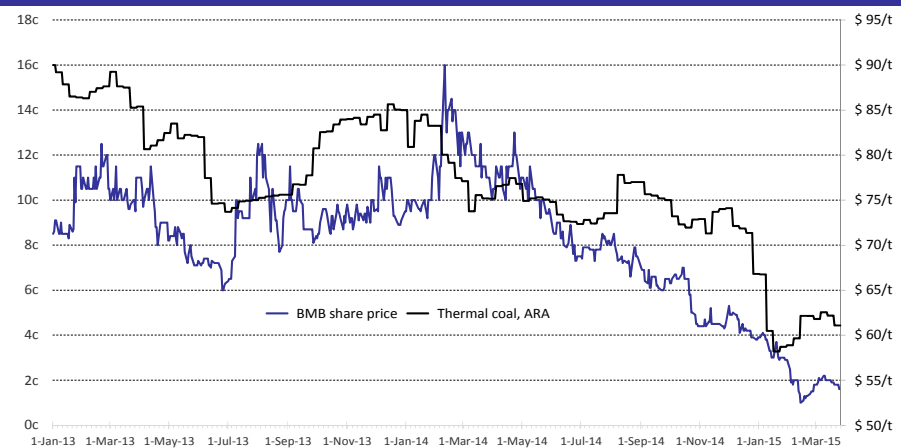


Source : BMB Presentation, March 2015

BMB announced the acquisition of the Nowa Ruda leases in July 2013. BMB has since acquired Sawin and Mariola, the former through a lease application and the latter purchased for BMB scrip.

**Figure 2 : BMB share price v. coal price**

**The BMB share price has been falling with European coal prices**



Sources : IRESS, Reuters & McCloskey, Beer & Co

In addition to the falling coal price and poor investor sentiment on coal, the weakening BMB share price can also be attributed to

- (i) The failure to receive \$15m in cash, which would have taken BMB though to completed feasibility studies, meaning that equity needs to be raised; and
- (ii) Wariness among investors of Poland, as well as coal

Figure 2 shows that the BMB share price jumped when the Nowa Ruda acquisition was announced on 24 July 2013. Since then, the BMB share price has steadily fallen, apart from the spike in the share price in February 2014 when BMB announced the sale of its Balkan Metals assets for \$15m in cash. Beer & Co attributes this share price fall to three factors :

- The failure to receive \$15m in cash that had been expected from the sale of BMB's Balkans Metals project, and hence the need to raise further equity;
- The continued fall in the coal price;
- A lack of understanding of the value of BMB's projects, which is partly because it is coal, which is out of favour, and partly because it is in Poland, which is poorly understood.

This is despite the increasing value in BMB's assets as they are progressively de-risked. This led to BMB's announcement, on 13 February 2015, that it will seek to de-list from the ASX.

## Mariola Coal Project

Mariola is a relatively shallow thermal coal project that is intended to be mined as an under-ground operation.

On 5 December 2014, BMB announced a JORC 2012 compliant resource estimate, as shown in Figure 3.

**Figure 3 : Resource estimate for Mariola**

BMB's Mariola thermal coal project has 120Mt in JORC Resources.

|              |                 | kCal/kg      | moisture   | dry ash    | Sulphur     | Volatiles  |
|--------------|-----------------|--------------|------------|------------|-------------|------------|
| Indicated    | 85.6Mt          | 6,118        | 11.5%      | 11.5%      | 1.59%       | 31.7%      |
| Inferred     | 35 Mt           | 5,975        | 12%        | 12%        | 1.5%        | 31%        |
| <b>TOTAL</b> | <b>120.6 Mt</b> | <b>6,076</b> | <b>12%</b> | <b>12%</b> | <b>1.6%</b> | <b>31%</b> |

Source : BMB ASX announcement, 5 December 2014

The Resource estimate is based on 11 of 20 identified seams

Drilling has identified 20 seams in the resource model, but the resource estimate is based on 11 of these 20 seams, excluding those less than 80m below the surface.

BMB announced the results of a Pre-Feasibility Study (PFS) on 4 March, 2015. It is based on a Reserve of 39.5Mt, from 5 seams, as shown in Figure 4.

**Figure 4 : Mariola Reserves**

Mariola has a PFS based on a Reserve estimate of 39.5Mt in only 5 of these seams

| Seam         | Reserve        | air dried basis |               |               |              |               |
|--------------|----------------|-----------------|---------------|---------------|--------------|---------------|
|              |                | kCal/kg         | moisture      | dry ash       | Sulphur      | Volatiles     |
| S 208        | 7.3Mt          | 5,532           | 9.98%         | 22.78%        | 1.90%        | 32.78%        |
| S 209        | 4.5Mt          | 5,229           | 10.81%        | 27.54%        | 2.17%        | 31.67%        |
| S 210        | 5.0Mt          | 4,588           | 11.65%        | 32.93%        | 1.20%        | 25.41%        |
| S 214        | 15.5Mt         | 5,859           | 12.66%        | 17.79%        | 1.21%        | 28.77%        |
| S 301        | 7.2 Mt         | 5,653           | 13.21%        | 20.16%        | 1.62%        | 28.59%        |
| <b>TOTAL</b> | <b>39.5 Mt</b> | <b>5,530</b>    | <b>11.91%</b> | <b>22.16%</b> | <b>1.52%</b> | <b>29.39%</b> |

The PFS is based on sale on Run of Mine coal

Source : BMB ASX announcement, 4 March 2015, Beer & Co

The PFS is based on the sale of RoM product. Beer & Co expects it would sell at a discount of about \$7.50/t to the ARA price shown in Figure 2. The discount comprises a location premium, as Mariola has 14 coal fired power stations within 125km, more than offset by penalties for ash, sulphur and lower energy levels.

Beer & Co expects the coal will sell at a discount to the ARA benchmark due to its higher ash and sulphur and lower energy,

but attract a location premium reflecting the cost of alternative supply, given that Poland imports thermal coal.

The PFS estimated a total capital cost of US\$ 79m, of which \$6.0m is spent prior to construction.

The PFS is based on a mine capacity of 3.0Mt/yr to produce an average of 2.7Mt/yr of RoM coal. It estimated cash costs of US\$ 45/t.

The PFS generated an NPV for the Mariola project of US\$ 312.7m.

In Beer & Co's view, this is very conservative :

- There is a very large contingency in the capital cost estimate, as the capital costs over the period from year 0 to year 3 total only \$56.9m;
- The cash costs appear high when compared with the estimate by Prairie Metals (PDZ.ASX) which advised cash costs of US\$ 37/t of product coal, assuming a 78% washery recovery, from its Lublin coal, when that coal starts at over 600m below surface, compared with 100m for Mariola; and
- The PFS is based on after-tax but un-g geared cashflows.

Beer & Co has adjusted our cash costs to reflect the PFS and used \$42/t in our modelling.

Figure 5 shows our projected assumptions and resulting cashflows.

**Figure 5 : Beer & Co base case projections**

| USD m                 | 2015-16 | 2016-17 | 2017-18  | 2018-19  | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  | 2025-26  | 2026-27  |
|-----------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Thermal Coal, ARA     | \$ 65/t | \$ 74/t | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  |
| Coal sold             | 0 kt    | 350 kt  | 2,344 kt | 2,970 kt | 2,716 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt |
| Revenue per tonne     | \$ 57/t | \$ 66/t | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  |
| Revenue               | 0       | 24      | 158      | 200      | 183      | 182      | 182      | 182      | 182      | 182      | 182      | 182      |
| Total Cash Costs      | 0       | (13)    | (58)     | (68)     | (64)     | (65)     | (65)     | (66)     | (67)     | (67)     | (68)     | (68)     |
| Royalties             | 0       | (1)     | (4)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      |
| Dep'n & Amort'sn      | 0       | (1)     | (8)      | (10)     | (9)      | (8)      | (8)      | (7)      | (2)      | (2)      | (2)      | (2)      |
| E B I T               | 0       | 8       | 88       | 118      | 106      | 105      | 104      | 105      | 109      | 109      | 108      | 108      |
| Interest Expense      | (0)     | (4)     | (4)      | (4)      | (3)      | (2)      | (1)      | (0)      | 0        | 0        | 0        | 0        |
| Tax Expense           | 0       | (1)     | (16)     | (22)     | (20)     | (19)     | (20)     | (20)     | (21)     | (21)     | (21)     | (21)     |
| N P A T               | (0)     | 4       | 68       | 93       | 83       | 83       | 84       | 84       | 88       | 88       | 87       | 87       |
| Feasibility           | (6)     | 0       | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Project Cap.Ex Cap.it | (55)    | (18)    | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Sus. Cap. Ex          | 0       | (0)     | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      |
| Net Cashflow          | (61)    | (13)    | 75       | 100      | 90       | 89       | 90       | 90       | 88       | 88       | 87       | 87       |

Source : Beer & Co estimates

The PFS estimated an NPV of US\$313m

In our view, the PFS is conservative in its estimates of cap.ex, op.ex and revenue.

Our base case valuation is \$A 784m.

Using spot prices, our valuation is \$A 421m.

Figure 6a shows that, based on the Reserves, our valuation is very similar to that of the PFS, using spot prices. Figure 6b shows that Beer & Co's base case valuation is AUD 784m, while other potential values all show valuations significantly greater than both the investment required and BMB's market cap.

**Figure 6a : Beer & Co valuation of Mariola, in USD terms**

| USD m              | Long Run = US\$ 75/t |            | Spot price = US\$ 61/t |            |
|--------------------|----------------------|------------|------------------------|------------|
| price v. benchmark | (US\$7.5/t)          | US\$ 0.0/t | (US\$7.5/t)            | US\$ 0.0/t |
| Inventory = 41 Mt  | 515                  | 608        | 331                    | 478        |
| Inventory = 60Mt   | <b>591</b>           | 684        | 385                    | 425        |

Source : Beer & Co estimates

**Figure 6b : Beer & Co valuation of Mariola, in AUD terms**

| AUD m              | Long Run = US\$ 75/t |            | Spot price = US\$ 61/t |            |
|--------------------|----------------------|------------|------------------------|------------|
| price v. benchmark | (US\$7.5/t)          | US\$ 0.0/t | (US\$7.5/t)            | US\$ 0.0/t |
| Inventory = 41 Mt  | 682                  | 806        | 421                    | 606        |
| Inventory = 60Mt   | <b>784</b>           | 907        | 488                    | 539        |

Source : Beer & Co estimates

## Nowa Ruda Coal Project

On 24 July 2013, BMB announced that it had acquired the Nowa Ruda project as an exploration tenement. It had been mined for some time, being closed in 1995 when High Quality Hard Coking Coal prices were about US\$ 50/t.

**BMB has recently released some drilling results on Nowa Ruda.**

**These results show thick, mineable seams of High Quality, Hard Coking Coal, which washes to a premium low ash product**

**Beer & Co expects the location premium to be greater than the discount to the FOB Queensland benchmark price.**

**Nowa Ruda was an operating mine until the mid 1990s; it was shut when coal price was \$50/t.**

**Beer & Co have estimated a capital cost of US\$ 155m to refurbish the mine, plus \$10m in feasibility costs. To produce 1.4Mt/yr of RoM coal for 980kt/yr of product, at an all in cost of US\$ 78/t.**

### Coal

While there was significant geological information available on Nowa Ruda, including 1.5Mt in developed coal plus a further 91Mt in defined mineralisation, across a range of coking and thermal coals, it was not JORC compliant.

BMB announced an initial resource estimate on 28 April and 2 May 2014, of 8.76Mt in Indicated Resources, 14.3Mt in Inferred resources plus an exploration target of 112 to 161Mt.

BMB is currently drilling and on 10 March 2015, BMB announced the results of its first three holes in its current drill programme, as indicated in Figure 15. The results shows that Nowa Ruda coal is very near benchmark for High Quality, Hard Coking Coals (HQ HCC) in all important parameters :

- Free Swell Index (CSN) of 7.0 – 7.5, compared with benchmark of 8.0;
- Roga Index (CSR) of 68 – 77, compared with benchmark about 70 and higher; and
- Ash content of 1.79% to 6.85% after washing, compared with benchmark 8.0%.

BMB also advised that the Sulphur level is around 1%, which is the benchmark level.

We expect Nowa Ruda coal will sell at a small discount, say \$5/t, to the FOB benchmark, but gain a premium of \$15/t for transport for a net premium of \$10/t.

### Development

Nowa Ruda has considerable infrastructure in place, including extensive underground development, including :

- Production and ventilation shafts
  - the main shafts are in place but require regeneration work as they were capped and stripped of equipment;
- Horizontal underground development work, including cross-cuts and access drives between the two main deposits; and
- Surface infrastructure such as roads, rail, power and water are all available at the mine gate.

Beer & Co expects that Nowa Ruda will be mined using 4 continuous mining units, and that these will be leased and so are not included in the capital cost estimate, of US\$ 155m, of which \$10m is feasibility assessment.

Beer & Co expects Nowa Ruda to mine 1.4Mt/yr of RoM coal with a 70% washery yield to produce 980kt of product coal.

Beer & Co estimate C1 cash costs of US\$ 50.6/t of RoM, a premium of 29% over the comparable costs for Mariola. Higher costs arise as Nowa Ruda is deeper and uses CM units while Mariola employs a Long-Wall, which has much higher productivity.

Estimated C1 costs for product coal is US\$ 69/t and all-In cash costs are US\$ 74/t.

Figure 7 shows Beer & Co's projected financial outcomes for Nowa Ruda.

**Figure 7 : Beer & Co's projected financial outcomes for Nowa Ruda**

| USD m                | 2015-16  | 2016-17  | 2017-18  | 2018-19  | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Coal sold            | 0 kt     | 0 kt     | 21 kt    | 629 kt   | 968 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   |
| HQ HCC benchmark     | \$ 135/t | \$ 149/t | \$ 150/t | \$ 150/t | \$ 150/t | \$ 150/t | \$ 150/t | \$ 150/t | \$ 150/t | \$ 150/t |
| Revenue per tonne    | \$ 130/t | \$ 145/t | \$ 159/t | \$ 160/t | \$ 160/t | \$ 160/t | \$ 160/t | \$ 160/t | \$ 160/t | \$ 160/t |
| Revenue              | 0        | 0        | 3        | 94       | 155      | 157      | 157      | 157      | 157      | 157      |
| Total Cash Costs     | 0        | 0        | (2)      | (45)     | (65)     | (65)     | (65)     | (66)     | (66)     | (66)     |
| Royalties            | 0        | 0        | (0)      | (2)      | (4)      | (4)      | (4)      | (4)      | (4)      | (4)      |
| Dep'n & Amort'sn     | 0        | 0        | (1)      | (17)     | (26)     | (27)     | (27)     | (27)     | (27)     | (21)     |
| E B I T              | 0        | 0        | (0)      | 30       | 60       | 61       | 61       | 60       | 60       | 66       |
| Interest Expense     | 0        | 0        | (5)      | (9)      | (8)      | (6)      | (5)      | (3)      | (1)      | 0        |
| Tax Expense          | 0        | 0        | 1        | (4)      | (10)     | (10)     | (11)     | (11)     | (11)     | (12)     |
| N P A T              | 0        | 0        | (4)      | 17       | 42       | 44       | 45       | 46       | 48       | 53       |
| Feasibility          | (6)      | (1)      | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Project Cap.Ex Cap.£ | 0        | (73)     | (73)     | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Sus. Cap. Ex         | 0        | 0        | (0)      | (1)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      |
| Net Cashflow         | (6)      | (74)     | (76)     | 33       | 66       | 69       | 70       | 71       | 72       | 72       |

Source : Beer & Co estimates

Figure 8 shows that Beer & Co's estimated base case value for Nowa Ruda is \$A 413m, which is after tax and feasibility studies. It also shows that even at spot prices, Nowa Ruda is a valuable project.

**Beer & Co's base case valuation is \$A 364m, which is based on mining inventory of 37Mt**

**Figure 8a : Beer & Co valuation of Nowa Ruda, in USD terms**

| USD m             | Long Run = US\$ 150/t |          | Spot price = US\$ 110/t |          |           |
|-------------------|-----------------------|----------|-------------------------|----------|-----------|
|                   | price v. benchmark    | US\$ 0/t | US\$ 10/t               | US\$ 0/t | US\$ 10/t |
| Inventory = 23 Mt |                       | 224      | 266                     | 58       | 100       |
| Inventory = 37Mt  |                       | 263      | <b>309</b>              | 122      | 75        |

Source : Beer & Co estimates

**Using spot prices, our valuation is \$A 126m.**

**Figure 8b : Beer & Co valuation of Nowa Ruda, in USD terms**

| AUD m             | Long Run = US\$ 150/t |          | Spot price = US\$ 110/t |          |           |
|-------------------|-----------------------|----------|-------------------------|----------|-----------|
|                   | price v. benchmark    | US\$ 0/t | US\$ 10/t               | US\$ 0/t | US\$ 10/t |
| Inventory = 23 Mt |                       | 299      | 354                     | 77       | 133       |
| Inventory = 37Mt  |                       | 350      | <b>413</b>              | 163      | 100       |

Source : Beer & Co estimates

## Sawin Coal Project

**BMB's Sawin project is in the Lublin basin, adjacent to PDZ's Lublin project and near the Bogdanka coal operations.**

BMB was awarded the concession rights for Sawin in July 2014. It is adjacent to ASX listed Prairie Mining's (PDZ) Lublin coal project and near the Bogdanka mine as shown in Figure 9. Bogdanka produces about 8Mt/yr, with projections to over 9Mt/yr, of thermal coal, with an average sulphur content of 1.1%, energy of 6,200kCal/kg and ash 8.4%.

PDZ produced a scoping study in April 2014 on its Lublin project, based largely on Bogdanka's operations.

Beer & Co assumes it is mined using 2 sets of 2 CM units and one Long Wall to produce 7.0Mt.yr of RoM coal. We assume 70% washery yield to produce 5.25Mt/yr of semi-soft coal, which sells at 71% of HQ HCC benchmark, plus a premium of \$5/t for delivery to the customer.

**Figure 8 : Sawin JORC Resource, 1,200Mt**

|          |          | kCal/kg | moisture | dry ash | Sulphur | Volatiles | Swell |
|----------|----------|---------|----------|---------|---------|-----------|-------|
| Inferred | 1,200 Mt | 6,900   | 3.5%     | 10%     | 1.7%    | 33%       | 2     |

Source : BMB ASX announcement, 23 March 2015

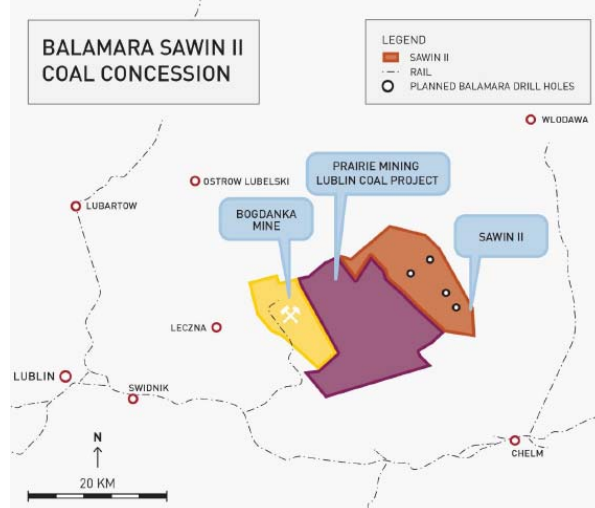
Beer & Co's estimates for Sawin are influenced by the PFS for Mariola and PDZ's April 2014 scoping study on Lublin.

Beer & Co estimate capital costs US\$ 475m, plus \$20m in feasibility.

This is lower than the PDZ estimate of \$684m as equipment is leased rather than bought and Sawin is shallower.

We assume cash costs 22% higher than PDZ

**Figure 9 : Sawin Exploration Project, Lublin Basin**



Source : BMB ASX announcement, 23 March 2015

PDZ estimated project capital cost of US\$684m. We assume \$475m for project capital, with the lower estimate due to

- Assumption that mining equipment is leased rather than purchased; and
- Sawin is 200m shallower than Lublin, so lower cost to develop to coal.

Beer & Co estimates all-in costs of \$56/t of product, which is \$45/t C1 costs after deducting the costs for leasing mining equipment.

This is 22% higher than the cost estimated by PDZ in their scoping study.

Figure 10 shows our financial projections for Sawin.

**Figure 10 : Beer & Co's projected financial outcomes for Sawin**

| USD m                | 2017-18  | 2018-19  | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  | 2025-26  | 2026-27  | 2027-28  | 2028-29  |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Coal sold            | 0 kt     | 0 kt     | 139 kt   | 1,094 kt | 2,847 kt | 3,783 kt | 5,231 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt |
| 71% of HQ HCC        | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t | \$ 107/t |
| Revenue per tonne    | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t | \$ 112/t |
| Revenue              | 0        | 0        | 16       | 122      | 317      | 422      | 583      | 585      | 585      | 585      | 585      | 585      |
| Total Cash Costs     | 0        | 0        | (15)     | (67)     | (138)    | (173)    | (219)    | (220)    | (222)    | (223)    | (224)    | (226)    |
| Royalties            | 0        | 0        | (0)      | (3)      | (8)      | (11)     | (15)     | (15)     | (15)     | (15)     | (15)     | (15)     |
| Dep'cn & Amort'sn    | 0        | 0        | (3)      | (17)     | (40)     | (53)     | (68)     | (63)     | (50)     | (11)     | (11)     | (11)     |
| E B I T              | 0        | 0        | (3)      | 34       | 131      | 185      | 282      | 287      | 299      | 337      | 336      | 335      |
| Interest Expense     | 0        | 0        | (3)      | (17)     | (28)     | (30)     | (27)     | (23)     | (18)     | (13)     | (8)      | (2)      |
| Tax Expense          | 0        | 0        | 1        | (3)      | (20)     | (30)     | (48)     | (50)     | (53)     | (62)     | (62)     | (63)     |
| N P A T              | 0        | 0        | (5)      | 14       | 84       | 126      | 206      | 214      | 227      | 262      | 266      | 270      |
| Feasibility          | (20)     | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Project Cap.Ex Cap.E | 0        | (158)    | (158)    | (158)    | (0)      | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Sus. Cap. Ex         | 0        | 0        | (0)      | (2)      | (6)      | (8)      | (11)     | (11)     | (11)     | (11)     | (11)     | (11)     |
| Net Cashflow         | (20)     | (158)    | (161)    | (129)    | 118      | 171      | 264      | 267      | 267      | 262      | 266      | 270      |

Source : Beer & Co estimates

As shown in Figure 11, the base case valuation for Sawin estimated by Beer & Co is US\$ 841m, or AUD 1,122m; using spot prices our valuation is \$A 463m.



Beer & Co's base case valuation is \$A 1,122m

**Figure 11a : Beer & Co valuation of Mariola, in USD terms**

| USD m              | Long Run = US\$ 107/t |            | Spot price = US\$ 78/t |          |          |
|--------------------|-----------------------|------------|------------------------|----------|----------|
|                    | price v. benchmark    | US\$ 0/t   | US\$ 5/t               | US\$ 0/t | US\$ 5/t |
| Inventory = 165 Mt | 754                   | <b>841</b> | 261                    | 348      |          |

Source : Beer & Co estimates

Using spot prices, our valuation is \$A 463m

**Figure 11b : Beer & Co valuation of Mariola, in USD terms**

| AUD m              | Long Run = US\$ 107/t |              | Spot price = US\$ 78/t |          |          |
|--------------------|-----------------------|--------------|------------------------|----------|----------|
|                    | price v. benchmark    | US\$ 0/t     | US\$ 5/t               | US\$ 0/t | US\$ 5/t |
| Inventory = 165 Mt | 1,006                 | <b>1,122</b> | 348                    | 463      |          |

Source : Beer & Co estimates

## Asset Valuation

Figure 12 shows Beer & Co's valuation of BMB's assets.

**Figure 12 : Beer & Co's valuation of BMB's assets**

| AUD m        | Un-Risked    |             | risk factor | Risked       |             |
|--------------|--------------|-------------|-------------|--------------|-------------|
|              | base case    | spot prices |             | base case    | spot prices |
| Mariola      | 784          | 421         | 65 %        | 509          | 273         |
| Nowa Ruda    | 413          | 133         | 50 %        | 206          | 66          |
| Sawin        | 1,122        | 463         | 40 %        | 449          | 185         |
| Corporate    | (38)         | (38)        | 100 %       | (38)         | (38)        |
| <b>TOTAL</b> | <b>2,279</b> | <b>978</b>  |             | <b>1,126</b> | <b>487</b>  |

Source : Beer & Co estimates

Beer & Co's risked, base case valuation for BMB's assets is \$A 1,101m

Figure 12 shows :

Beer & Co's risked valuation of BMB's assets, using spot prices, is \$A 471m

- Beer & Co's base case valuation of BMB's assets is nearly \$2.3B, but even using current coal prices, our valuation is nearly \$1.0B;
- The valuation of each of the assets needs to be risked for the uncertainty in delivering as expected (note that the time value, and feasibility costs, are already included in the base case valuation)
  - the resulting valuation is still \$1.1B using base case assumptions, or \$487m using current coal prices and exchange rates;
- Beer & Co has given zero value for BMB's Australian exploration assets and for the Balkans Metals assets, which will return to BMB \$15m from a 2% net smelter royalty
  - We have estimated an indicative NPV of \$4m for this asset

Beer & Co have not given any value to BMB's metals assets

## Conclusions

Investing in BMB has the risk of investing in an illiquid stock as management seeks to de-list from the ASX.

Due to the uncertainty on project funding and the amount of equity that can be expected to be issued, especially due to BMB's pending de-listing, Beer & Co is unable to give a per share valuation for BMB.

However, BMB's current market cap is less than 3% of the value of its assets, so Beer & Co rates BMB has a BUY, high risk.

However, Figure 36 shows that BMB's current market capitalisation, of \$10.6m, is only 0.9% of Beer & Co's risked base case valuation, or 2.2% of our risked valuation using spot prices.

Investing in BMB will require patient capital as, while the stock is de-listed, trading will be illiquid. Despite the fact that BMB will need to raise equity to develop each project, and the fact that it will be de-listed, Beer & Co re-initiates research on BMB with a BUY, High Risk, recommendation. .



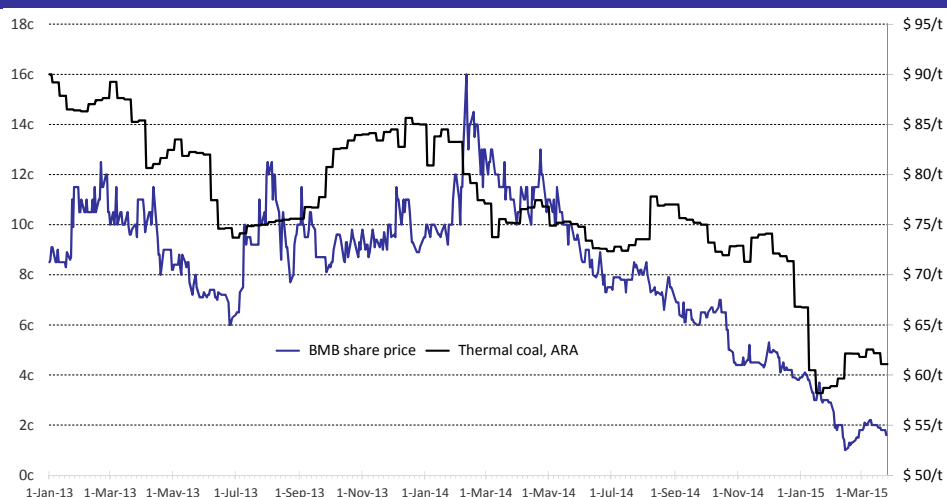
## Balamara Resources : Overview

### Introduction

BMB announced the acquisition of the Nowa Ruda leases in July 2013. BMB has since acquired Sawin and Mariola, the former through a lease application and the latter purchased for BMB scrip.

Figure 13 shows that the BMB share price jumped when the Nowa Ruda acquisition was announced on 24 July 2013. Apart from the spike in the share price in February 2014, when BMB announced the sale of its Balkan Metals assets for \$15m in cash, the BMB share price has slid with the coal price.

**Figure 13 : BMB share price v. coal price**



Sources : IRESS, Reuters & McCloskey, Beer & Co

Figure 13 shows a short lived dip in the share price when BMB announced its intention to de-list from the ASX and remain un-listed of a period of time.

The BMB share price spiked when BMB announced that it had reached an agreement to sell its Balkan assets for \$15m in cash as it meant that BMB would be funded through to Definitive Feasibility on at least one coal project and so would not need to raise equity until it had a well defined and profitable project.

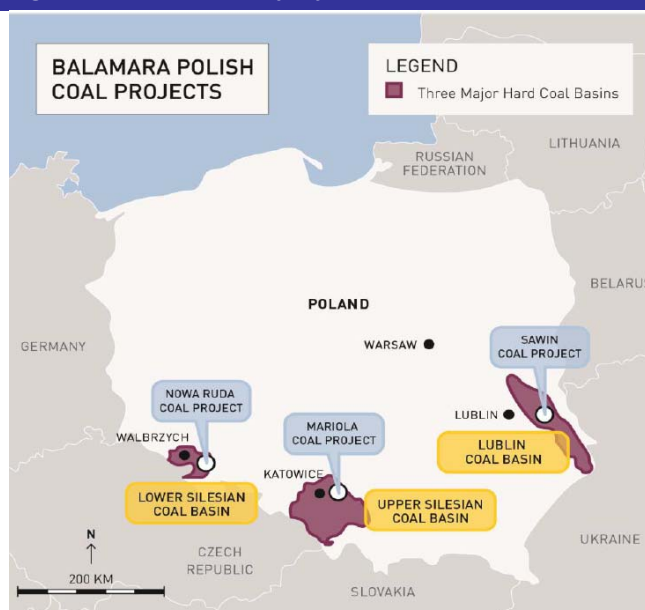
However, the purchaser failed to settle and on 27 November, 2014, BMB announced that it had sold the asset for \$50k in cash plus a Net Smelter Royalty of 2%, up to a total of \$15m, on any production from the assets. This means that BMB needs to raise equity.

That, together with the falling coal price, has led to the weakness in the BMB share price.

## Description

While BMB has interests in 3 base and precious metals exploration projects, its focus is on 3 coal projects in Poland, as shown in Figure 14.

Figure 14 : BMB's coal projects, in Poland



Source : BMB Presentation, March 2015

Figure 14 shows that BMB has one project in each of the 3 major coal basins in Poland.

## Mariola Coal Project

### Description

As shown in Figure 14, Mariola is in the Upper Silesian Basin. It is a thermal coal project. BMB announced the acquisition of an initial 15% interest in Mariola on 24 July 2014, for :

- \$0.5m in cash, of which \$0.4m was to be spent on project development; plus
- 11.8m BMB shares, nominally valued at \$1.1m.

On 22 December, 2014, BMB announced that it had moved to 100% ownership of Mariola by issuing a further 200m BMB shares to the vendors.

The shares issued to the vendors, Carbon Investment, has left the vendors with 211.8m or 33.7% of the BMB shares on issue.

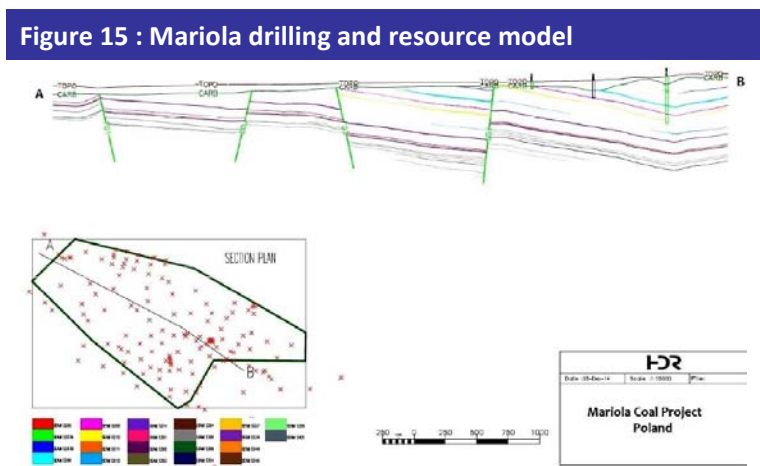
Mariola is a relatively shallow thermal coal project that is intended to be mined as an under-ground operation.

BMB announced the results of a Pre-Feasibility Study (PFS) on 4 March, 2015.

## Coal

At the time of acquisition, Mariola had a Polish resource estimate of 200Mt of thermal coal.

BMB announced a JORC 2012 compliant Resource estimate on 5 December 2014. As indicated in Figure 15, the resource model comprises 20 seams to a maximum depth of 550m below surface.



Source : BMB ASX announcement, 5 December 2014

Figure 16 below shows the Resource estimate reported by BMB on 4 December 2014. This estimate was based on 11 of the 20 seams in the resource model. The resource estimate excludes coal less than 80m below surface due to concerns with oxidation and approvals that would be required for open-cut mining.

**Figure 16 : Resource estimate for Mariola**

|              |                 | kCal/kg      | moisture   | dry ash    | Sulphur     | Volatiles  |
|--------------|-----------------|--------------|------------|------------|-------------|------------|
| Indicated    | 85.6Mt          | 6,118        | 11.5%      | 11.5%      | 1.59%       | 31.7%      |
| Inferred     | 35 Mt           | 5,975        | 12%        | 12%        | 1.5%        | 31%        |
| <b>TOTAL</b> | <b>120.6 Mt</b> | <b>6,076</b> | <b>12%</b> | <b>12%</b> | <b>1.6%</b> | <b>31%</b> |

Source : BMB ASX announcement, 5 December 2014

## Coal value / pricing

The data in Figure 16 shows that Mariola coal, on a Run of Mine (RoM) or in-situ basis, is

- benchmark, or slightly better, standard in terms of energy, ash and volatiles; but
- above benchmark level, of 1.0%, for sulphur levels.

Figure 13 shows that the current European coal price, is about US\$ 61/t.

As shown in Figure 17, Poland is a net importer of coal, especially thermal coal.

For this reason, Beer & Co expects that market price in Poland is ARA benchmark, plus a premium of about \$6/t for the cost of shifting coal from Rotterdam to Poland.

Mariola should trade at a discount to benchmark due to its high S levels. At a rate of about \$1 per 0.1% S, this gives a discount of about \$6/t.

**Figure 17 : Coal production and net exports, Poland**

|                    | 2009      | 2010      | 2011       | 2012      | 2013      |
|--------------------|-----------|-----------|------------|-----------|-----------|
| <b>Production</b>  |           |           |            |           |           |
| Coking             | 8,541 kt  | 11,658 kt | 11,435 kt  | 11,738 kt | 12,200 kt |
| Thermal            | 69,524 kt | 65,070 kt | 63,943 kt  | 66,503 kt | 64,300 kt |
| <b>Net Exports</b> |           |           |            |           |           |
| Coking             | 974 kt    | 5,370 kt  | 2,220 kt   | 3,663 kt  | 7,673 kt  |
| Thermal            | (2,975kt) | (8,921kt) | (10,908kt) | (6,237kt) | (6,484kt) |

Source : World Coal Association

Figure 18 shows the locations of the coal fired power stations in Poland. It shows that most of Poland’s capacity is within 140km of the Mariola coal deposit, in the Upper Silesian Basin.

Figure 19 shows that the 600MW Tauron power station is only about 2km from the gate of the proposed Mariola mine.

Tauron consumes about 1.5Mt.yr of coal.

Figure 19 also shows that Tauron is served by an existing rail line that has a capacity of 2.5Mt/yr.

This enhances the location premium for Mariola coal.

**PFS : Reserves**

The PFS assumes a mining inventory of 41Mt, based on a reserve estimate of 39.5Mt, as shown in Figure 20.

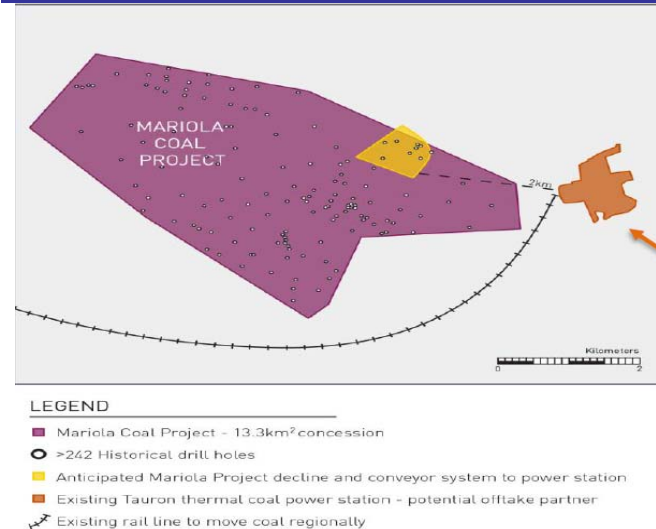
Compared with the Resource estimate, the reserves show lower energy and higher ash.

**Figure 18 : Coal fired power stations in Poland**



Source : BMB presentation, October 2014

**Figure 19 : 600MW Tauron power station, 2km away**



Source : BMB presentation, October 2014

**Figure 20 : Mariola Reserves**

| Seam         | Reserve        | kCal/kg      | moisture      | dry ash       | Sulphur      | Volatiles     |
|--------------|----------------|--------------|---------------|---------------|--------------|---------------|
| S 208        | 7.3Mt          | 5,532        | 9.98%         | 22.78%        | 1.90%        | 32.78%        |
| S 209        | 4.5Mt          | 5,229        | 10.81%        | 27.54%        | 2.17%        | 31.67%        |
| S 210        | 5.0Mt          | 4,588        | 11.65%        | 32.93%        | 1.20%        | 25.41%        |
| S 214        | 15.5Mt         | 5,859        | 12.66%        | 17.79%        | 1.21%        | 28.77%        |
| S 301        | 7.2 Mt         | 5,653        | 13.21%        | 20.16%        | 1.62%        | 28.59%        |
| <b>TOTAL</b> | <b>39.5 Mt</b> | <b>5,530</b> | <b>11.91%</b> | <b>22.16%</b> | <b>1.52%</b> | <b>29.39%</b> |

Source : BMB ASX announcement, 4 March 2015, Beer & Co

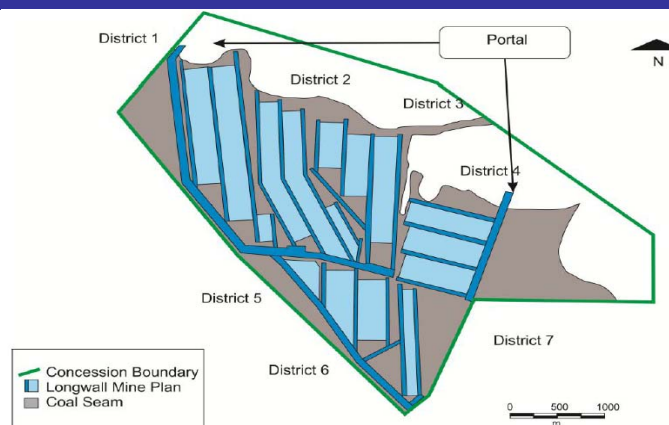
Despite this, the PFS is based on the sale of RoM product; this surprised Beer & Co, especially given that the power station adjacent to the mine has idle wash capacity.

Based on the specification for the coal in the Reserves estimate, Beer & Co would expect it sell at a discount of about \$7.50/t, comprising \$6/t location premium offset by discounts of :

- \$5 for S, being \$1 for each 0.1% above the 1.0% benchmark level;
- \$5 for lower CV, being \$1 for each 100kCal/kg below the 6,000kCal/kg benchmark;
- \$3.50 for higher ash levels, being 50c for each 1% above the 15% benchmark.

## PFS - Operations

Figure 21 shows the mine plan developed, as part of the PFS, for the largest seam, S 214. It shows that mine design uses 2 continuous miners to develop road-ways and a long-wall for coal extraction. However the financial plan is based on leasing this equipment.

**Figure 21 : Mine plan, Mariola, seam S 214**

Source : BMB presentation, March 2015

Figure 22 shows the detail of the capital cost estimate prepared as part of the PFS. It shows a total capital cost of US\$ 79m, of which \$6.0m is spent prior to construction.

The amount includes a significant contingency.

Figure 23 shows the pattern of capital expenditure, from Table 11 of BMB's 2 March 2015 announcement of the PFS results, which total US\$ 56.9m during the construction phase with a further US\$ 23.1m in sustaining capital.

The PFS is based on a mine capacity of 3.0Mt/yr to produce an average of 2.7Mt/yr of RoM coal; the difference allows for periodic Long-Wall shifts.

The PFS advised cash costs of US\$ 45/t. Figure 24 shows the detail of the cash cost estimate advised by the PFS, and has added the sustaining capital of \$23.1m to be spent over the life of the mine, divided by the mining inventory of 41Mt.

**Figure 22 : Estimated capital costs**

|                                  | USD m       |
|----------------------------------|-------------|
| Infill drilling & studies        | 5.0         |
| Permitting                       | 1.0         |
| Sub-Total Feasibility Costs      | 6.0         |
| Site development                 | 2.0         |
| Surface Infrastructure           | 11.5        |
| Mine development                 | 44.5        |
| Auxiliary equipment              | 4.0         |
| Raw coal handling                | 2.5         |
| Contingency                      | 8.5         |
| <b>Total Project Development</b> | <b>73.0</b> |

Source : BMB, 4 March 2015, Beer & Co

**Figure 23 : Estimated capital expenditure profile for Mariola**

| Initial capital | Year 1     | Year 2     | Year 3     | Subsequent  | TOTAL     |
|-----------------|------------|------------|------------|-------------|-----------|
| US\$ 44.7 m     | US\$ 6.7 m | US\$ 1.6 m | US\$ 3.9 m | US\$ 23.1 m | US\$ 80 m |

Source : BMB ASX announcement, 4 March 2015, Beer & Co

## PFS Valuation

Based on a coal price of \$61.5/t rising to \$69.7/t in 2019, and a Long-Run price of \$68.4/t for Mariola sales, the PFS advised a value for the Mariola project of US\$ 312.7m.

## Beer & Co Analysis : PFS is Conservative

### Development

Figure 10 shows that about \$28m is spent annually on development, which we assume is between seam levels, as Figure 7 shows the Continuous

Miner units develop in coal and as a result produce product coal. We assume a rate of 350kt – 400kt/yr for each CM unit, which is a conservative rate compared with many other mines.

Given that the mine plan is based on only 5 seams, and development to the first seam is part of the capital cost, this seems to be a very high level.

### Mine Life

The PFS is based on mining 41Mt of a total Resource of over 120Mt.

Beer & Co expects that further drilling during the mining operations will increase the mine life, but as the product is not washed at Mariola, the mine does not have rejects to fill in the voids and so needs to leave significant pillars to avoid subsidence.

**Figure 24 : PFS Cash costs**

|                    | USD /t of RoM coal |
|--------------------|--------------------|
| Mine Development   | \$ 10.26/t         |
| Labour             | \$ 7.31/t          |
| Consumables        | \$ 10.20/t         |
| Power, utilities   | \$ 3.35/t          |
| Coal handling      | \$ 1.55/t          |
| Coal transport     | \$ 3.50/t          |
| Overheads          | \$ 1.50/t          |
| Equipment Lease    | \$ 4.00/t          |
| Contingency        | \$ 2.08/t          |
| Royalty            | \$ 1.37/t          |
| Sustaining Capital | \$ 0.56/t          |
| <b>TOTAL</b>       | <b>\$ 45.68/t</b>  |

Source : BMB, 4 March 2015, Beer & Co

## Labour

BMB's 4 March 2015 announcement of the PFS results states, at p.19, that "Mariola will employ approximately 700 trained staff".

This is nearly 2x the level that Beer & Co initially estimated based on other coal mines we have modelled, with only a small crew on the CHPP.

Further, Labour costs of \$7.31/t by 2.7Mt/yr give a total average annual cost of US\$ 19.7m, or €18m. Assuming that 450 of the 700 staff are in coal mining (with others in CHPP, mine site overhead, etc), this gives :

- Low productivity, of 6,000 tonnes of coal per mining person; and
- High costs, of around €3,320 a month, or about 4.5x the national average wage.

## Transport

The analysis has allowed \$3.5/t for transport costs. Given that Figure 19 showed the potential for half of the product to have a transport cost of about 30c/t, and that it is connected to rail, this estimate seems excessive.

## Beer & Co Cash Costs

Figure 25 shows Beer & Co's cash costs, estimated on a "bottom-up" basis, but assuming higher manning levels at higher wage costs, following the PFS results.

Note that our all in cost estimate, of \$47/t, allows for our estimated net difference in product quality, so can be compared directly with benchmark prices.

**Figure 25 : Beer & Co's estimated all in costs, Mariola**

|                    | LoM              | 2016-17          | 2017-18          | 2018-19          | 2019-20          | 2020-21          | 2021-22          | 2022-23          |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Mining             | \$ 13.7/t        | 16.7             | 12.4             | 12.2             | 12.8             | 13.0             | 13.2             | 13.5             |
| Mine development   | \$ 10.9/t        | 3.6              | 10.7             | 10.3             | 11.0             | 11.0             | 11.0             | 11.0             |
| Mining units       | \$ 4.4/t         | 7.3              | 4.5              | 4.3              | 4.4              | 4.4              | 4.4              | 4.4              |
| Processing         | \$ 5.0/t         | 6.3              | 5.0              | 4.8              | 5.0              | 5.0              | 5.0              | 5.0              |
| Site Admin         | \$ 1.6/t         | 4.3              | 1.6              | 1.4              | 1.6              | 1.6              | 1.6              | 1.6              |
| Transport          | \$ 0.9/t         | 1.5              | 1.5              | 1.5              | 1.5              | 1.5              | 1.5              | 1.5              |
| Royalties          | \$ 1.7/t         | 1.5              | 1.6              | 1.7              | 1.7              | 1.7              | 1.7              | 1.7              |
| Sustaining Capital | \$ 0.7/t         | 0.8              | 0.7              | 0.7              | 0.7              | 0.7              | 0.7              | 0.7              |
| Quality / Location | \$ 7.5/t         | 7.5              | 7.5              | 7.5              | 7.5              | 7.5              | 7.5              | 7.5              |
| <b>TOTAL</b>       | <b>US\$ 47/t</b> | <b>US\$ 49/t</b> | <b>US\$ 46/t</b> | <b>US\$ 44/t</b> | <b>US\$ 46/t</b> | <b>US\$ 46/t</b> | <b>US\$ 47/t</b> | <b>US\$ 47/t</b> |

Source : Beer & Co estimates

Beer & Co's cost estimate, based on the PFS is slightly lower, after taking into account our assumed price penalty for the coal quality compared with benchmark. We stated earlier how we believe that the costs used in the PFS are higher than should be expected.

## Financial Analysis

A simple analysis is that the Mariola project will generate \$14/t in cash by 2.7Mt/yr, or \$39m/yr for a payback period of about 2.0 years, at current prices.

Figure 26 shows Beer & Co's base case projections for thermal coal prices in Europe. It shows that we project only a very weak recovery in coal prices, based on very little growth in coal demand, but with no investment and some current operations not able to cover all costs at present prices.



**Figure 26 : Historical and projected European coal prices**

Source : Reuters, McCloskey, Beer &amp; Co estimates

Figure 27 shows Beer & Co's base case financial projections, based on coal prices, production and sales volumes, cash costs and capital costs given above.

**Figure 27 : Beer & Co base case projections**

| USD m                 | 2015-16 | 2016-17 | 2017-18  | 2018-19  | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  | 2025-26  | 2026-27  |
|-----------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Thermal Coal, ARA     | \$ 65/t | \$ 74/t | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  | \$ 75/t  |
| Coal sold             | 0 kt    | 350 kt  | 2,344 kt | 2,970 kt | 2,716 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt | 2,703 kt |
| Revenue per tonne     | \$ 57/t | \$ 66/t | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  | \$ 68/t  |
| Revenue               | 0       | 24      | 158      | 200      | 183      | 182      | 182      | 182      | 182      | 182      | 182      | 182      |
| Total Cash Costs      | 0       | (13)    | (58)     | (68)     | (64)     | (65)     | (65)     | (66)     | (67)     | (67)     | (68)     | (69)     |
| Royalties             | 0       | (1)     | (4)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      | (5)      |
| Dep'n & Amort'sn      | 0       | (1)     | (8)      | (10)     | (9)      | (8)      | (8)      | (7)      | (2)      | (2)      | (2)      | (2)      |
| E B I T               | 0       | 8       | 88       | 118      | 106      | 105      | 104      | 105      | 109      | 109      | 108      | 107      |
| Interest Expense      | (0)     | (4)     | (4)      | (4)      | (3)      | (2)      | (1)      | (0)      | 0        | 0        | 0        | 0        |
| Tax Expense           | 0       | (1)     | (16)     | (22)     | (20)     | (19)     | (20)     | (20)     | (21)     | (21)     | (21)     | (20)     |
| N P A T               | (0)     | 4       | 68       | 93       | 83       | 83       | 84       | 84       | 88       | 88       | 87       | 87       |
| Feasibility           | (6)     | 0       | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Project Cap.Ex Cap.Ex | (55)    | (18)    | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Sus. Cap. Ex          | 0       | (0)     | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      |
| Net Cashflow          | (61)    | (13)    | 75       | 100      | 90       | 89       | 90       | 90       | 88       | 88       | 87       | 87       |

Source : Beer &amp; Co estimates

## Valuation of Mariola

Despite the conservatism in their capital and operating cost estimates, the PFS gave a valuation of Mariola of US\$ 312.7m.

Beer & Co's analysis showed that this result was of un-gearred cashflows, after tax.

Figure 28 shows our valuation, assuming borrowing \$44m for the \$79m project.

**Figure 28a : Beer & Co valuation of Mariola, in USD terms**

| USD m             | Long Run = US\$ 75/t |                        | Spot price = US\$ 61/t |            |
|-------------------|----------------------|------------------------|------------------------|------------|
|                   | price v. benchmark   | (US\$7.5/t) US\$ 0.0/t | (US\$7.5/t)            | US\$ 0.0/t |
| Inventory = 41 Mt | 515                  | 608                    | 331                    | 478        |
| Inventory = 60Mt  | <b>591</b>           | <b>684</b>             | <b>385</b>             | <b>425</b> |

Source : Beer &amp; Co estimates

**Figure 28b : Beer & Co valuation of Mariola, in AUD terms**

| AUD m             | Long Run = US\$ 75/t |             | Spot price = US\$ 61/t |             |
|-------------------|----------------------|-------------|------------------------|-------------|
|                   | price v. benchmark   | (US\$7.5/t) | US\$ 0.0/t             | (US\$7.5/t) |
| Inventory = 41 Mt | 682                  | 806         | 421                    | 606         |
| Inventory = 60Mt  | <b>784</b>           | 907         | 488                    | 539         |

Source : Beer &amp; Co estimates

## Nowa Ruda Coal Project

### Description

As shown in Figure 1, Nowa Ruda Mariola is in the Lower Silesian Basin.

On 24 July 2013, BMB announced that it had acquired the Nowa Ruda project as an exploration tenement.

It had been mined for some time, being closed in 1995 when High Quality Hard Coking Coal prices were about US\$ 50/t.

### Geology

Nowa Ruda comprises 2 deposits, Waclaw and Lech, with former having the large area, to the north, as shown in Figure 29.

Figure 30 shows that Nowa Ruda has a number of seams, with the shallowest about 700m below surface.

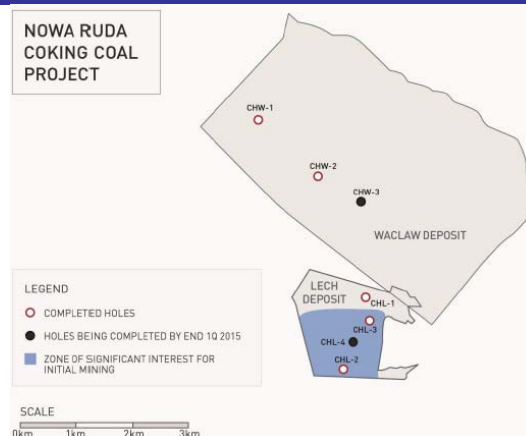
### Resources

The detail in Figure 31 shows a range of coal types; the higher the number, the more valuable is the coal is a general rule.

Also, A+B roughly relates to developed coal while C relates to Inferred Resources.

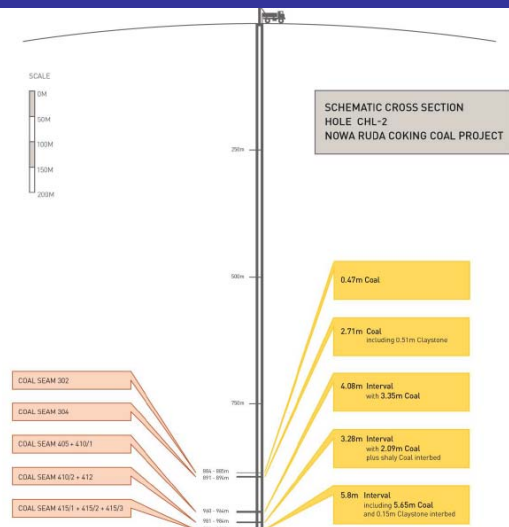
It shows a total of 105Mt. This compares with the Resource estimate announced by BMB in April 2014, as shown in Figure 32. This was based on historical data.

As indicated in Figure 33, BMB is currently executing a drill programme to provide confirmatory data, and a revised resource is expected in about May.

**Figure 29 : Nowa Ruda coal deposit.**

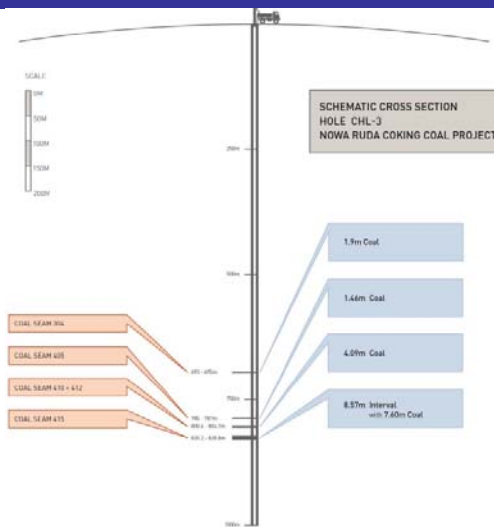
Source : BMB ASX announcement, 10 March 2015

Figure 30a : Drilling at Nowa Ruda, CHL-2



Source : BMB ASX announcement, 10 March 2015

Figure 30b : Drilling at Nowa Ruda, CHL-3



Source : BMB ASX announcement, 10 March 2015

Figure 31 : Polish geological information relating to Nowa Ruda

| Waclaw           | A + B            | C1               | C2               |                   |                   |                           |
|------------------|------------------|------------------|------------------|-------------------|-------------------|---------------------------|
| type 32          |                  | 4,895 kt         | 3,374 kt         | 8,269 kt          | gas-cannel coal   | medium grade thermal coal |
| type 33          |                  | 4,584 kt         | 595 kt           | 5,179 kt          | gas coal          | high grade thermal coal   |
| type 34          |                  | 9,889 kt         | 10,815 kt        | 20,704 kt         | gas-coking coal   | semi-soft coking coal     |
| type 35          |                  | 5,297 kt         | 10,680 kt        | 15,977 kt         | ortho-coking coal | medium grade coking coal  |
| type 37          |                  | 11,005 kt        | 9,093 kt         | 20,098 kt         | semi-coking coal  | hard coking coal          |
| type 41          |                  | 13,078 kt        | 581 kt           | 13,659 kt         | anthracite coal   | anthracite coal           |
| <b>Sub-Total</b> |                  | <b>48,748 kt</b> | <b>35,138 kt</b> | <b>83,886 kt</b>  |                   |                           |
| <b>Piast</b>     |                  |                  |                  |                   |                   |                           |
| type 35          | 2,766 kt         | 347 kt           | 1,404 kt         | 4,517 kt          | ortho-coking coal | medium grade coking coal  |
| type 37          | 12,725 kt        | 1,026 kt         | 4,368 kt         | 18,119 kt         | semi-coking coal  | hard coking coal          |
| <b>Sub-Total</b> | <b>15,491 kt</b> | <b>1,373 kt</b>  | <b>5,772 kt</b>  | <b>22,636 kt</b>  |                   |                           |
| <b>TOTAL</b>     | <b>15,491 kt</b> | <b>50,121 kt</b> | <b>40,910 kt</b> | <b>106,522 kt</b> |                   |                           |

Source : BMB ASX announcement, 24 July 2013

Figure 32 : JORC Resource and coal quality data

|              |                | Moisture    |           | Volatiles   |           | Sulphur     |           | Ash         |           |
|--------------|----------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
|              |                | As Received | Air Dried | As Received | Air Dried | As Received | Air Dried | As Received | Air Dried |
| Indicated    | 8.76Mt         |             | 1.10%     | 21.35%      | 22.78%    | 0.73%       |           | 29%         |           |
| Inferred     | 14.30Mt        |             | 1.10%     | 21.35%      | 22.78%    | 0.73%       |           | 29%         |           |
| <b>TOTAL</b> | <b>23.06Mt</b> |             |           |             |           |             |           |             |           |
| Exploration  | 112.5Mt        | 9.4 %       | 1.02%     | 20%         | 22%       | 0.94%       | 1.16%     | 28%         | 22%       |
| Target       | 160.7Mt        |             |           |             |           |             |           |             |           |

BMB ASX announcements, 28 April 2014 and 2 May 2014

On 10 March 2015, BMB announced the results of its first three holes in its current drill programme, as indicated in Figure 30. Notable results include :

- Free Swell Index (Coal Swell Number) of 7.0 – 7.5, compared with 8.0 for HQ HCC benchmark;
- Roga Index (Coal Strength) of 68 – 77, compared with about 70 and higher for HQ HCC benchmark; and
- Ash content of 1.79% to 6.85% after washing, compared with 8.0% for HQ HCC benchmark.

BMB also advised that the Sulphur level is around 1%, as shown in Figure 18, which is about the benchmark for HQ HCC.

Figure 33 shows Nowa Ruda coal, showing good seam width with a stone floor; while other drilling shows a stone roof.

**Figure 33 : Nowa Ruda coal**



Source : Beer & Co site visit, December 2014

## Development

Figure 29 shows that the area of focus is the Lech deposit.

Figure 34 shows Beer & Co’s estimated capital costs for Nowa Ruda. This estimate is low as Nowa Ruda has been an operating mine and has considerable infrastructure in place, including extensive underground development, including :

- Production and ventilation shafts
  - the main shafts are in place but require regeneration work as they were capped and stripped of equipment;
- Horizontal underground development work, including cross-cuts and access drives between the two main deposits; and
- Surface infrastructure such as roads, rail, power and water are all available at the mine gate.

**Fig. 34 : Nowa Ruda Cap.ex**

|                    |                   |
|--------------------|-------------------|
| Feasibility        | US\$ 10 m         |
| Shaft Access       | US\$ 22 m         |
| Mechanical         | US\$ 20 m         |
| Development Drives | US\$ 10 m         |
| Ventilation Shaft  | US\$ 13 m         |
| Mine ventilation   | US\$ 10 m         |
| C H P P            | US\$ 30 m         |
| Mine refurb        | US\$ 20 m         |
| Surface            | US\$ 20 m         |
| <b>TOTAL</b>       | <b>US\$ 155 m</b> |

Source : Beer & Co estimate

In our analysis, we allow for an extended construction period of 18 months. First coal is expected in mid-2018. We also allow for an extended ramp up period, introducing one new CM unit each quarter.

## Expected Production

Beer & Co projects that each CM unit will produce about 350kt/yr of Run of Mine coal. We allow for a 70% washery yield for just under 1.0Mt/yr of saleable, product coal, as shown in Figure 35.

Our projections go for 30 years from current, so we project a total of 37Mt of RoM coal is mined from 26 years of operations at 1.4Mt/yr.

**Figure 35 : Beer & Co's projection of coal produced from Nowa Ruda**

|                   | 2017-18 | 2018-19 | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  | 2025-26  | 2026-27  |
|-------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| RoM coal produced | 35 kt   | 980 kt  | 1,400 kt | 1,400 kt | 1,400 kt | 1,400 kt | 1,400 kt | 1,400 kt | 1,400 kt | 1,400 kt |
| Washery Yield     | 60 %    | 64 %    | 69 %     | 70 %     | 70 %     | 70 %     | 70 %     | 70 %     | 70 %     | 70 %     |
| Product coal      | 21 kt   | 629 kt  | 968 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   |
| Coal sold         | 17 kt   | 587 kt  | 966 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   |

Source : Beer & Co estimates

## Cost Estimates

The basis of our costs was outlined in the discussion relating to Mariola. The detail of our cost estimates for product coal is shown in Figure 36. It shows estimated C1 costs of USD 69/t and All-In cash costs of USD 74/t.

Figure 24 showed that our estimate for Mariola was \$49/t, of which \$7.5/t related to quality and location, so our estimate for all in cash cost is \$41.5/t.

**Figure 36 : Detail of cost estimates for Nowa Ruda, product coal**

| USD / t            | LoM              | 2017-18           | 2018-19          | 2019-20          | 2020-21          | 2021-22          | 2022-23          | 2023-24          |
|--------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Mine Development   | \$ 14.0/t        | 6.0               | 12.4             | 14.1             | 14.0             | 14.0             | 14.0             | 14.1             |
| Mining             | \$ 24.4/t        | 37.4              | 25.7             | 23.2             | 23.2             | 23.5             | 23.8             | 24.0             |
| Mining units       | \$ 10.6/t        | 12.3              | 11.4             | 10.6             | 10.5             | 10.5             | 10.5             | 10.5             |
| Processing         | \$ 11.1/t        | 18.0              | 12.2             | 11.0             | 10.9             | 10.9             | 10.9             | 10.9             |
| Site Admin         | \$ 4.3/t         | 25.4              | 5.3              | 4.2              | 4.1              | 4.2              | 4.2              | 4.2              |
| Transport          | \$ 3.7/t         | 3.7               | 3.7              | 3.7              | 3.7              | 3.7              | 3.7              | 3.7              |
| Royalties          | \$ 4.0/t         | 3.2               | 3.7              | 4.0              | 4.0              | 4.0              | 4.0              | 4.0              |
| Sustaining Capital | \$ 2.2/t         | 2.5               | 2.3              | 2.2              | 2.1              | 2.1              | 2.1              | 2.1              |
| <b>TOTAL</b>       | <b>US\$ 74/t</b> | <b>US\$ 109/t</b> | <b>US\$ 77/t</b> | <b>US\$ 73/t</b> | <b>US\$ 72/t</b> | <b>US\$ 73/t</b> | <b>US\$ 73/t</b> | <b>US\$ 74/t</b> |

Source : Beer & Co estimates

However, Mariola sells RoM coal. Our estimate for the comparable cost for Nowa Ruda RoM coal is \$54/t, a premium of 30.5%, as Nowa Ruda is deeper and lower volume, using CM units while Mariola employs a Long-Wall.

## Nowa Ruda – Financial Outcomes

Poland is a net exporter of coking coal, as shown in Figure 17. Most coal into Europe is sourced from Australia, with some lower quality coals from USA. Hence the price into Europe is a premium over the FOB benchmark of about \$15/t.

Following the discussion on coal quality above, Beer & Co is of the view that Nowa Ruda coal will sell at only a small discount to High Quality Hard Coking Coal, but will attract a location premium that is significantly greater.

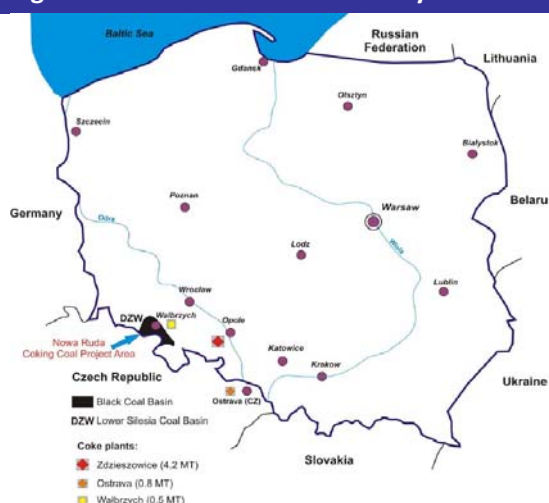
Figure 37 shows that Nowa Ruda is within 150km, by rail, from 4 major coke plants, which currently source some of their coal from Queensland.

Netting out the \$15/t location premium and the \$5/t quality discount, gives a net premium to the FOB benchmark of \$10/t.

Figure 38 shows that current HQ HCC price, for the September quarter of 2015, is US\$ 109.50/t, while Beer & Co's projected long run price is \$150/t.

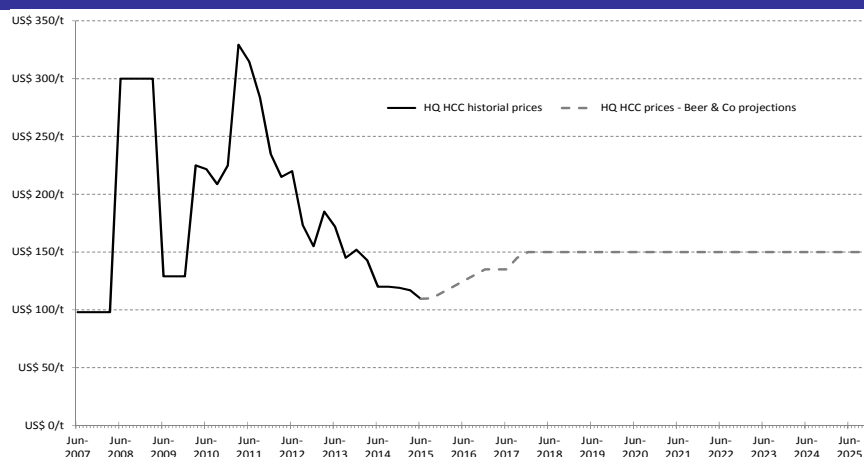
Given the production shown in Figure 35, the cash costs shown in Figure 36, the capital costs shown in Figure 33 and the discussion on pricing, Figure 39 shows our projected financial outcomes.

Figure 37 : Nowa Ruda : <150km by rail



Source : BMB presentation, October 2014

Figure 38 : Historical and projected HQ HCC prices, quarterly basis



Source : Reuters, McCloskey, Beer & Co estimates

Figure 39 : Beer & Co's projected financial outcomes for Nowa Ruda

| USD m                | 2015-16  | 2016-17  | 2017-18  | 2018-19  | 2019-20  | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Coal sold            | 0 kt     | 0 kt     | 21 kt    | 629 kt   | 968 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   | 980 kt   |
| HQ HCC benchmark     | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t | \$ 110/t |
| Revenue per tonne    | \$ 127/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t | \$ 120/t |
| Revenue              | 0        | 0        | 2        | 70       | 116      | 118      | 118      | 118      | 118      | 118      |
| Total Cash Costs     | 0        | 0        | (2)      | (45)     | (65)     | (65)     | (65)     | (66)     | (66)     | (66)     |
| Royalties            | 0        | 0        | (0)      | (2)      | (3)      | (3)      | (3)      | (3)      | (3)      | (3)      |
| Dep'n & Amort'sn     | 0        | 0        | (1)      | (17)     | (26)     | (27)     | (27)     | (27)     | (27)     | (21)     |
| E B I T              | 0        | 0        | (1)      | 7        | 22       | 23       | 22       | 22       | 22       | 28       |
| Interest Expense     | 0        | 0        | (5)      | (9)      | (8)      | (6)      | (5)      | (3)      | (1)      | 0        |
| Tax Expense          | 0        | 0        | 1        | 0        | (3)      | (3)      | (3)      | (4)      | (4)      | (5)      |
| N P A T              | 0        | 0        | (5)      | (2)      | 11       | 13       | 14       | 15       | 17       | 22       |
| Feasibility          | (6)      | (1)      | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Project Cap.Ex Cap.f | 0        | (73)     | (73)     | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Sus. Cap. Ex         | 0        | 0        | (0)      | (1)      | (2)      | (2)      | (2)      | (2)      | (2)      | (2)      |
| Net Cashflow         | (6)      | (74)     | (77)     | 14       | 36       | 38       | 39       | 40       | 42       | 41       |

Source : Beer & Co estimates

## Nowa Ruda - Valuation

At current HQ HCC prices, of \$110/t, Beer & Co projects that Nowa Ruda generates a margin of \$47/t, including the quality discount and location premium, for \$46m annual free cashflow for a pay-back period of 3.4 years.

While not as good as Mariola, which is another reason to develop that project first, it is still a good return.

Figure 40 shows that base case valuation of Nowa Ruda, as at June 2015, is US\$ 309m, or \$A 413m.

**Figure 40a : Beer & Co valuation of Nowa Ruda, in USD terms**

| USD m<br>price v. benchmark | Long Run = US\$ 150/t |            | Spot price = US\$ 110/t |           |
|-----------------------------|-----------------------|------------|-------------------------|-----------|
|                             | US\$ 0/t              | US\$ 10/t  | US\$ 0/t                | US\$ 10/t |
| Inventory = 23 Mt           | 224                   | 266        | 58                      | 100       |
| Inventory = 37Mt            | 263                   | <b>309</b> | 122                     | 75        |

Source : Beer & Co estimates

**Figure 40b : Beer & Co valuation of Nowa Ruda, in USD terms**

| AUD m<br>price v. benchmark | Long Run = US\$ 150/t |            | Spot price = US\$ 110/t |           |
|-----------------------------|-----------------------|------------|-------------------------|-----------|
|                             | US\$ 0/t              | US\$ 10/t  | US\$ 0/t                | US\$ 10/t |
| Inventory = 23 Mt           | 299                   | 354        | 77                      | 133       |
| Inventory = 37Mt            | 350                   | <b>413</b> | 163                     | 100       |

Source : Beer & Co estimates

Even using spot prices, Nowa Ruda is a valuable project.

## Sawin

### Background

On 22 July 2014, BMB announced that it had been awarded the concession rights, for no acquisition cost, for the Sawin North Thermal Coal Project, located in the Lublin Basin of south-eastern Poland.

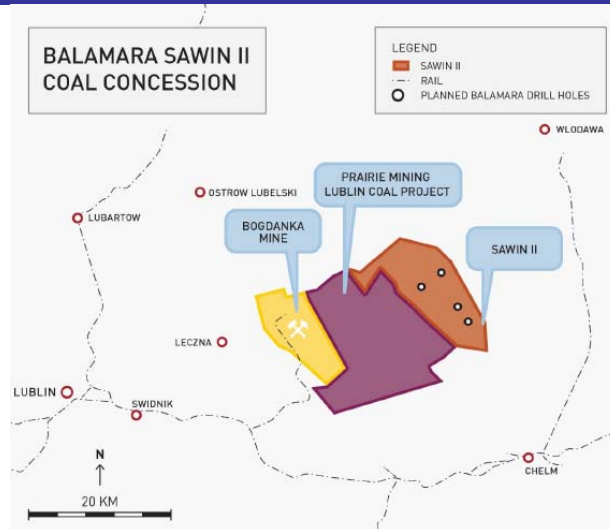
Sawin is a coal exploration licence covering an area of 132km<sup>2</sup>. BMB has been awarded the exploration tenements for an initial period of 3½ years.

The location of the Sawin project, in eastern Poland, was shown in Figure 14.

Figure 41 shows that the Sawin project is adjacent to ASX listed Prairie Mining's (PDZ) Lublin coal project.



**Figure 41 : Sawin Exploration Project, Lublin Basin**



Source : BMB ASX announcement, 23 March 2015

## Mineralisation

### Sawin

Figure 42 shows data collected from Polish records, that are not JORC compliant, giving a total “foreign reserve” of 1,387Mt.

**Figure 42 : Sawin Mineralisation**

|              |                | kCal/kg | dry ash | Sulphur |
|--------------|----------------|---------|---------|---------|
| seam >1.0m   | 530.8Mt        | 6,488   | 11.66%  | 1.64%   |
| seam >0.6m   | 856.2Mt        |         |         |         |
| <b>TOTAL</b> | <b>1,387Mt</b> |         |         |         |

Source : BMB ASX announcement, 21 July 2014

BMB has been collecting available information to digitalise in order to deliver a maiden JORC resource, which was announced on 23 March 2015, totalling 1,200Mt of Inferred Resource, as shown in Figure 43.

**Figure 43 : Sawin JORC Resource, 1,200Mt**

|          |          | kCal/kg | moisture | dry ash | Sulphur | Volatiles | Swell |
|----------|----------|---------|----------|---------|---------|-----------|-------|
| Inferred | 1,200 Mt | 6,900   | 3.5%     | 10%     | 1.7%    | 33%       | 2     |

Source : BMB ASX announcement, 23 March 2015

Figure 43 shows that Sawin coal is either a very high quality thermal coal, albeit with a high ash level, or a semi-soft coking coal, given that its specific gravity is 1.3.

### Bogdanka

Bogdanka is listed on the Polish stock exchange. It has a market capitalisation of about \$1.6B. It produces about 8Mt/yr, with projections to over 9Mt/yr, of thermal coal. The coal has an average sulphur content of 1.1%, energy of 6,200kCal/kg and ash 8.4%.

## Prairie Mining (PDZ.ASX) – Lublin Coal Project

As shown in Figure 44, PDZ has a market capitalisation of \$32m, based on the Lublin Coal Project.

PDZ announced the results of a scoping study on Lublin on 30 April 2014. PDZ is now executing a pre-feasibility study which is expected to be completed by mid-2015.

PDZ stated that much of their costings were modelled on the operation at Bogdanka; note the low C1 cash cost.

Also, PDZ stated that royalties are about \$1.3/t.

PDZ expect to sell about half of their coal as a semi-soft coking coal, which will be exported, and the balance as a premium thermal coal, that can be consumed within Poland.

**Figure 44 : PDZ and Lublin**

|                            |               |
|----------------------------|---------------|
| <b>PDZ</b>                 |               |
| Share price                | 24.0 c        |
| Shares on Issue            | 135.2m        |
| Market Capitalisation      | \$A 32m       |
| <b>Lublin Coal Project</b> |               |
| C1 Cash costs              | \$ 37/t       |
| Capital Costs              | US\$ 684m     |
| Average saleable coal      | 6.0Mt         |
| Resource                   | 1,559Mt       |
| <b>Lublin Coal</b>         |               |
| Energy (kCal/kg)           | 7,526 - 7,800 |
| Coal Swell                 | 4.0 - 6.0     |
| Ash                        | 2.0% - 2.7%   |
| Volatiles                  | 33.2% - 36.7% |
| Washery Yield              | 77.3%         |

Source : IRESS, Beer & Co

## Sawin -Development

In this analysis, Beer & Co has assumed that Mariola and Nowa Ruda are developed first, so development of Sawin is not rushed, but is developed properly.

Due to its depth, we assume that BMB spends \$20m on feasibility studies to mid-2018.

Given the significant volume of mineralisation, and high production volumes currently from Bogdanka and expected from PDZ's Lublin project, Beer & Co has assumed 7.0Mt/yr of RoM coal from 2 sets of 2 CM units and a Long-Wall, each producing 3.5Mt/yr.

We allow for a lengthy ramp-up period, as each mining unit is introduced and to allow time for the CM units to have achieved sufficient development for the LW to commence.

Figure 45 shows the projections that Beer & Co has used in this analysis.

**Figure 45 : Beer & Co's projected production from Sawin**

|                   | 2019-20 | 2020-21  | 2021-22  | 2022-23  | 2023-24  | 2024-25  | 2025-26  | 2026-27  | 2027-28  | 2028-29  |
|-------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| RoM coal produced | 250 kt  | 1,656 kt | 3,875 kt | 5,156 kt | 7,000 kt | 7,000 kt | 7,000 kt | 7,000 kt | 7,000 kt | 7,000 kt |
| Washery Yield     | 66 %    | 71 %     | 75 %     | 75 %     | 75 %     | 75 %     | 75 %     | 75 %     | 75 %     | 75 %     |
| Product coal      | 164 kt  | 1,180 kt | 2,895 kt | 3,867 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt |
| Coal sold         | 139 kt  | 1,094 kt | 2,847 kt | 3,783 kt | 5,231 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt | 5,250 kt |

Source : Beer & Co estimates

## Sawin - Cost Estimates

The estimated capital cost for PDZ's Lublin project is US\$ 684m.

BMB believes they are able to develop the project for less. Beer & Co understands that PDZ's capital costs includes all the mining units. For Mariola, BMB is acquiring its mining units on a finance lease basis, so Beer & Co assumes the same approach.

Also, Sawin coal begins about 500m below surface, while for PDZ's Lublin project, ifirst coal is about 700m below surface.

As shown in Figure 46, our estimate of project capital is US\$ 475m. Apart from the cost of mining equipment, the other area of major saving is in the use of decline access, with conveyor haulage. For 500m depth, with 1 in 7 gradient, this means 3.5km of decline, at \$5m/km plus 3,5km of conveyor at \$3.0m per km for 7Mt/yr capacity.

Figure 47 shows the cash costs estimated by Beer & Co. It gives a C1 estimate of \$45/t, if the mining units were owned instead of leased, which is 22% higher than PDZ's advice.

**Fig 46 : Sawin est'd Cap.ex**

|                     |                   |
|---------------------|-------------------|
| Feasibility         | US\$ 20 m         |
| Decline & conveyors | US\$ 45 m         |
| u/g development     | US\$ 55 m         |
| u/g infrastructure  | US\$ 75 m         |
| Ventilation, etc.   | US\$ 60 m         |
| C H P P             | US\$ 70 m         |
| Infrastrcuture      | US\$ 80 m         |
| EPCM, contingency   | US\$ 90 m         |
| <b>TOTAL</b>        | <b>US\$ 475 m</b> |

Source : Beer & Co estimates

**Figure 47 : Beer &Co's estimated operating costs for Sawin**

|                    | LoM              | 2019-20           | 2020-21          | 2021-22          | 2022-23          | 2023-24          | 2024-25          | 2025-26          | 2026-27          | 2027-28          |
|--------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Mine development   | <b>\$ 11.8/t</b> | 32.0              | 14.2             | 13.8             | 12.1             | 11.4             | 11.5             | 11.5             | 11.5             | 11.5             |
| Mining             | <b>\$ 16.0/t</b> | 23.5              | 19.2             | 16.2             | 16.4             | 15.2             | 15.4             | 15.6             | 15.8             | 16.1             |
| Mining units       | <b>\$ 6.3/t</b>  | 11.0              | 9.3              | 7.2              | 6.6              | 6.0              | 6.0              | 6.0              | 6.0              | 6.0              |
| Processing         | <b>\$ 7.8/t</b>  | 17.6              | 10.8             | 8.4              | 8.1              | 7.6              | 7.6              | 7.6              | 7.6              | 7.6              |
| Site Admin         | <b>\$ 1.6/t</b>  | 9.7               | 3.3              | 1.9              | 1.7              | 1.4              | 1.5              | 1.5              | 1.5              | 1.5              |
| Transport          | <b>\$ 7.9/t</b>  | 7.9               | 7.9              | 7.9              | 7.9              | 7.9              | 7.9              | 7.9              | 7.9              | 7.9              |
| Royalties          | <b>\$ 2.8/t</b>  | 2.4               | 2.6              | 2.7              | 2.7              | 2.8              | 2.8              | 2.8              | 2.8              | 2.8              |
| Sustaining Capital | <b>\$ 1.3/t</b>  | 1.5               | 1.4              | 1.3              | 1.3              | 1.3              | 1.3              | 1.3              | 1.3              | 1.3              |
| Quality / Location |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>TOTAL</b>       | <b>US\$ 56/t</b> | <b>US\$ 106/t</b> | <b>US\$ 69/t</b> | <b>US\$ 60/t</b> | <b>US\$ 57/t</b> | <b>US\$ 54/t</b> | <b>US\$ 54/t</b> | <b>US\$ 54/t</b> | <b>US\$ 54/t</b> | <b>US\$ 55/t</b> |

Source : Beer & Co estimates

In terms of costs per RoM tonne, the cost is \$41/t, which is about the same as for Mariola, with the greater volume compensating for the extra cost in coal preparation and greater depth.

## Swain – Financial Outcomes

In this analysis, we have used 71%, plus a \$5/t location premium, which gives a delivered value of about 75% of HQ HCC, FOB basis.

**Figure 48 : Beer & Co's projected financial outcomes for Sawin**

| USD m                | 2017-18     | 2018-19      | 2019-20      | 2020-21      | 2021-22    | 2022-23    | 2023-24    | 2024-25    | 2025-26    | 2026-27    | 2027-28    | 2028-29    |
|----------------------|-------------|--------------|--------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Coal sold            | 0 kt        | 0 kt         | 139 kt       | 1,094 kt     | 2,847 kt   | 3,783 kt   | 5,231 kt   | 5,250 kt   | 5,250 kt   | 5,250 kt   | 5,250 kt   | 5,250 kt   |
| 71% of HQ HCC        | \$ 107/t    | \$ 107/t     | \$ 107/t     | \$ 107/t     | \$ 107/t   | \$ 107/t   | \$ 107/t   | \$ 107/t   | \$ 107/t   | \$ 107/t   | \$ 107/t   | \$ 107/t   |
| Revenue per tonne    | \$ 112/t    | \$ 112/t     | \$ 112/t     | \$ 112/t     | \$ 112/t   | \$ 112/t   | \$ 112/t   | \$ 112/t   | \$ 112/t   | \$ 112/t   | \$ 112/t   | \$ 112/t   |
| Revenue              | 0           | 0            | 16           | 122          | 317        | 422        | 583        | 585        | 585        | 585        | 585        | 585        |
| Total Cash Costs     | 0           | 0            | (15)         | (67)         | (138)      | (173)      | (219)      | (220)      | (222)      | (223)      | (224)      | (226)      |
| Royalties            | 0           | 0            | (0)          | (3)          | (8)        | (11)       | (15)       | (15)       | (15)       | (15)       | (15)       | (15)       |
| Dep'cn & Amort'sn    | 0           | 0            | (3)          | (21)         | (49)       | (63)       | (82)       | (75)       | (59)       | (7)        | (7)        | (7)        |
| <b>E B I T</b>       | <b>0</b>    | <b>0</b>     | <b>(3)</b>   | <b>31</b>    | <b>123</b> | <b>175</b> | <b>268</b> | <b>275</b> | <b>290</b> | <b>341</b> | <b>339</b> | <b>338</b> |
| Interest Expense     | 0           | 0            | (4)          | (22)         | (35)       | (38)       | (34)       | (29)       | (23)       | (17)       | (10)       | (2)        |
| Tax Expense          | 0           | 0            | 1            | (2)          | (17)       | (26)       | (44)       | (47)       | (51)       | (62)       | (63)       | (64)       |
| <b>N P A T</b>       | <b>0</b>    | <b>0</b>     | <b>(6)</b>   | <b>7</b>     | <b>71</b>  | <b>111</b> | <b>189</b> | <b>199</b> | <b>216</b> | <b>262</b> | <b>267</b> | <b>272</b> |
| Feasibility          | (10)        | 0            | 0            | 0            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Project Cap.Ex Cap.f | 0           | (200)        | (200)        | (200)        | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Sus. Cap. Ex         | 0           | 0            | (0)          | (2)          | (4)        | (5)        | (7)        | (7)        | (7)        | (7)        | (7)        | (7)        |
| <b>Net Cashflow</b>  | <b>(10)</b> | <b>(200)</b> | <b>(203)</b> | <b>(173)</b> | <b>116</b> | <b>169</b> | <b>264</b> | <b>268</b> | <b>268</b> | <b>262</b> | <b>267</b> | <b>272</b> |

Source : Beer & Co estimates

Beer & Co assumes that the coal will be washed and achieve a high energy, low ash, moderate swell and acceptable sulphur level for a semi-sift coal; as a RoM product it could be sold as a premium thermal coal. Semi-soft coking coal sells for 70% to 75% of the HQ HCC price.

Figure 48 shows the cashflows projected by Beer & Co for Sawin, based on capital costs in Figure 46, cash costs in Figure 47, operations shown in Figure 45 and coal value in the discussion above.

## Sawin - Valuation

While we have projected a significant ramp-up period, Beer & Co projects a margin of \$61/t even if semi-soft coal prices stay at current spot levels. At projected sales volume of 5.25Mt/yr, this generates cash of \$320m a year for a pay-back period of under 2 years. This indicates it is a high return project.

As shown in Figure 49, the base case valuation for Sawin estimated by Beer & Co is US\$ 793m, or AUD 1,0006m

**Figure 49a : Beer & Co valuation of Mariola, in USD terms**

| USD m              | Long Run = US\$ 107/t |            | Spot price = US\$ 78/t |          |          |
|--------------------|-----------------------|------------|------------------------|----------|----------|
|                    | price v. benchmark    | US\$ 0/t   | US\$ 5/t               | US\$ 0/t | US\$ 5/t |
| Inventory = 165 Mt | 754                   | <b>841</b> | 261                    | 348      |          |

Source : Beer & Co estimates

**Figure 49b : Beer & Co valuation of Mariola, in USD terms**

| AUD m              | Long Run = US\$ 107/t |              | Spot price = US\$ 78/t |          |          |
|--------------------|-----------------------|--------------|------------------------|----------|----------|
|                    | price v. benchmark    | US\$ 0/t     | US\$ 5/t               | US\$ 0/t | US\$ 5/t |
| Inventory = 165 Mt | 1,006                 | <b>1,122</b> | 348                    | 463      |          |

Source : Beer & Co estimates

Despite the Resource of 1,200Mt, Figure 49 shows that Beer& Co's valuation assumes a mining inventory of only 165Mt, which is the amount of coal mined over the next 30 years given the mining rates shown in Figure 45.

## Balamara Valuation

### Corporate Background

Figure 13 shows that the BMB share price has progressively fallen, in contrast to its underlying value. Beer & Co attributes this share price fall to three reasons :

- The failure to receive \$15m in cash that had been expected from the sale of BMB's Balkans Metals project, and hence the need to raise further equity;
- The continued fall in the coal price;
- A lack of understanding of the value of BMB's projects, which is partly because it is coal, which is out of favour, and partly because it is in Poland, which is poorly understood.

This led to BMB's announcement, on 13 February 2015, that it will seek to de-list from the ASX.

## Asset Valuation

Figure 50 shows Beer & Co's valuation of BMB's assets.

**Figure 50: Beer & Co's valuation of BMB's assets**

| AUD m        | Un-Risked    |             | risk factor | Risked       |             |
|--------------|--------------|-------------|-------------|--------------|-------------|
|              | base case    | spot prices |             | base case    | spot prices |
| Mariola      | 784          | 421         | 65 %        | 509          | 273         |
| Nowa Ruda    | 413          | 133         | 50 %        | 206          | 66          |
| Sawin        | 1,122        | 463         | 40 %        | 449          | 185         |
| Corporate    | (38)         | (38)        | 100 %       | (38)         | (38)        |
| <b>TOTAL</b> | <b>2,279</b> | <b>978</b>  |             | <b>1,126</b> | <b>487</b>  |

Source : Beer & Co estimates

Figure 50 shows :

- Beer & Co's base case valuation of BMB's assets is over \$2.2B, but even using current coal prices, our valuation is nearly \$1.0B;
- The valuation of each of the assets needs to be risked for the uncertainty in delivering as expected (note that the time value, and feasibility costs, are already included in the base case valuation)
  - the resulting valuation is still \$1.1B using base case assumptions, or \$487m using current coal prices and exchange rates;
- Beer & Co has given zero value for the Balkans Metals assets, which will return to BMB \$15m from a 2% net smelter royalty
  - We have estimated an indicative NPV of \$4m for this asset
- Beer & Co has given zero value for BMB's Australian exploration assets.

## Funding

BMB has 2 major shareholders that, together, account for 64% of BMB's issued capital. Management accounts for a further 4%.

BMB will need to raise equity to complete a Definitive Feasibility Study on Mariola.

BMB will then be able to seek project funding, of which we expect some will come from an asset sale with the balance from a (re-)IPO.

If coal prices recover as expected, then Mariola, if 100% BMB, will generate sufficient cash to develop Nowa Ruda, which will then generate enough cash to develop Sawin.

If prices do not recover, then BMB has the option to defer projects, raise further equity or sell further project stakes.

## Conclusions

Due to the uncertainty on project funding and the amount of equity that can be expected to be issued, especially due to BMB's pending de-listing, Beer & Co is unable to give a per share valuation for BMB.

However, Figure 36 shows that BMB's current market capitalisation, of \$14m, is only 1.3% of Beer & Co's risked base case valuation, or 3.2% of our risked valuation using spot prices.

Beer & Co understand the reasons for BMB seeking to de-list; this will enable management to focus on project delivery.

Investing in BMB will require patient capital as, while the stock is de-listed, trading will be illiquid.

Despite the fact that BMB will need to raise equity to develop each project, and the fact that it will be de-listed, Beer & Co re-initiates research on BMB with a BUY, High Risk, recommendation.

Over time, the projects should be progressively de-risked and the valuation rise accordingly.

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The analyst responsible for this research report certifies that all of the views expressed reflect his personal views about the securities and the issuer.

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