



AUSTRALIA



PDZ AU

Outperform

Price (at 04:43, 25 Nov 2014 GMT)

A\$0.34

Valuation	A\$	0.76
- DCF (WACC 12.0%)		
12-month target	A\$	0.76
12-month TSR	%	+126.9
Volatility Index		Very High
GICS sector		Materials
Market cap	A\$m	45
30-day avg turnover	A\$m	0.0
Number shares on issue	m	135.2

Investment fundamentals

Year end 30 Jun		2014A	2015E	2016E	2017E
Revenue	m	0.0	0.0	0.0	0.0
EBIT	m	-8.8	-11.1	-12.4	-12.8
Reported profit	m	-5.0	-8.8	-9.6	-6.5
Adjusted profit	m	-5.0	-8.8	-9.6	-6.5
Gross cashflow	m	1.6	-1.8	-1.3	2.0
CFPS	¢	1.2	-1.0	-0.4	0.3
CFPS growth	%	nmf	nmf	63.9	nmf
PGCFPS	x	28.5	nmf	nmf	125.7
EPS adj	¢	-3.7	-4.9	-2.8	-0.9
EPS adj growth	%	34.3	-31.1	42.4	69.5
Total DPS	¢	0.0	0.0	0.0	0.0
Total div yield	%	0.0	0.0	0.0	0.0
ROA	%	-48.6	-27.2	-8.1	-5.2
ROE	%	-29.2	-32.8	-7.5	-3.0
EV/EBITDA	x	-19.4	-16.1	-59.5	-57.7
Net debt/equity	%	-12.1	-73.2	-95.1	-31.3
P/BV	x	2.1	2.2	1.1	1.2

Source: FactSet, Macquarie Research, November 2014
(all figures in AUD unless noted)

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26 November 2014

Macquarie Securities (Australia) Limited

Prairie Mining

Keeping the lights on in Europe

Commencing coverage with an Outperform rating

We are commencing coverage of Prairie Mining (PDZ AU) with an Outperform rating and target price of \$0.76/sh. PDZ's Lublin Coal project in southeast Poland is a large high-quality underground development play with significant scale. Lublin is expected to produce ~6Mtpa of high-quality thermal and semisoft coking coal in a longwall operation with bottom-quartile production costs. On our coal price forecasts we expect Lublin to achieve Ebitda margins of 50% and deliver annual earnings in excess of A\$150m over the first ten years of operation.

Premium quality thermal and semisoft coking coal

PDZ is targeting the premium market; clean coal from the 391 seam compares particularly well against the European ARA specification at high yields. Recent initial test work has also shown the potential to produce semisoft coking coal. PDZ is currently undertaking a marketing study to determine specifics of Lublin's target customers, product split and pricing, but the broad strategy is to target European power utilities and steel manufacturers, selling 3Mt of thermal coal and 1.5Mt of semisoft coking coal into the European market. In addition, the company believes there is potential for sales of up to 1.5Mt of semisoft coking coal into the seaborne market.

A competitive advantage over existing imports

The European energy landscape is clearly changing and the future power generation balance is unclear. That being said, coal-fired capacity is expected to remain a significant base load provider and hard coal imports have increased in recent years as production capacity declines. We believe Lublin's quality and cost advantages will be complemented by a favourable freight differential due to the close proximity to market and existing rail infrastructure. We expect this to be a strong competitive advantage to current imports.

Bogdanka – a direct benchmark

Underlining the potential of the Lublin project is the existing Bogdanka mine, Europe's lowest operating cost hard coal mine. Bogdanka is located ~10km from Lublin and mines at similar depths. The mine has been in operation since 1982 and provides a direct benchmark for the mining conditions and productivity levels that can be expected at Lublin. The Bogdanka mine produced ~8Mt in 2013 with plans for expansion to 12Mt. In FY13 Bogdanka reported operating Ebitda of US\$1,000m and earnings of US\$100m from sales of thermal coal.

Management with a delivery track record

Capex for Lublin is estimated at \$590m; given the large capital requirement versus the company's current market capitalisation, project funding is a clear risk. In our view the quality, scale and strategic nature of Lublin is likely to attract substantial off-take and debt financing. At this early stage, we have diluted our \$579m NPV¹² DCF valuation of PDZ for \$220m in new equity. PDZ has assembled a Board and management team with a track record in financing and developing large scale coal projects including significant in-country presence with direct experience in the approval, financing and development of projects such as Lublin.

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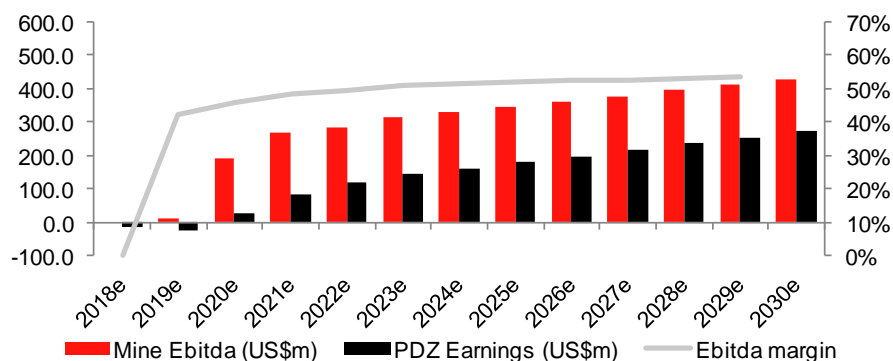
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Prairie Mining

Company profile

- Prairie Mining is a coal explorer and developer. Its key asset is the Lublin Coal Project located in southeast Poland. The project’s scoping study envisages a large underground longwall mine producing high-quality thermal and semisoft coking coal for the European and seaborne markets.
- PDZ’s board and management team has an impressive track record in the financing and development of large-scale coal projects and includes former executives of Coalspur and Aston Resources. The company’s CEO is a qualified coal mine manager and former finance executive. In addition to PDZ’s international executives, the company has built a significant in-country presence including former executives of leading Polish coal mining companies and former Deputy Ministers of the Environment and of Transport, Construction and Maritime Economy.

Fig 1 PDZ forecast Ebitda, earnings and Ebitda margin



Source: Company data, Macquarie Research, November 2014

Fig 2 PDZ AU vs Small Ordinaries, & rec history



Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, November 2014

(all figures in AUD unless noted)

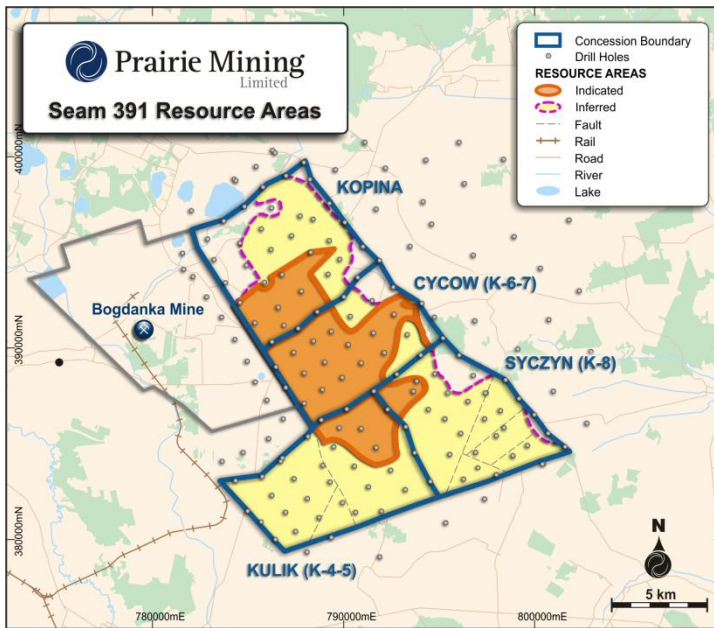
Keeping the lights on in Europe

Commencing coverage with an Outperform rating and \$0.76/sh target price.

**Outperform rating
and target price of
\$0.76/sh.**

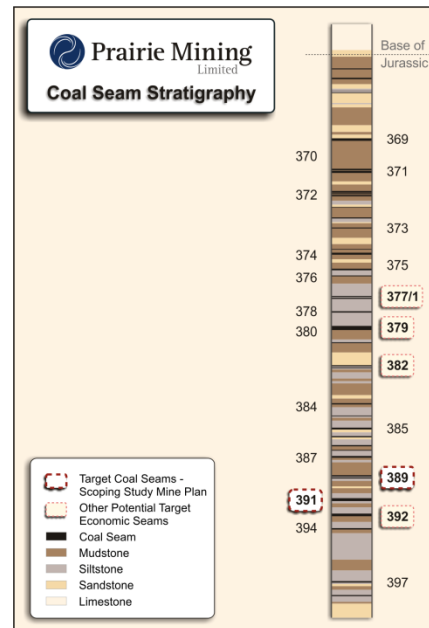
We are commencing coverage of Prairie Mining (PDZ AU) with an Outperform rating and target price of \$0.76/sh. PDZ's Lublin Coal project in southeast Poland is a large high-quality underground development play with significant scale. Lublin is expected to produce 6Mtpa of high-quality thermal coal and semisoft coking coal at industry-leading costs.

Fig 3 391 seam resource



Source: Company data, November 2014

Fig 4 Lublin seam stratigraphy

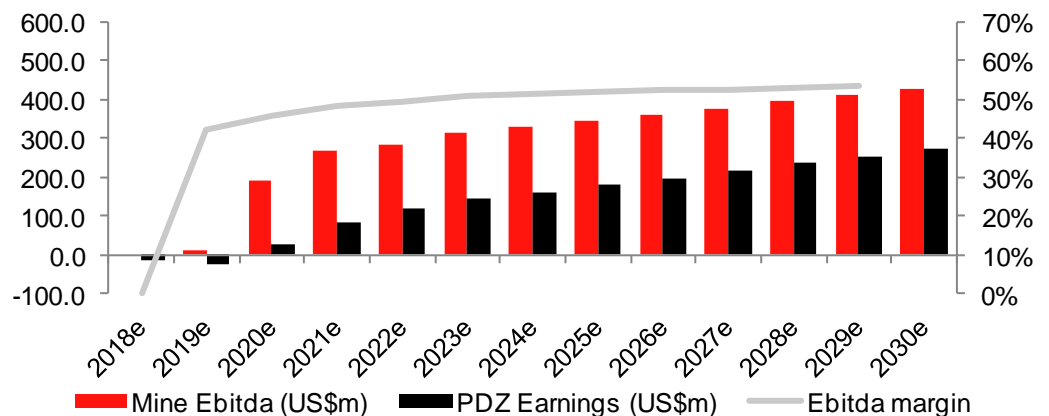


Scale and geology drives low-cost high-margin operation

**158Mt of ROM coal
mining inventory**

Lublin will be a large underground Longwall operation, mining coal from the 391 and 379 seams. These seams contain 418Mt of in-situ coal and provide the 158Mt of ROM coal mining inventory used in the Scoping Study.

Fig 5 PDZ forecast Ebitda, earnings and Ebitda margin

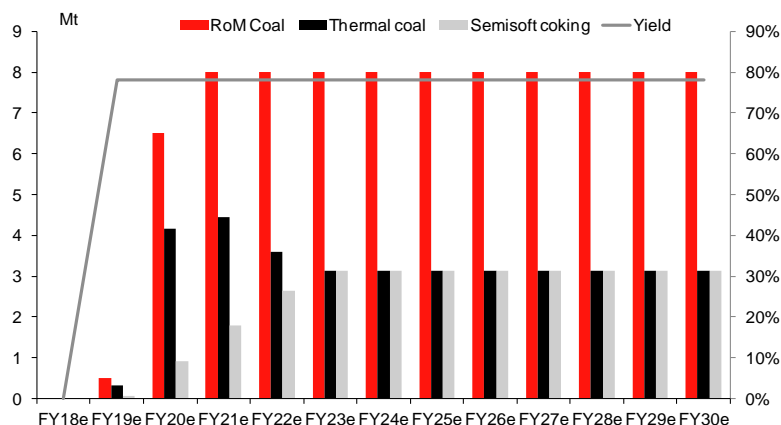


Source: Company data, Macquarie Research, November 2014

Flat, thick, consistent seams

Coal at Lublin occurs in a flat, thick, consistent and laterally continuous seams ranging in thickness from 1.0m to 4.6m at a depth of 800m to 900m. The large resource and thick coal seams at Lublin lend themselves to highly productive large-scale mining practices.

Fig 6 Modelled coal production and product splits



Source: Company data, Macquarie Research, November 2014

22-year mine life

Under the scoping study mine plan, 120.9Mt of clean coal is produced over a 22-year mine life with a \$37 per tonne steady state cost of production.

\$37 per tonne steady-state cost of production

Capex and the development timeline of the project are commensurate with its scale. Two ~1000m deep shafts will be required to access the coal with each estimated to cost ~US\$115m. The Coal Handling and Preparation Plant and underground capital and surface infrastructure are expected to cost US\$360m bringing the full development cost to US\$590m. First coal is expected until the first half of 2019 due to the long construction time for the shafts. However, this could potentially play out well for the project as its coal will enter the market at a time when production from Poland’s Silesian Basin and Germany’s Ruhr basin are in terminal decline.

US\$590m capex

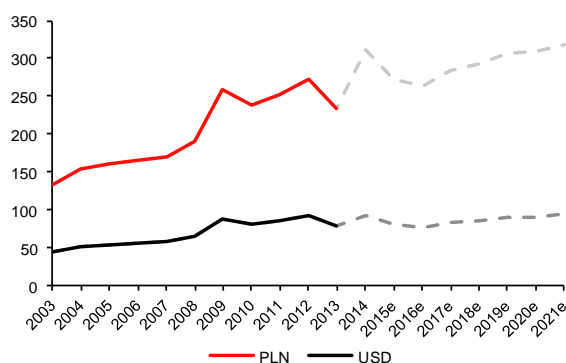
Premium quality coal

Premium thermal and semisoft coking coal

PDZ is targeting the premium market; clean coal from the 391 seam compares particularly well against the European ARA specification at high yields. PDZ is currently undertaking a marketing study to determine specifics of Lublin’s target customers, product split and pricing, but the broad strategy is to target domestic power utilities and steel manufacturers in Germany, Czech Republic, Slovakia and potentially Turkey.

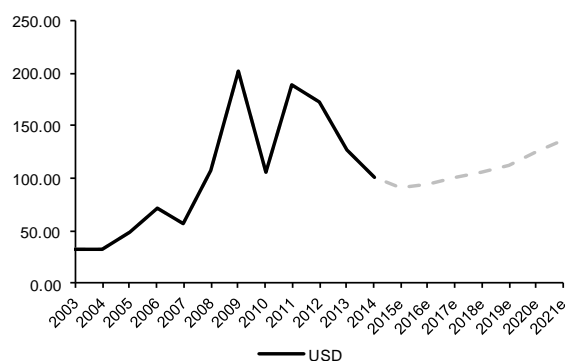
At this stage the company envisages 50% (3Mt) of production will be thermal coal sold into the European market and transported by rail. The other 50% will be semisoft coking coal with half of this sold into Europe and the remainder available for export and the seaborne market.

Fig 7 Polish thermal coal price and forecast ARA benchmark price (PLN and US\$)



Source: Company data, Macquarie Research, November 2014

Fig 8 Newcastle semisoft coking benchmark price (US\$)



Source: Company data, Macquarie Research, November 2014

European hard coal imports have increased in recent years as production capacity continues to decline

Lublin’s thermal coal is expected to be priced off the ARA benchmark. We forecast prices of US\$90 per tonne for ARA specification coal in 2019, when first coal is expected from Lublin. We assume semisoft coking products will be priced off the Newcastle semisoft coking benchmark.

Location and infrastructure – a competitive advantage over existing imports

The European power generation landscape is clearly changing and Europe’s future energy balance is unclear. Poland’s recently drafted energy policy to 2050 proposes to replace around half of its current coal-fired capacity, 80% of which is fuelled by brown coal, with nuclear and renewable sources. Conversely, Germany plans to shut down all its nuclear capacity by 2022 and is attempting large-scale implementation of sustainable energy under its ‘Energiewende’ programme, although this is proving complex and costly to the German economy.

Fig 9 European Hard Coal production and imports

	2013	2012	2011
Domestic production (Mt)	113.7	128.5	129.5
Hard Coal Imports (Mt)	216.0	213.5	199.0

Source: Company data, Macquarie Research, November 2014

That being said, European hard coal imports have increased in recent years as production capacity continues to decline. Germany is bringing eight new coal-fired plants online by 2015 and it appears coal-fired generation will remain an important part of the energy mix. However, future expansion of coal-fired capacity beyond that currently approved seems unlikely in the current environment.

Lublin’s coal will have a strong competitive advantage over imports

In our view, this enhances the attraction of a project like Lublin. We believe Lublin’s quality and cost advantages will be complemented by a significant freight differential due to its close proximity to the market and existing rail infrastructure. This will be a strong competitive advantage to coal currently imported from Russia, the Americas and Australia.

Fig 10 Lublin’s location and its target markets



Source: Company data, November 2014

Extensive heavy-gauge rail network

Poland has an extensive rail network, a mainline of which passes 15km to the south of Lublin. A number of independent freight operators are active; PDZ’s analysis of current tender rates freight charges to the German border of the port of Gdansk would be around US\$2.2/tonne/km, a total charge of around to US\$15/tonne.

Gdansk, the closest port to the project

Lublin products entering the seaborne export market would most likely do so through the Port of Gdansk, the closest port to the project. Alternative ports do exist but they are significantly smaller. Gdansk’s Dry Bulk terminal has an annual capacity of ~8Mt and can accommodate Baltmax (15m draft) vessels year round. According to PDZ’s transport study, port charges range from \$4.00-US\$6.50 per tonne.

Bogdanka – a direct benchmark

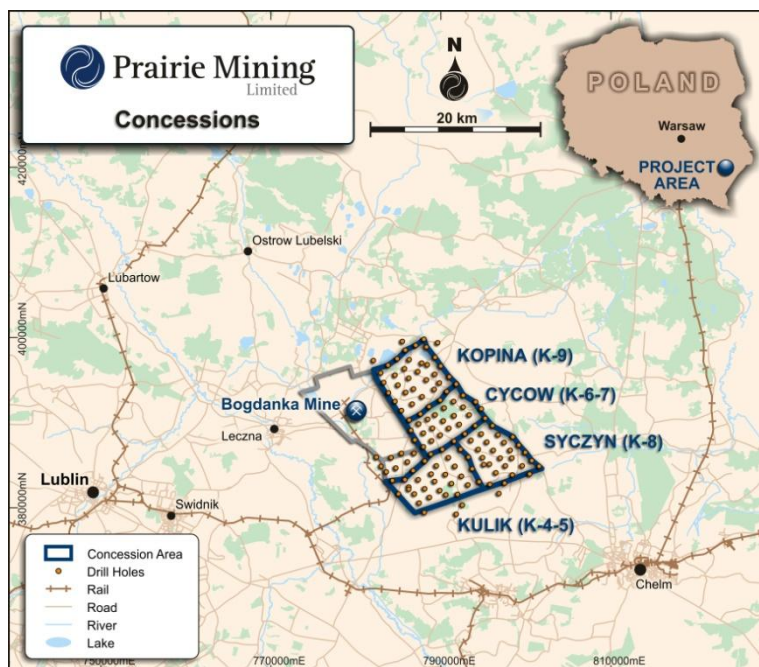
Existing large-scale coal mine ~10km from Lublin

Underlining the potential of the Lublin project is the existing Bogdanka mine. Bogdanka is located ~10km from Lublin, with mines at similar depths and has been in operation since 1982.

Bogdanka ratios

EBITDA margin	39.7%
EBIT margin	22.4%
Gross margin	24.0%
Net margin	17.4%
Return on Assets	8.6%
Return on Equity	13.4%

Fig 11 Bogdanka ~10km west of PDZ's licences



Source: Company data, November 2014

~8Mt in 2013 with plans for expansion to 12Mt in 2018

The mine provides a direct benchmark for the mining conditions and productivity levels that can be expected at Lublin. The Bogdanka mine is highly productive and produced ~8Mt in 2013 with plans for expansion to 12Mt in 2018. The mine is operated by Lubelski Węgiel Bogdanka (LWB-WAR) listed on the Warsaw exchange with a market capitalisation of A\$1.2bn. In FY13 LWB reported operating Ebitda of US\$1,000m and earnings of US\$100m from sales of 8.4Mt of 10% ash thermal coal. Key points of note from Bogdanka are:

FY13 operating Ebitda of US\$1,000 and earnings of US\$100m

- ⇒ Production expansion to 11.5Mtpa by 2015, upgrade Nadrybie shaft to increase production to 12Mtpa by 2018,
- ⇒ LWB plans to double company resources and extend mine life to 2050 targeting recoverable reserves of 450Mt, currently 237Mt,
- ⇒ Targeting 20% market share in Poland, 14% in 2014,
- ⇒ Current mining cost US\$43/t targeting a 15% reduction by 2017,
- ⇒ PLN600m (US\$174m) per year expansion programme between 2013-2020,
- ⇒ PLN350m (US\$100m) annual operating costs,
- ⇒ 2012 dividend payment of PLN172m (US\$50m), a 60% payout ratio. Dividend target for 2013-2015 60% payout ratio,
- ⇒ Average sale price for thermal coal in 2013 PLN234/t (US\$68.7/t) for a 10% ash product,
- ⇒ Coal yields 60-72%, 2013 average yield 69%,
- ⇒ 97% of coal sold is classified as fines,

The desirability of Lublin's coal resource was clearly demonstrated recently when Bogdanka attempted to gain a mining licence over a portion of PDZ exploration leases. The application and a subsequent appeal were both rejected by the Polish mines department which also issued a statement in support of PDZ and the legal framework under which exploration leases are held.

Valuation, recommendation, risks

Outperform rating and \$0.76/sh price target

We value the Lublin project at \$486m of \$0.64/sh, after unpaid capital, corporate costs and net cash we value PDZ at A\$579m or \$0.76/sh, using a sum-of-parts DCF methodology at a nominal 12% discount rate. Our price target of \$0.76/sh is equal to our valuation.

**Lublin project
valued at \$486m of
\$0.64/sh**

**\$0.76/sh sum-of-
parts valuation for
PDZ**

Fig 12 PDZ sum-of-parts valuation

NPV ¹²	A\$m	A\$ps
Lublin	486	0.64
Unpaid capital	223	0.29
Corporate	(141)	(0.19)
Net cash (debt)	11	0.01
Net Equity Value (@ 12% WACC)	579	0.76
Price Target	(1.0x NPV)	0.76

Source: Company data, Macquarie Research, November 2014

**Price target of
\$0.76/sh**

Our base model assumptions are broadly in line with those presented in the project scoping study. The key difference between our assumptions and those of the scoping study is the product mix and price achieved.

Fig 13 Model assumptions

Mine life	22 years
RoM coal production	8.0Mt
Thermal coal production	5.3Mt
Semisoft coking coal production	0.9Mt
Cash cost of production (including royalty)	US\$38.25/t
Sustaining capital (per tonne of washed coal)	US\$8.00/t
Pre-production capital	US\$616.5m
Polish corp tax rate	19%

Source: Company data, Macquarie Research, November 2014

Valuation is sensitive to pricing and product mix

We take a more conservative view on the potential to produce semisoft coking coal and the opportunity to sell coal into the seaborne market. We assume that initially 15% of ROM coal is suitable for export with a 50:50 split between thermal coal and semisoft coking coal, equating to 18% of total product sales. This grows over a five-year period to the targeted production mix of 3Mtpa thermal coal and 3Mt of semisoft coking with 50% of the semisoft sold into the seaborne market.

Our pricing assumptions are also more conservative: we assume a long-term real price for ARA thermal coal of US\$89/t with a resultant realised price of \$86.4 in Real 2014 dollars. Our long-term realised price for semisoft coking coal after rail costs to Gdansk and port charges is \$88 per tonne 10% lower than PDZ's scoping study.

**Conservative view
on semisoft coking
potential and
seaborne sales**

Fig 14 Assumed coal prices

Real US\$ 2014	Macq LT Price	Macq LT Realised price	PDZ LT Realised price	Variance
Thermal	89.0	83.0	86.4	-4%
Semisoft coking	105.0	88.1	98.0	-10%

Source: Company data, Macquarie Research, November 2014

**10% change in the
thermal coal prices
results in a 19%
move in our NPV**

Our valuation is sensitive to both commodity price and product mix. A 10% change in the thermal coal prices results in an average ~30% move in our earnings forecasts and a 19% move in our NPV. Our model is similarly sensitive to moves in the semisoft coking price.

Fig 15 Earnings and NPV sensitivity to price and product mix

Y/E June	FY18e	FY19e	FY20e	FY21e	FY22e	FY23e	FY24e	FY25e	NPV
10% change in ARA	0%	-11%	123%	50%	29%	22%	21%	20%	19%
10% change in Newcastle semisoft	0%	-3%	38%	29%	31%	30%	29%	27%	22%
10% change in A\$/US\$	(5%)	(4%)	(20%)	(13%)	(12%)	(12%)	(12%)	(11%)	(8%)
100% Thermal sales	0%	3%	(69%)	(60%)	(66%)	(66%)	(64%)	(62%)	(52%)

Source: Company data, Macquarie Research, November 2014

Product mix also has meaningful impact

Changing the product mix also has meaningful impacts, assuming all coal is sold as thermal coal in the European domestic market reduces our forecasts and NPV by 52%. Conversely an increase in the volume of coking coal in the sales mix increases our forecasts due to the higher forecast sales price.

Fig 16 WACC Sensitivity

Discount	8%	10%	12%
NPV A\$ m	997	753	579

Source: Company data, Macquarie Research, November 2014

Funding a key risk**Large capital requirement vs current mkt cap**

Given the large capital requirement versus the company's current market capitalisation, project funding is a clear risk. At this early stage, there are a number of different possible funding scenarios, exactly how this plays out will be driven by progress made on the project and the impact this has on PDZ's equity. Given the significant scale of the project and its strategic nature we believe that ultimately a large proportion of the project funding could be secured in the form of off-take prepayments and project debt. Consequently, we assume approximately 66% of the project capex is debt-funded. We assume A\$200m is raised in new equity to fund contingencies and working capital. We conservatively assume that this is raised at the current share price of \$0.37.

Fig 17 ~589m new shares under our funding scenario

Lublin Project funding scenario	A\$ raised	New shares
New equity	20	48.6
New equity	200	540.5
Debt	650.3	
Total	870.3	589.2

Source: Company data, Macquarie Research, November 2014

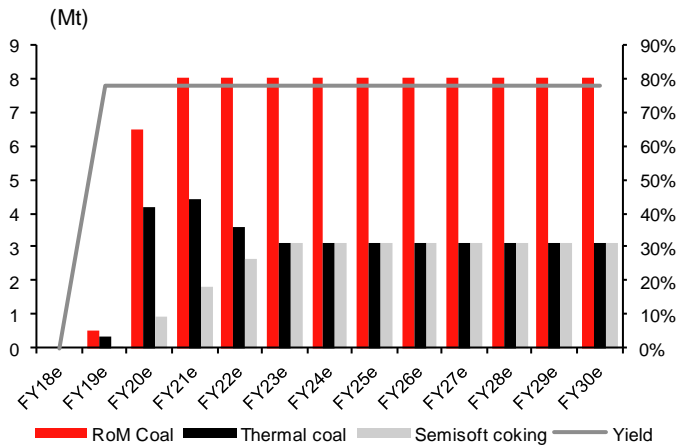
We assume \$220m in new equity

In the immediate term PDZ holds approximately 5.9m B2Gold shares (BTO CN, C\$1.98, Outperform, TP: C\$4.25, Michael Gray) from the takeover of Papillion Resources. Whilst BTO's share price has declined significantly recently, along with the rest of the gold sector, selling this holding does provide an alternative option to new equity. In the longer term, we assume further \$20m of it is raised in 2015 at a ~10% discount to the current share price to fund ongoing study work.

Hardening of negative sentiment cannot be discounted

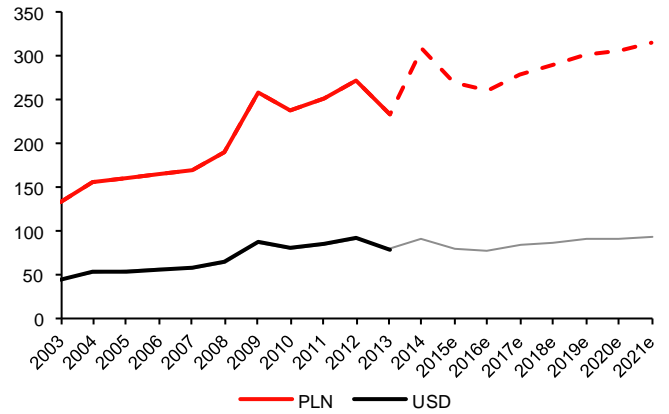
In addition to commodity price, product mix and funding risk, project execution also needs to be considered. Building Lublin will be a substantial undertaking. In our view though, with Bogdanka having proved the concept and significant industry improvements made since its construction in the 1970s, we see little risk to the technical completion of Lublin. Rather, we see risk around permitting and approvals for the project. Although we believe Lublin is a standout in terms of coal quality and project economics, making it a logical choice for development, a hardening in sentiment towards the coal industry within Poland cannot be discounted.

Fig 18 Modelled production and product mix



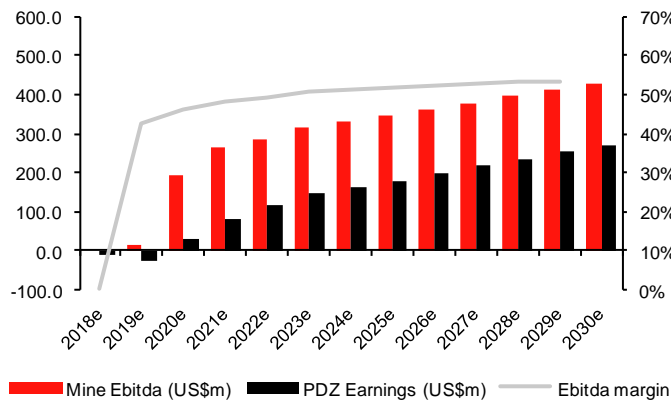
Source: Company data, Macquarie Research, November 2014

Fig 19 Bogdanka realised coal price and ARA forecast



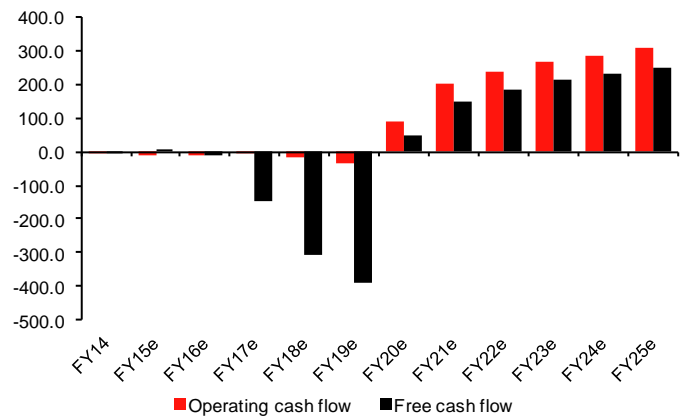
Source: Company data, Macquarie Research, November 2014

Fig 20 Mine Ebitda and company earnings



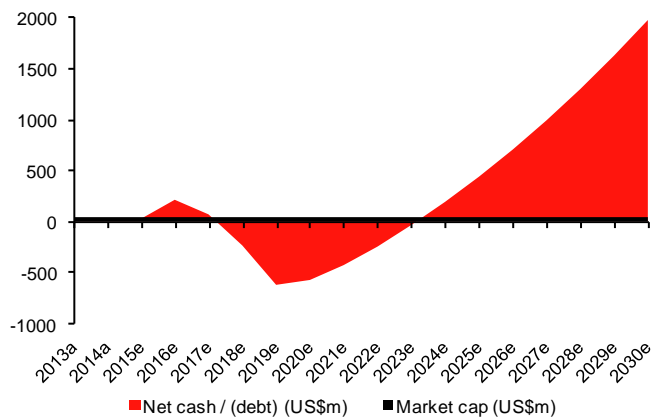
Source: Company data, Macquarie Research, November 2014

Fig 21 Operating and free cash flow



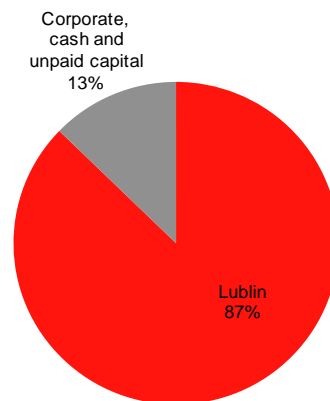
Source: Company data, Macquarie Research, November 2014

Fig 22 Cumulative cash generation



Source: Company data, Macquarie Research, November 2014

Fig 23 PDZ valuation breakdown



Source: Company data, Macquarie Research, November 2014

Appendices

Board and Management

Track record in the financing and development of large-scale coal projects

PDZ board and management team has an impressive track record in the financing and development of large-scale coal projects, including former executives of Coalspur and Aston Resources. The company's CEO is a qualified coal mine manager and former finance executive. In addition to PDZ's international executives the company has built a significant in-country presence including the former Chairman of Bogadanka, former executives of leading Polish coal mining companies, the former Deputy Ministers of the Environment and of Transport, Construction and Maritime Economy.

The below is abbreviated from www.pdz.com.au and recent ASX announcements regarding board and management appointments.

Board of directors

Mr Ian Middlemas Non-Executive Chairman

Mr Middlemas is a Chartered Accountant, a member of the Financial Services Institute of Australasia and holds a Bachelor of Commerce degree. He worked for a large international Chartered Accounting firm before joining the Normandy Mining Group where he was a senior group executive for approximately 10 years. He has had extensive corporate and management experience, and is currently a director with a number of publicly listed companies in the resources sector and was formerly Chairman of Mantra Resources and Papillion Resources.

Mr Benjamin Stoikovich Chief Executive Officer

Mr Stoikovich is a mining engineer and professional corporate finance executive. He has extensive experience in the resources sector gained from a unique career firstly as an underground Longwall Coal Mining Engineer with BHP Billiton where he was responsible for underground longwall mine operations and permitting, and more recently as a senior executive within the investment banking sector in London where he gained experience in mergers and acquisitions, debt and offtake financing. He has Bachelor of Mining Engineering; a Master of Environmental Engineering and an MSc in Mineral Economics from Curtin University. Mr Stoikovich also holds a 1st Class Coal Mine Managers Ticket from the Coal Mine Qualifications Board (NSW, Australia) and is a registered Chartered Engineer (CEng) and Chartered Environmentalist (CEnv) in the United Kingdom.

Mr Anastasios (Taso) Arima Executive Director

Mr Arima was a founder and former Executive Director of Coalspur Mines Limited having been instrumental in the identification and acquisition of Coalspur's coal projects, as well as the corporate strategy and marketing of the company. At the time of his resignation from the Board, Coalspur's fully diluted market capitalisation was approximately A\$1.2 billion.

Mr John Welborn Non-Executive Director

Mr Welborn is a Chartered Accountant with a Bachelor of Commerce degree from the University of Western Australia and holds memberships of the Institute of Chartered Accountants in Australia, the Financial Services Institute of Australasia, and the Australian Institute of Company Directors. Mr Welborn has extensive experience in the resources sector as a senior executive and in corporate management, finance and investment banking.

Mr Mark Pearce Non-Executive Director

Mr Pearce is a Chartered Accountant and is currently a Director of several listed companies that operate in the resources sector. He has had considerable experience in the formation and development of listed resource companies and has worked for several large international Chartered Accounting firms. Mr Pearce is also a Fellow of the Institute of Chartered Secretaries and a Fellow of the Financial Services Institute of Australasia.

Mr Dylan Browne Company Secretary

Mr Browne is a Chartered Accountant and Chartered Secretary who commenced his career at a large international accounting firm and has since worked in the corporate office of a number of listed companies that operate in the resources sector.

Mr Thomas Todd Non-Executive Director

Mr Todd was the Chief Financial Officer of Aston Resources from 2009 to November 2011. Prior to Aston Resources, Mr Todd was Chief Financial Officer of Custom Mining, where his experience included project acquisition and funding of project development for the Middlemount project to the sale of the company to Macarthur Coal. A graduate of Imperial College, Mr Todd holds a Bachelor of Physics with first class Honours. He is a member of The Institute of Chartered Accountants in England and Wales and a graduate of the Australian Institute of Company Directors. Mr Todd Hannigan, former CEO of Ashton resources has been appointed

Polish Supervisory Board**Mr Janusz Jakimowicz** President & Chairman of PD Co z o.o.

Mr Jakimowicz is a Geologist with over 30 years experience and a proven ability in the identification, exploration and appraisal of new resource projects. He has been instrumental in identifying, negotiating and applying for the coal concessions and progressing the development of the Lublin Coal Project in Poland.

Dr Jacek Jeziński Supervisory Board of Pd Co z o.o.

Former Chief National Geologist and Deputy Minister of Poland's Ministry of Environment and previously a Director on the Supervisory Board of Kompania Weglowa SA ("KW"), Poland's largest coal mining company.

Mr Artur Kluczny Supervisory Board of Pd Co z o.o.

Former head of the secretariat of the Polish prime minister's office and Deputy Chairman of the Board of the Polish Financial Supervision Authority ("KNF") responsible for capital markets supervision (Warsaw Stock Exchange).

Mrs Patrycja Wolińska-Bartkiewicz Supervisory Board of PD Co sp. z.o.o

Mrs Bartkiewicz was previously the Deputy Minister (Undersecretary of State) at Poland's Ministry of Transport, Construction and Maritime Economy, and specialized in co-ordinating EU funding for multi-billion dollar infrastructure projects across Poland. Mrs Bartkiewicz will be focused on successful advancement of various aspects of project permitting and infrastructure for the Lublin Coal Project as well as community liaison

Mr Witold Woloszyn Environmental Manager

Mr Woloszyn has over 20 years' experience in preparing Environmental Impact Assessments ("EIA") in Poland for local, regional and national authorities. He was previously Chair of the Lublin Regional EIA Commission and member of the Polish National Commission for EIA's.

Mr Hugo Schumann Executive - Corporate Development (London)

Mr Schumann has seven years of corporate development and capital markets experience in the natural resources sector. He holds an MBA from INSEAD, is a CFA Charterholder and holds a Bachelor of Business Science from the University of Cape Town.

Significant in-country presence including the former Chairman of Bogadanka

Lublin Scoping Study

Strategic holding in a new basin

Lublin Basin of southeast Poland

The Lublin coal Project is located in the Lublin Basin of southeast Poland. Commercial coal production from the basin commenced in 1982 but development has been limited with only one mine in operation at Bogdanka. That being said Bogdanka is a substantial operation producing 8.4Mt of coal in 2013 with plans to expand to 12Mt in 2017.

Marketing Study and Pre-Feasibility Study underway

PDZ has completed a Scoping Study for the project and is currently completing a Marketing Study and Pre-Feasibility Study.

Fig 24 Lublin project location



Source: Company data, November 2014

Substantial high-quality coal resource

1.6Bt high-quality coal thermal and semisoft coking coal

PDZ holds four exploration permits containing a 1.6Bt high-quality coal thermal and semisoft coking coal suitable for sale to power utilities and steel manufacturers. The resource has been estimated from new drilling and data for 200,000m of historic drilling completed between the 1960's and 1980's by Polish state agencies. The resource comprises coal from 21 seams but the most significant seams in terms of future mining are the 391 and 389 seams. These seams contain 418Mt of in-situ coal and provide the 158Mt of ROM coal mining inventory used in the Scoping Study.

Fig 25 Lublin Coal resource estimate - Net Seam thickness

Seam	Indicated In-Situ Coal (Mt)	Inferred In-Situ Coal (Mt)	Total In-Situ Coal (Mt)
391	137	177	314
389	20	84	104
Other seams		1,141	1,141
Total	157	1,402	1,559

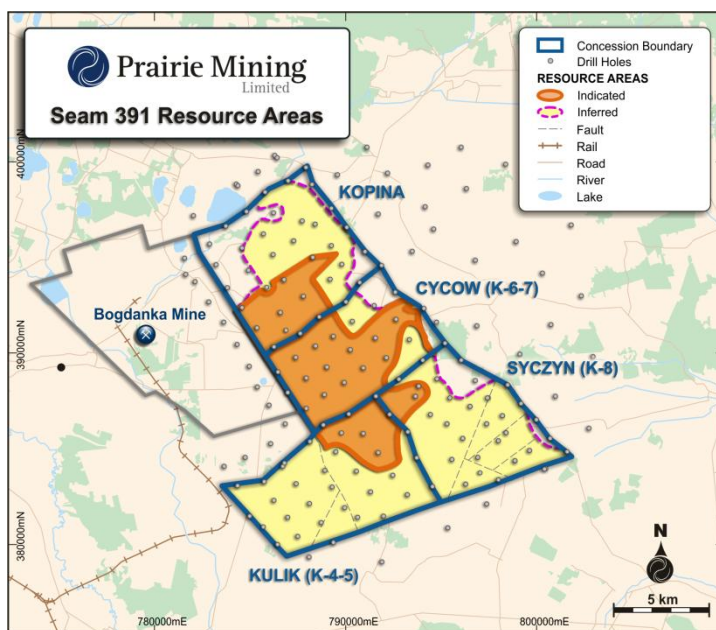
Source: Company data, Macquarie Research, November 2014

Main seams 800m and 900m deep

Coal at Lublin occurs in flat, thick, consistent and laterally continuous seams ranging in thickness from 1.0m to 4.6m with an average of 1.4m. Seams included in the resource estimate extend from 624m to 1,091m, the 391 and 389 seams are found between 800m and 900m. The coal units are overlain by a Jurassic age aquifer.

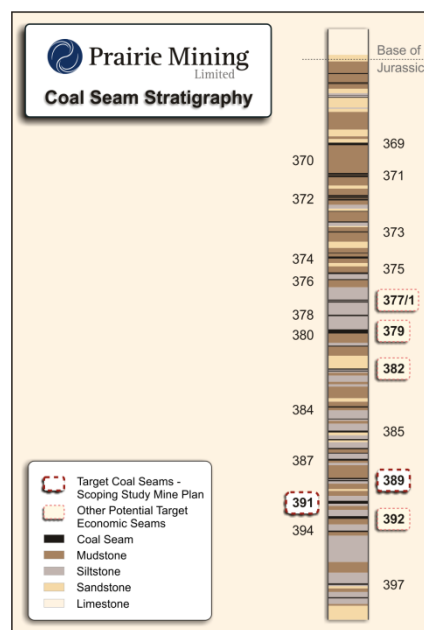
The 391 and 389 seams are the most attractive in terms of mining parameters and quality, particularly the 391, which has been shown to have the potential to produce semisoft coking coal.

Fig 26 391 seam resource



Source: Company data, November 2014

Fig 27 Lublin seam stratigraphy



Source: Company data, November 2014

391 seam compares particularly well against the European ARA specification

Unwashed coal from the 391 and 389 seams would likely be marketable but PDZ is targeting the export market. Washability tests on coal samples from four new drill holes drilled across the concessions illustrate the high quality of the coal. Clean coal from the 391 seam compares particularly well against the European ARA specification with calorific values ranging for 7,526-7,830kcal versus the ARA spec of 6,700kcal, ash at 2.0-2.7% is significantly lower than the ARA standard of 16% and volatiles are below the upper limit of 37%. Of note are the very high yields achieved in the test work, the low ash content and also the reduction in sulphur content with washing.

Fig 28 391 Washed Coal Analysis (Air Dried)

Drill Hole	Calorific value (kcal/kg)	Free swelling index	Ash (%)	Volatile Matter (%)	Inherent Moisture (%)	Sulphur (%)	Yield at 1.35g/cm3 Float (%)
Syczyn 7	7,830	5	2.40	36.7	3.3	0.70	97
Kopina 1	7,526	4	2.00	35.6	2.3	0.90	95
Kulik	7,806	6	2.20	36.4	2.7	1.00	94
Borowo	7,809	5	2.70	33.2	2.4	1.00	75

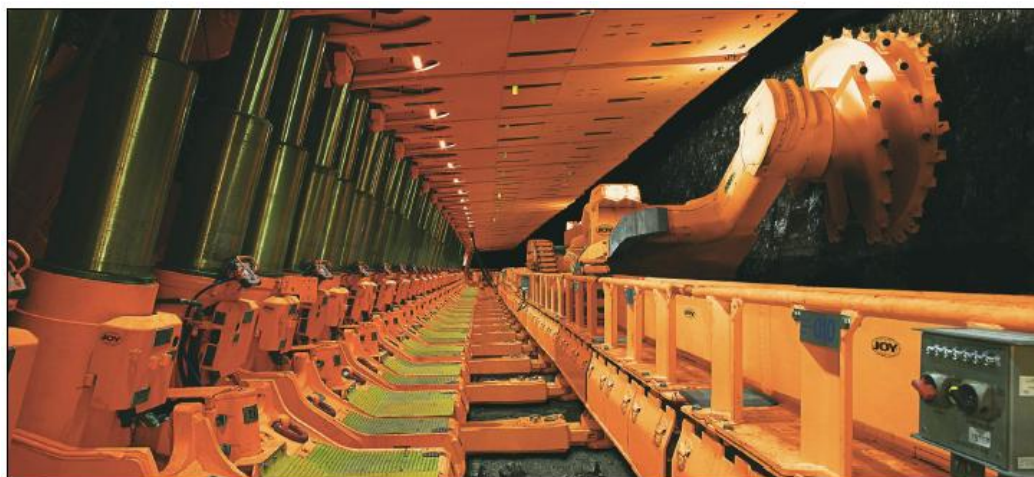
Source: Company data, Macquarie Research, November 2014

Longwall retreat mining using fully automated longwall ploughs or shearers

Large-scale underground mining

The large resource and thick, flat lying coal seams at Lublin lend themselves to highly productive large-scale mining practices. PDZ's scoping study envisaged mining by longwall retreat mining using fully automated longwall ploughs or shearers. The study assumes the use of steel arched roadways driven by roadheaders for main and lateral headings and roof bolted roadways driven by continuous miners for longwall gateroads. Study work suggests that longwall faces of 300m and longwall runs of 5,000m should be achievable.

Fig 29 Longwall shearer



Source: Company data, November 2014

7.7Mtpa steady-state run rate with two longwall units running in parallel

The scoping study mine plan includes total coal production of 157.7Mt of raw coal and 120.9Mt of clean coal over a 22 year mine life. Coal comes predominantly from the 391 seam with lesser amounts from the 389. At the expected 7.7Mtpa steady state run rate two longwall units operate at the same time.

Of the other 21 seams present there are substantial resources of mineable coal in the 337/1, 379, 382 and 392 seams and it is likely that Lublin's mine life will extend well beyond the 22 years envisaged in the study.

Two 100m deep concrete lined shafts

Two 8-metre concrete-lined shafts will be required to access the coal seams and bring coal to surface; these will be sunk to ~1,000m depth. Coal will be processed through a Coal Handling and Preparation Plant (CHPP). The CHPP will be designed to produce products suitable for both the local and export sales using dense media separation and cyclones, hydrosizers and froth floatation. Saleable coal will be loaded onto trains via a new 15km rail spur connecting to the existing network and then railed to customers or port for export.

Fig 30 Lublin capex

Lublin capital estimates	US\$m
Shafts	227.4
Underground development	49.8
Underground infrastructure	73.8
Pre-production	84
CHPP and waste	74.9
Surface infrastructure	78.2
Subtotal	588.1
Contingency	96.4
Total	684.5

Source: Company data, Macquarie Research, November 2014

US\$685m capex inclusive of US\$95m contingency

Total capital cost for construction of the mine at Lublin is estimated to be US\$685m inclusive of US\$95m contingency and owners cost. This assumes that the mining fleet will be leased and that a third party would build and operate the rail spur.

Poland has an extensive heavy gauge rail network

Mainline passes 15km to the south of Lublin

Competitive advantage to imported coal

Rail and Port infrastructure study

Although new coal-fired generation capacity is being constructed in the region, eight new plants are expected to come on line in Germany before 2015; future expansion of coal fired capacity seems unlikely in the current environment. In our view it therefore seems likely that coal from Lublin will need to displace existing imports in order to achieve targeted sales volumes.

Fig 31 European Hard Coal Market

	2013	2012	2011
Domestic production (Mt)	113.7	128.5	129.5
Hard Coal Imports (Mt)	216.0	213.5	199.0

Source: Company data, Macquarie Research, November 2014

In our view, key to achieving market penetration is Lublin's proximity to existing rail infrastructure. This and the freight differential it should provide will be a strong competitive advantage to coal currently imported from Russia, Australia and North America. Additionally European hard coal production capacity continues to decline whilst imports have increased suggesting this advantage should increase over time.

Fig 32 Export locations



Source: Company data, November 2014

Poland has an extensive rail network, a mainline of which passes 15km to the south of the Lublin project. A number of independent freight operators are active; PDZ's analysis of current tender rates freight charges to the German border or the port of Gdansk would be around US\$2.2/tonne/km, a total charge of around \$15/tonne.

Gdansk's Dry Bulk terminal has an annual capacity of ~8Mt

Lublin products entering the seaborne export market would most likely do so through the Port of Gdansk, the closest port to the project. Alternative ports do exist but they are significantly smaller. Gdansk's Dry Bulk terminal has an annual capacity of ~8Mt and can accommodate Baltmax (15m draft) vessels year round. According to PDZ's transport study port charges range from \$4.00-US\$6.50 per tonne.

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Outperform – return >3% in excess of benchmark return
 Neutral – return within 3% of benchmark return
 Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

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Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

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Macquarie - Canada

Outperform – return >5% in excess of benchmark return
 Neutral – return within 5% of benchmark return
 Underperform – return >5% below benchmark return

Macquarie - USA

Outperform (Buy) – return >5% in excess of Russell 3000 index return
 Neutral (Hold) – return within 5% of Russell 3000 index return
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Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high-highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

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* Applicable to Asia/Australian/NZ/Canada stocks only

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

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Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
 Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / epowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 September 2014

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	48.73%	59.90%	35.63%	42.00%	60.28%	42.11%	(for US coverage by MCUSA, 6.09% of stocks followed are investment banking clients)
Neutral	33.76%	24.97%	39.08%	52.67%	36.17%	38.42%	(for US coverage by MCUSA, 8.12% of stocks followed are investment banking clients)
Underperform	17.52%	15.13%	25.29%	5.33%	3.55%	19.47%	(for US coverage by MCUSA, 0.51% of stocks followed are investment banking clients)

PDZ AU vs Small Ordinaries, & rec history



(all figures in AUD currency unless noted)

BTO CN vs TSX, & rec history



(all figures in CAD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, November 2014

12-month target price methodology

PDZ AU: A\$0.76 based on a DCF methodology

BTO CN: C\$4.25 based on a DCF methodology

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Date	Stock Code (BBG code)	Recommendation	Target Price
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