



# Banpu DCF and multiples valuation analysis

Banpu Disclosure and Valuation Methodology Workshop



AWR Lloyd

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MAY 2012

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# Agenda

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1. Objectives
2. DCF analysis
3. SOTP multiples analysis
4. Who we are

# Agenda

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1. Objectives

2. DCF analysis

3. SOTP multiples analysis

4. Who we are

# Workshop objectives

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1. To use publicly available information from Banpu and others sources to develop DCF and multiples-based analysis of Banpu; sources:
  - Banpu results presentation (with new disclosure template) for Q1 2012
  - Previous Banpu results 'Focus' sections
  - Other publicly available information on comparable companies and industry websites
2. To 'test' Banpu's new disclosure template and identify possible areas for improvement
3. To seek feedback from the analyst and investor community in relation to:
  - Their preferred valuation methodologies for valuing Banpu
  - Potential areas for improvement in Banpu's disclosure

# Agenda

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1. Objectives

2. DCF analysis

3. SOTP multiples analysis

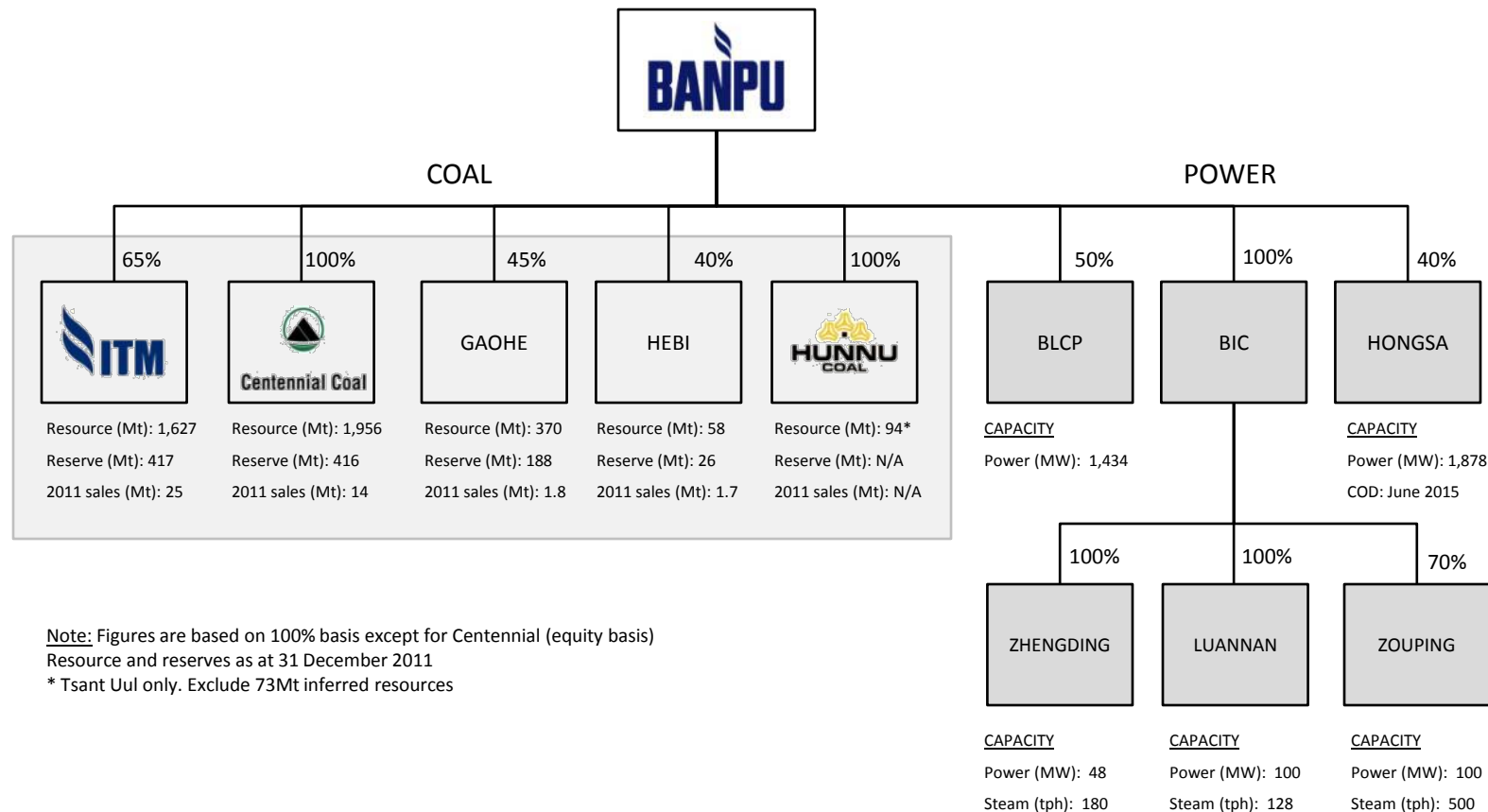
4. Who we are

# Overall value structure

## Portfolio of thermal coal and coal-fired power assets

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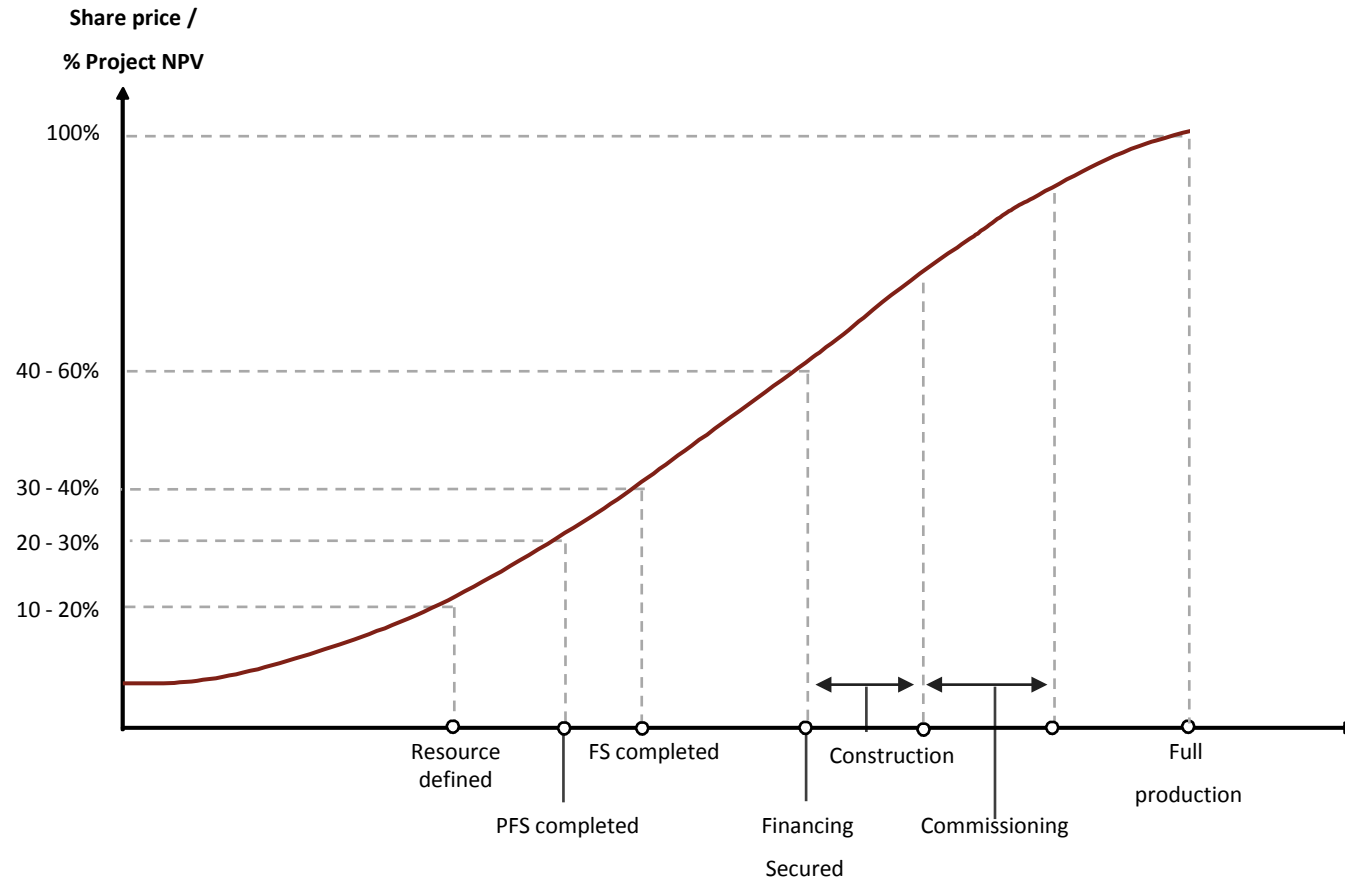
# Project development risk NPV curves

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Developing projects are valued at a discount to their full potential net present value

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Source: "Financing the Development of Mining Projects", RFC, 12 July 2001, Expo Minerva, Venezuela



# ITM: production forecast

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## Life of mine and resource conversion potential

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**RESERVE, RESOURCES, AND CONVERSION POTENTIAL**

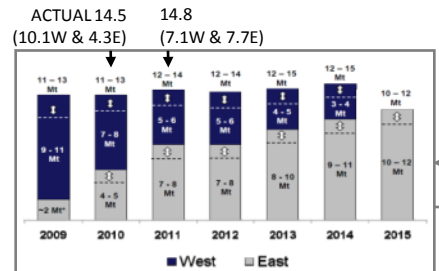
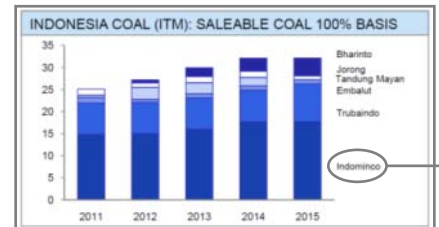
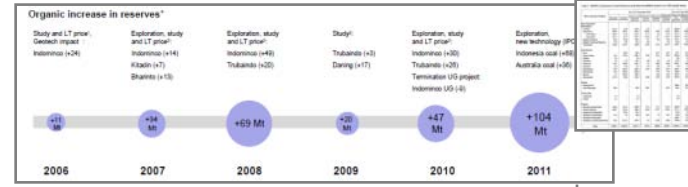
**2012-2015 PRODUCTION FORECASTS**

Model until reserves depleted  
Account for potential for further conversion?

**OVERALL**  
4-year outlook provided  
Breakdown of Indominco, Bharinto and Tandung Mayan is available

**INDOMINCO BREAKDOWN**  
Actual in 2010 and 2011 higher than guidance in 2009. Additional tonnage came from West block

**BHARINTO BREAKDOWN**  
Looks roughly in line with the 5-years plan



Track record for reserves upgrade

Production at west block was more than original plan presented in 2Q09 QRP

**SOURCES**

Focus section (Banpu's 4Q11 presentation)  
Reserves statement

Coal operation (Banpu's 1Q12 QRP)

Focus section (Banpu's 2Q09 presentation)

Focus section (Banpu's 2Q11 presentation)

# ITM: stripping ratios

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Historical numbers may not be a good indicator for future stripping ratios

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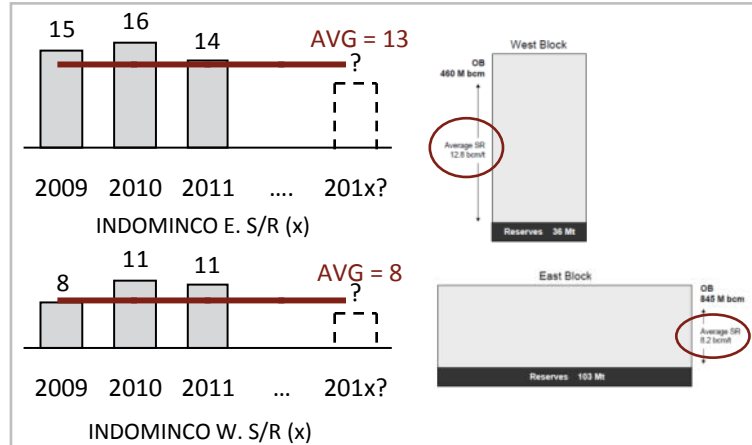
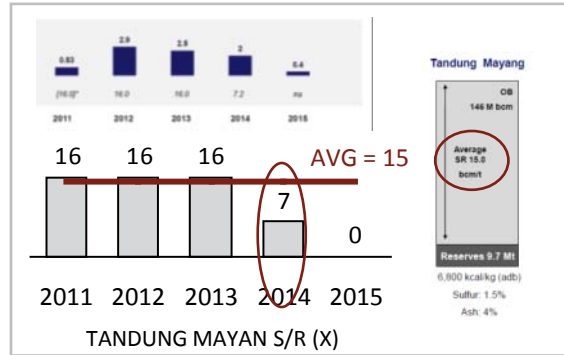
NOTE ON STRIPPING RATIO

Historical S/R is not necessarily a good guidance for future S/R

Stripping ratios higher than avg. implies lower stripping ratios in the future

Indominco stripping ratio should be lower in the longer term – actual S/R are higher than avg. S/R shown in 2009 focus section...

... but this may somewhat be off-set from deeper reserves from IPCC



SOURCES

Focus section 2Q11 (Bharinto, Tandung Mayan)

Focus sections 2Q09 (Indominco)

Focus sections FY11 (Reserves update)

# ITM: operating cash cost

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## Estimate OB removal cost

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**OPERATING CASH COST BY MINE (US\$/t)**

EBITDA numbers exclude financing and derivative gain/loss

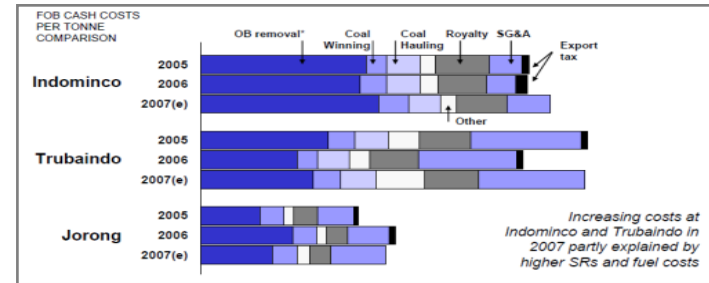
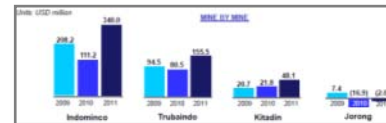
**BREAKDOWN**

- Major cost components are (a) OB removal (driven by S/R) and logistics in SG&A (driven by distance and mode of transportation)

OB removal cost can be estimated by

A) Calculate cash production cost

B) Estimate OB removal percentage from production cost



**SOURCES**

- Financial review ITMG's analyst presentation
- Focus section (Banpu's 3Q07 presentation)

Estimated from %royalty x ASP

**CASH PRODUCTION COST = COGS - royalty - D&A**

Cost of sale (Bt. million)	2011	2010
Indomnico	(21,992)	(19,843)
Trubaindo	(11,145)	(7,321)
Jorong	(1,872)	(960)
Kikasin	(1,837)	(1,496)
Tanjung Melayu	(419)	-
COGS from INDO	(36,866)	(29,620)
COGS from CEY	(21,887)	(4,394)
Coal-Thai	(22)	(86)
Total COGS from coal business	(57,976)	(34,112)
COGS from power business	(4,789)	(4,069)
COGS from other business	(275)	(459)
Total cost of sale (Bt. million)	(62,960)	(38,640)

ir pada 31 Desember 2011/For the year ended 31 December 2011		2011		2010	
25,409	10,877	11,945	447	2,942	-
293	2,521	6,590	727	415	-
					51,620
					Depreciation
					Amortisation
					10,546

- COGS EX ROYALTIES** Banpu's result highlight (Banpu website or SET) D&A
- Segment reporting (ITMG's note to financial statement)

**CURRENT OB COST = CASH PRODUCTION COST X OB%**

- Focus section of Banpu's 3Q07 presentation

# ITM: operating cash cost

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Adjust opex with future stripping ratios and fuel cost

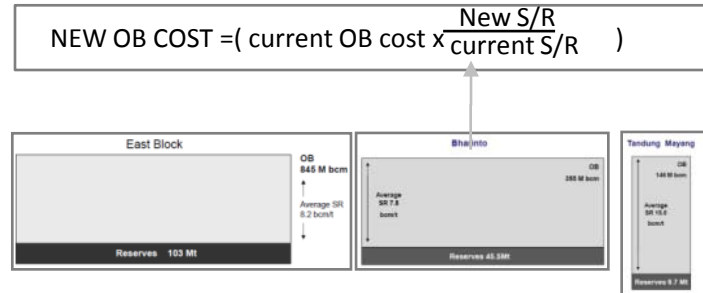
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**OPERATING CASH COST BY MINE (US\$/t)**

**STRIPPING RATIO**

- Adjust OB costs with new stripping ratio
- W. Block and E. Block OB cost can also be estimated separately (Indominco's OB cost is likely to be lower when production from W.block decreases)

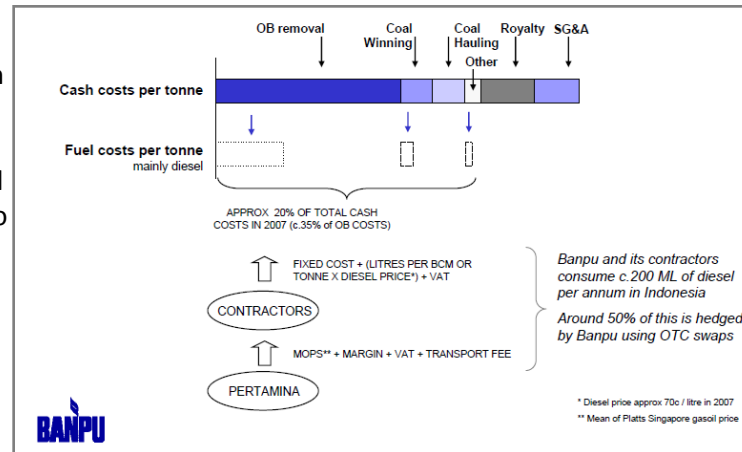


**SOURCES**

Focus sections (Indominco, Bharinto and TDYM)

**FUEL COST**

- Concept presented in 2007 focus section (Indominco only)
- May need to add fuel portion for Trubaindo barging
- Diesel price in 2007 vs. now – proportion should be higher at the current



Focus section of Banpu's 3Q07 presentation

# ITM: average selling prices forecast

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ASP by mine as a % discount (premium) to benchmark coal prices

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**COAL SPECIFICATION BY MINE**

- Qualification (esp. CV) impacts ASP
- Basis (GAD or GAR)
- Different by mines

Parameters	ITM			
	MCV11	MCV16	ICV11	
A-As Received (AR)				
Total Moisture	%	12.50	12.00	16.00
Gross Calorific Value	Kcal/kg	6,951	6,860	5,932
Net Calorific Value	Kcal/kg	6,054	6,355	5,006
Hydrogen	%	4.36	4.58	4.54
Oxygen	%	10.28	10.35	10.36
Ash	%	5.37	4.68	5.69
Volatile Matter	%	38.58	38.38	37.49
Total Sulfur	%	0.75	1.09	0.76

Product specification (ITM website)  
 Indominco west block and east block (GAD) (3Q07 focus section)  
 Bharinto and TDMY (GAD) (2Q11 focus section)

**ASP (DISCOUNT TO BENCHMARK COAL PRICE)**

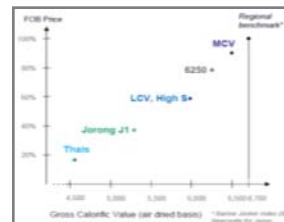
- Actual
- Incorporate other factors (e.g. blending synergies and impact from contracts)

	2011	2010
<b>Sales revenue (Bt. million)</b>		
MM	43,209	34,268
Trubaindo	23,085	14,838
Jorong	2,775	1,488
Kitadin	3,421	2,735
Tandung Mayang	1,604	
Sales revenue - INDO	74,093	53,329
Sales revenue - CEY	32,751	6,498
Sales revenue - Thai	30	74
Total revenue from coal business	106,874	59,901
Revenue from power business	5,236	4,865
Revenue from other business	293	520
Total revenues (Bt. million)	112,404	65,285

- HPB
- Not benchmark but provides guidance for several grades (Indominco East block, Trubaindo, and Jorong)

NO	MEREK DAGANG/ BRAND	KUALITAS TYPICAL				HPB MARKER (US\$/ton)
		CV (kcal/kg GAR)	TM (% ar)	TS (% ar)	Ash (% ar)	
1	Gumung Bayan I	7,000	10.0	1.0	15.0	109.81
2	Prima Coal	6,700	12.0	0.6	5.0	108.32
3	Pinang 6150	6,200	14.5	0.6	5.5	97.67
4	Indominco IM East	5,700	17.5	1.6	4.8	83.33
5	Melawan Coal	5,400	22.5	0.4	5.0	79.08
6	Envirocoal	5,000	26.0	0.1	1.2	73.28
7	Jorong J-1	4,400	32.0	0.3	4.2	59.07
8	Ecocoal	4,200	35.0	0.2	3.9	53.66

- Focus section
- Provide analysis on price to quality relationship against benchmark coal price



**SOURCES**

- Marketing section (ITMG's website)
- Focus section (E.Block, W.Block, Bharinto, TDMY)
- Historical (banpu's result highlight)
- HARGA PATOKAN BATUBARA (HPB) (ESDM website <http://mail.djmbp.esdm.go.id/files/>)
- Focus section (Banpu's 2009 analyst presentation)

# ITM: capex and net debt

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CAPEX

NET CASH

- Only the growth capex is shown
- Need to account the operating improvement that the capex is intended to bring about in the model

PROJECT NAME	PROGRESS	Total CAPEX 2012 – 15 only (€US\$m)	2012	2013	2014	2015
Bharinto	Production stage	100	[Progress bar from 2012 to 2015]			
IMM - East block IPCC System	Feasibility Study	185	[Progress bar from 2012 to 2015]			
BoCT expansion to 30 Mtpa	Feasibility Study	40	[Progress bar from 2012 to 2015]			
Bunyuul port expansion	Feasibility Study	20	[Progress bar from 2012 to 2015]			



**SOURCES**

Coal operations:  
Indonesia coal  
(Banpu's 1Q12 presentation)

Banpu group net debt breakdown  
(Banpu's 1Q12 presentation)

# Centennial: reserves and production

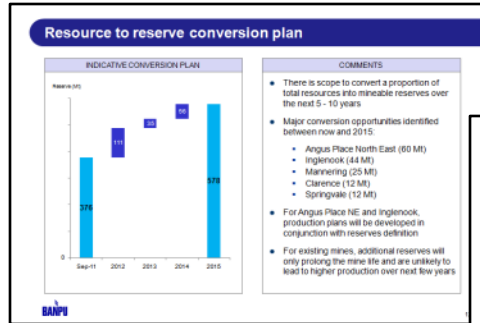
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Estimate domestic and export portion

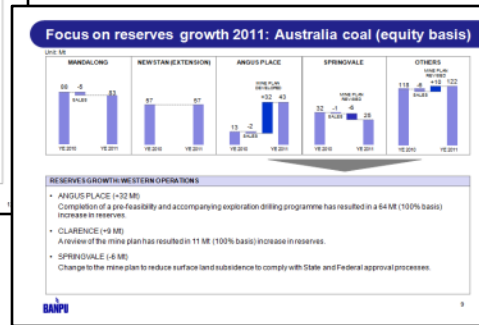
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**RESOURCES, RESERVES AND CONVERSION POTENTIAL**

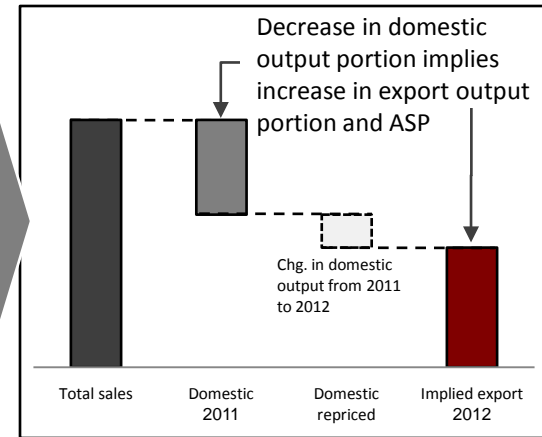
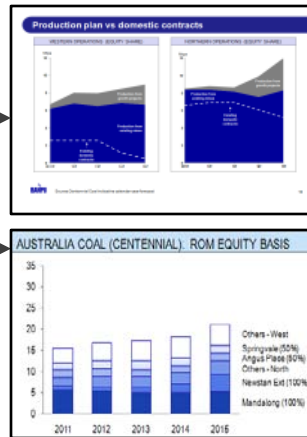


Potential conversion in the future



**2012-2015 PRODUCTION FORECASTS AND SALES MIX**

Domestic contract repricing guidance and indicative 5-year output targets can imply increase in export output in 2012-2015



**SOURCES**

- Focus section 'Centennial update' (Banpu's 3Q11 results presentation)
- Focus section 'Reserves upgrade' (Banpu's 2011 results presentation)

- Focus section 'Centennial update' (Banpu's 3Q11 results presentation)
- Coal operations (Banpu's 1Q12 results presentation)

# Centennial: cost structure, capex and gearing

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## Domestic and export cost?

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**COST STRUCTURE**

**CAPEX**

**NET DEBT**

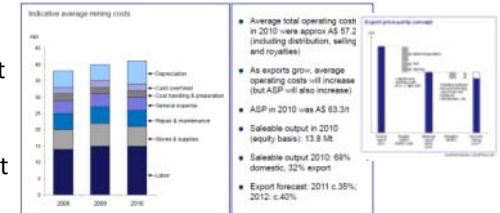
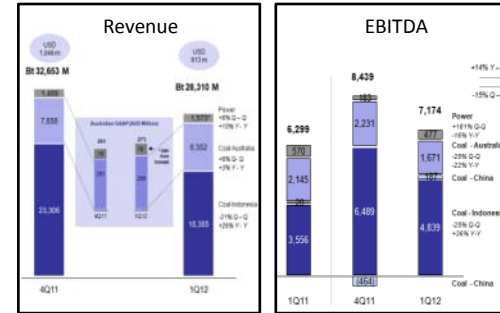
### POTENTIAL COST BREAKDOWN?

- 1) Cash mining cost (A\$/t) =  $\frac{\text{Revenue} - \text{EBITDA} - \text{Royalty}}{\text{Sales volume}}$
- 2) Royalty is c.7% of revenue
- 3) Additional export costs (i.e. washing, logistics) from export price parity concept

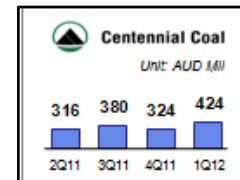
Cash costs likely to be higher with more export  
 Cost in repricing slide can help estimating export cost

- Export cost = domestic cost + A\$30-35/t?
- (Dom. cost x dom. Sales) + (Export cost x export sales) = cash cost

Discretionary capex but no sustaining capex



PROJECT NAME	PROGRESS	Total CAPEX 2012-15 only (€A\$m)	2012	2013	2014	2015
Western infrastructure	Feasibility Study	55				
Newstan extension and Northern washery upgrade	Construction phase	480				
Jayus Place extension	Pre-feasibility Study	90				2016



### SOURCES

- Financial summary (Banpu's results presentation)
- Focus section 'Centennial Strategic Plan' (Industry knowledge, Banpu's 1Q11 results presentation)
- Coal operations (Banpu's 1Q12 results presentation)
- Coal operations (Banpu's 1Q12 results presentation)
- Appendices (Banpu's 1Q12 results presentation)



# Centennial: average selling prices

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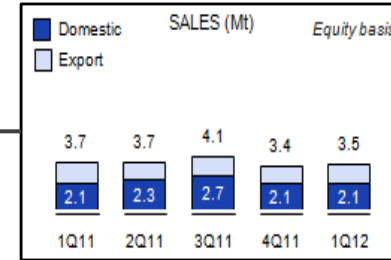
## ASP for domestic and domestic reprice

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**AVERAGE SELLING PRICE**

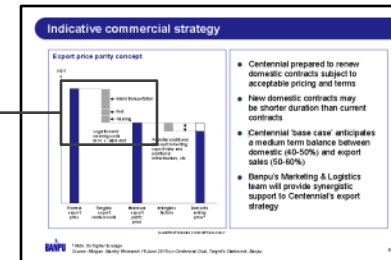
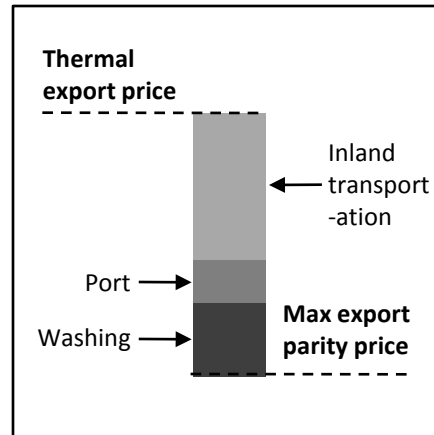
BJI 100%	US\$	121.5
FX (US\$/A\$)		1.03
Estimated export ASP	A\$	118.0
Export 2011	Mt	5.7
Revenue 2011	A\$	1074
- Export		672
- Domestic		401
Domestic 2011	Mt	9.2
Estimated domestic ASP	A\$	43.6



Estimate domestic ASP by assuming export price (BJI).

Based on Thai GAAP (excl. derivative gains)

**REPRICING**



**Export price parity concept :**

Max. export parity price = FOB export – c. A\$40/t?

**SOURCES**

- Financial summary (Banpu's 1Q12 results presentation)
- Focus section 'Centennial Strategic Plan' (Industry knowledge, Banpu's 1Q11 results presentation)

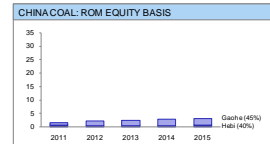
## Will the margin at full production improve?

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**PRODUCTION**

- Full production in 2014?
- Reserves support 30 years minelife



**ASP**

- Difficult to guess ASP and cost without knowing how products will be sold and to which market but can guess margin? (e.g. better or worse margins compared to other mines)

ASP (US\$/t)	2009	2010	2011
BJI	72	99	121
Danling	79 (109%)	95 (96%)	
Hebi	85 (118%)	108 (109%)	74 (61%)
Gaohe			114 (94%)

Cost (RMB/t)	2009	2010	2011
Danling	243	298	
Hebi	408	480	482
Gaohe			469

**SOURCES**

Coal operations (1Q12 QRP)

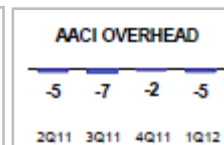
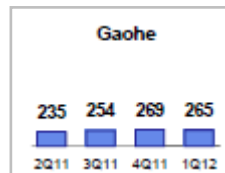
Historical results (previous QRP)

**CASH COST**

- Gaohe (2% lump, 37% PCI, 60% high CV thermal), 6Mt production – economy of scale?
- Should at least have better margin/t compared to Hebi?

**GAOHE NET DEBT AND AACI O/H**

- Overheads not included in Hebi or Gaohe's financials
- \$2-7m per quarter



EBITDA breakdown (1Q12 QRP)

## Will 2011 performance come to an end?

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### 2012-2015 PRODUCTION FORECASTS

- 1.5 – 1.7Mtpa in 2009 – 2011

### AVERAGE SELLING PRICES

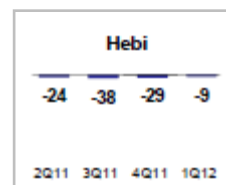
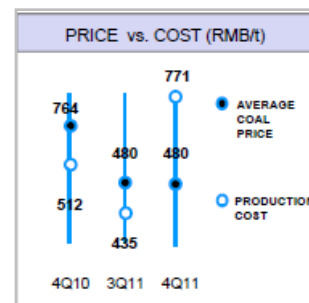
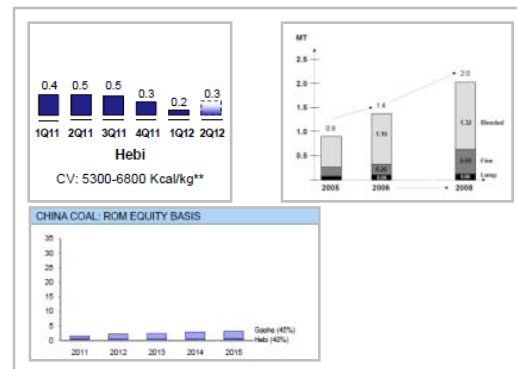
- ASP provided.
- Intl. prices not ideal for short term forecast but should be okay for long term?
- 2011 performance to continue?

### CASH COST

- Revenue less production cost reconciles with EBITDA
- High spending on Q4 – cash basis rather than accrual (safety according to govt. regulation?)

### NET CASH

- \$9m at end of 1Q12



### SOURCES

Coal operations (1Q12 QRP)

Focus section (1Q06 QRP)

Previous QRPs (Banpu's 1Q12 results presentation)

# Hunnu: revenues

ILLUSTRATIVE ONLY

Lots of information on coking coal but not thermal coal producer in Gobi area – South Gobi?

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RESERVES

- Thermal or coking?
- Only resources / no reserves
- How much will be converted
- Based on latest samples not average of the deposit

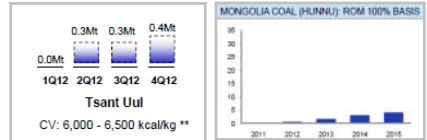
PRODUCTION

- 5Mt by 2015
- From which project?
- Stripping ratio?

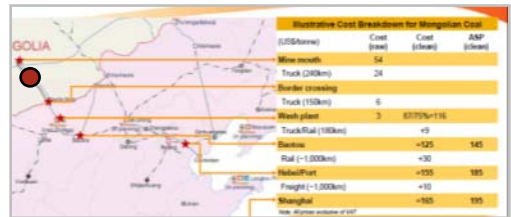
ASP

- Most producers focus on coking coal.
- Point of sales (ex-mine, at border, FOR)?
- South Gobi provides some info on thermal prices (ex-mine price)
- Sell ex-mine? Ex-mine price = prices at pricing point (e.g. at border) less logistics costs to the selling point

- Resources (JORC as of August 2011) for Tsant Uul only  
Measured 40.9 Mt  
Indicated 52.9 Mt  
Inferred 73.3 Mt  
Total 167.1 Mt
- Coal type: Thermal coal, CV 6,000 - 6,500 kcal/kg\*\*



QUARTER ENDED	2012 31-Mar	31-Dec	2011 30-Sep	30-Jun
Raw medium-ash coal				
Raw coal production (millions of tonnes)	0.64	0.37	0.20	-
Coal sales (millions of tonnes)	0.53	0.37	0.20	-
Average realized selling price (per tonne)	\$ 50.40	\$ 48.59	\$ 48.17	\$ -



SOURCES

Coal operations (1Q12 QRP)

Filing of Mongolian coal producers (SouthGobi, Mongolia Mining, Winsway)

ASP (ex-mine) (South Gobi results)

Logistics costs (Winsway presentation)

# Hunnu: cost, capex, net cash

ILLUSTRATIVE ONLY

Focus on cash cost for thermal coal with similar stripping ratio

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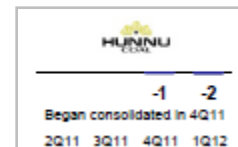
CASH COST
CAPEX
O/H
NET CASH

- Considerations: point of sales (e.g. ex-mine), stripping ratio, washed or unwashed
- For coal sold ex-mine, cash costs of other operations with similar S/R (South Gobi??)
- For Tsant Uul and Altai Nuurs
- Need to match capex with CFs (e.g. CFs from Altai Nuurs)
- \$1-2m per quarter
- \$9m net cash at 1Q12

QUARTER ENDED	2012		2011		
	31-Mar	31-Dec	30-Sep	30-Jun	31-Mar
<b>Costs</b>					
Direct cash costs of product sold (per tonne) <sup>(1)</sup>	\$ 10.80	\$ 22.14	\$ 22.64	\$ 26.77	\$ 18.91
Total cash costs of product sold (per tonne) <sup>(1)</sup>	\$ 15.04	\$ 23.09	\$ 23.17	\$ 27.61	\$ 20.61
<b>Waste movement and stripping ratio</b>					
Production waste material moved (millions of bank cubic meters)	2.20	4.58	4.10	4.08	3.85
Strip ratio (bank cubic meters of waste rock per tonne of coal produced)	2.07	3.42	3.28	4.74	3.47
Pre-production waste material moved (millions of bank cubic meters)	-	-	0.39	0.80	0.49

CAPEX TIMELINE						
PROJECT NAME	PROGRESS	CAPEX 2012 - 15 only (US\$m)	2012	2013	2014	2015
Tsant Uul	Production stage	200	●—————→			
Altai Nuurs	Exploration and early stage dev.	200	●—————→			

(INDICATIVE ONLY)



**SOURCES**

- Filing of Mongolian coal producers (SouthGobi, Mongolia Mining, Winsway)
- Coal operations (1Q12 QRP)
- EBITDA breakdown (1Q12 QRP)
- Net debt breakdown (1Q12 QRP)

# BLCP: key parameters for Thai power business

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Key valuation driver is future AP and negotiation on supply agreement

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AVAILABILITY PAYMENT AND ENERGY PAYMENT

- Energy payment ('EP') is fuel cost pass through mechanism
- Higher fuel cost means higher EP
- EBITDA is generally close to AP (e.g. AP accounts for less fixed O&M cost)
- Impact from negotiation on the coal supply agreement?

EBITDA

- Focus section 'BLCP' provides guidance to estimate EBITDA
- Future EBITDA is expected to decrease, esp. after debt is paid off (by 2019?)

NET DEBT

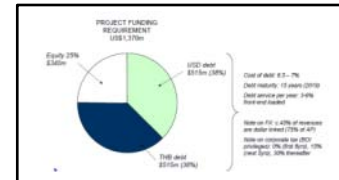
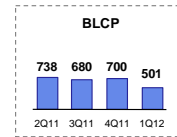
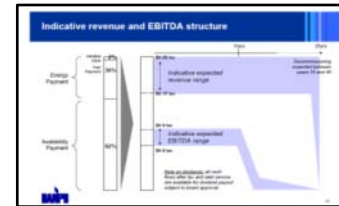
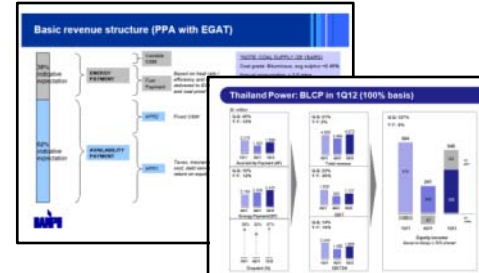
Banpu includes BLCP net debt in 1Q12 results presentation's appendices and will update it every quarter.

TAX

- Obtained BOI privileges:
- Tax holding, 0% CIT, for the first 8 years
  - 15% CIT for the next 5 years
  - 30% CIT, thereafter

CAPEX

Require maintenance CAPEX?



SOURCES

- Focus section 'BLCP' (Banpu's 2006 results presentation)
- Power Business (Banpu's results presentation)
- Focus section 'BLCP' (Banpu's 2006 results presentation)
- Power Business (Banpu's 1Q12 results presentation)
- Focus section 'BLCP' (Banpu's 2006 results presentation)

# BIC – China power

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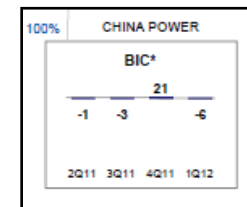
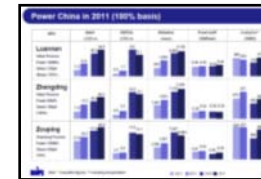
Information available but relatively small compared to other assets, may not require DCF?

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- PPA LIFE
- CAPACITY
- TARIFFS
- COAL COSTS
- EBITDA
- NET DEBT
- CAPEX

- Can be found in the focus section on ‘China CHP acquisition’
- Both data on power and steam can be found in Banpu’s website.
- If used with utilization can help estimate electricity sold (kwh) and steam sold (t)
- Tariffs are subject to government approval
- Using available data to calculate implied steam tariffs
- Coal consumption is not provided but can be estimated from information provided in 2005 focus section (e.g. scale coal consumption according to utilization)
- EBITDA margin have been narrowing (relatively stable tariffs while increasing coal costs) , will the plants benefit from lower coal prices?
- Banpu includes BIC’s net debt in 1Q12 results presentation’s appendices and will update it every quarter.
- Require maintenance CAPEX?



**SOURCES**

- Focus section on ‘China CHP acquisition’ in 2005 result presentation
- Group operation in Banpu’s website
- China power section of quarterly analyst meeting
- Focus section on ‘China CHP acquisition’ in 2005 result presentation
- 1Q12 analyst presentation

# Hongsa

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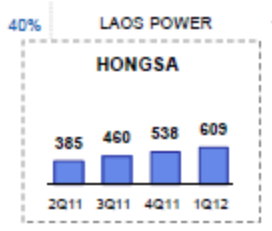
Capex and net debt available. Need to guess AP curve and return. Or use multiples?

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- DEVELOPMENT PROGRESS
- EBITDA
- NET DEBT
- CAPEX

- Update quarterly in analyst presentation
- No info on AP curve
- Need to guess AP curve and return to estimate cash flows for DCF
- May need to use multiples instead
- Banpu includes Hongsa's net debt in 1Q12 results presentation's appendices and will update it every quarter.
- \$3.7 bn project value (75:25 debt to equity)
- Banpu's remaining equity contribution \$340m



PROJECT NAME	PROGRESS	CAPEX (\$m)	CAPEX TIMELINE				
			2011	2012	2013	2014	2015
Hongsa Power	14%	343*					

**SOURCES**

- 1Q12 QRP
- News
- 1Q12 QRP



# Agenda

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1. Objectives
2. DCF analysis
3. SOTP multiples analysis
4. Who we are

# Note on NPV analysis vs. multiples analysis

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What does a multiple imply ?

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Best practice valuation methodology for any business is DCF.

Multiples are a kind of 'quick and dirty' form of DCF valuation.

PE is one of the most misleading multiples because it doesn't take into consideration different levels of gearing and because earnings are not a good proxy for cash flow.

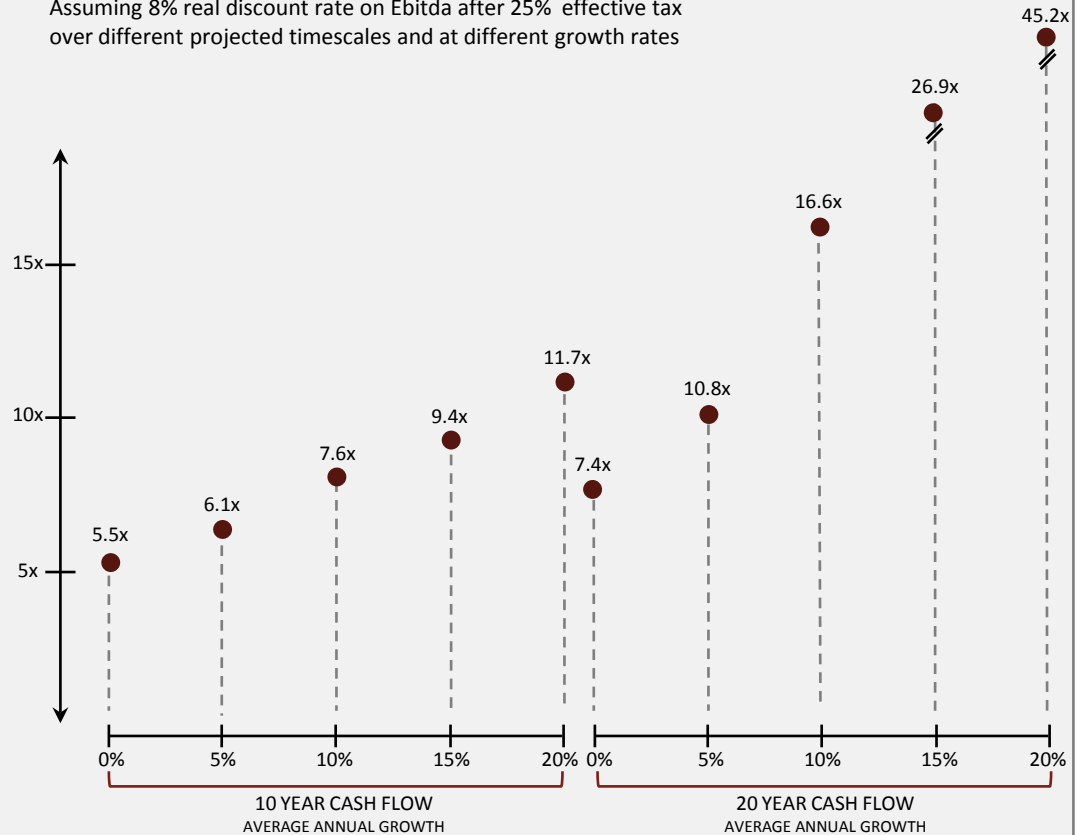
A forward looking EV/Ebitda multiple (ie based on next year's expected Ebitda) is a better proxy and a better form of valuation comparison between companies.

For example if we assume an 8% real discount rate and 25% effective tax, we can estimate the relationship between DCF and EV/Ebitda X (right)

**EV/EBITDA MULTIPLES VS NPV: SIMPLISTIC ILLUSTRATION**

ILLUSTRATIVE & CONCEPTUAL ONLY

Assuming 8% real discount rate on Ebitda after 25% effective tax over different projected timescales and at different growth rates

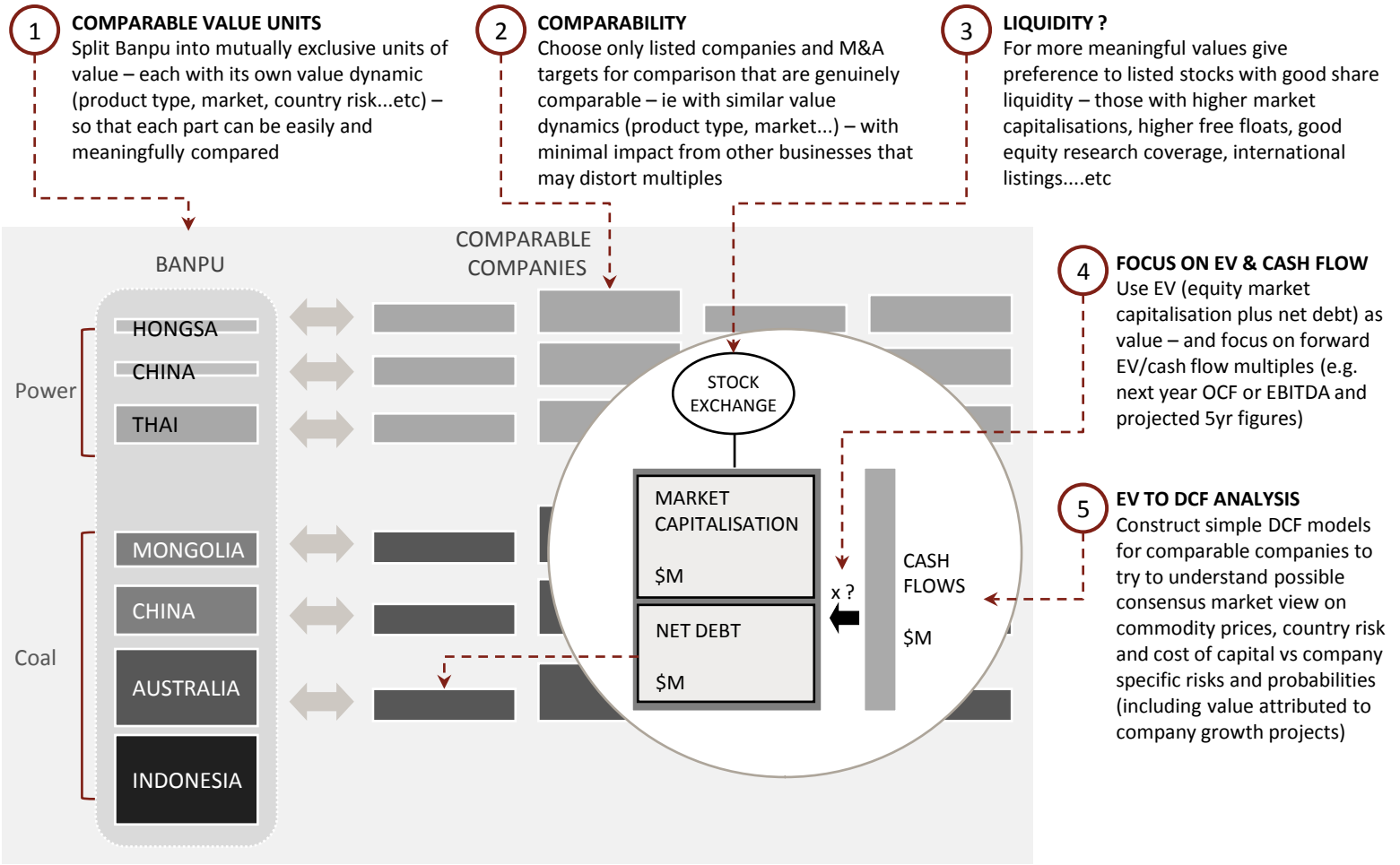


# Note on SOTP multiples analysis

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# Banpu comparables?

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	BANPU UNIT	COUNTRY OF ASSETS	PRODUCT	MARKET	COMPARABLE ?	PARTIALLY COMPARABLE ?	NOT COMPARABLE ?
COAL	ITM	Indonesia 	High to mid CV thermal coal	NE & SE Asia 	<ul style="list-style-type: none"> <li>• PTBA</li> <li>• Bumi</li> <li>• Sakari</li> <li>• Berau</li> <li>• Adaro</li> </ul>	<ul style="list-style-type: none"> <li>• Bayan</li> <li>• Lanna</li> <li>• Indika</li> </ul>	<ul style="list-style-type: none"> <li>• Golden Energy (insufficient liquidity)</li> <li>• Borneo Lumbung</li> </ul>
	CENTENNIAL	Australia 	High CV thermal coal	Australia & NE Asia 	<ul style="list-style-type: none"> <li>• New Hope</li> </ul>	<ul style="list-style-type: none"> <li>• Whitehaven</li> <li>• Gloucester</li> </ul>	<ul style="list-style-type: none"> <li>• Aston Resources</li> </ul>
	HUNNU	Mongolia 	High CV thermal coal (and coking?)	China 	<ul style="list-style-type: none"> <li>• SouthGobi</li> </ul>	<ul style="list-style-type: none"> <li>• MMC</li> </ul>	<ul style="list-style-type: none"> <li>• Mongolia Energy</li> <li>• Aspire Mining</li> </ul>
	GAOHE & HEBI	China 	PCI and thermal coal	China 	<ul style="list-style-type: none"> <li>• Luan?</li> </ul>	<ul style="list-style-type: none"> <li>• Shenhua Energy</li> <li>• China Coal</li> <li>• Yanzhou Coal</li> <li>• Lanhua?</li> </ul>	
POWER	BLCP & HONGSA	Thailand 	Coal-fired power plant	Thailand 	<ul style="list-style-type: none"> <li>• RATCH</li> <li>• EGCO ?</li> </ul>	<ul style="list-style-type: none"> <li>• GLOW</li> </ul>	
	BIC	China 	Coal-fired power plant	China 		<ul style="list-style-type: none"> <li>• Huaneng</li> <li>• Datang</li> <li>• China Resources</li> <li>• Huadian</li> <li>• China Power</li> </ul>	

# Summary of suggested methodologies

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BANPU UNIT	SUGGESTED METHODS ?
ITM	<ul style="list-style-type: none"> <li>65% of market capitalisation</li> </ul>
Centennial	<ul style="list-style-type: none"> <li>Apply EV/Ebitda 2012e for New Hope to estimated Centennial 2012e Ebitda</li> <li>Deduct net debt</li> </ul>
Gaohe	<ul style="list-style-type: none"> <li>Estimate full production Ebitda (2013e)</li> <li>Multiply by China Coal Energy EV/Ebitda 2013e</li> <li>Deduct net debt</li> <li>Multiply by 45%</li> </ul>
Hebi	<ul style="list-style-type: none"> <li>Estimate 2013e Ebitda and multiply by China Coal Energy EV/Ebitda 2013e</li> <li>Deduct net debt (add net cash)</li> <li>Multiply by 40%</li> </ul>
AACI OH	<ul style="list-style-type: none"> <li>Multiply AACI OH by China Coal EV/Ebitda 2013e (x)</li> </ul>
Hunnu	<ul style="list-style-type: none"> <li>Multiply Hunnu resources by South Gobi EV/tonne resources</li> <li>Deduct capx (\$200m) to get Hunnu to save output as South Gobi</li> <li>Add net cash</li> <li>Multiply by development risk factor of 50%</li> </ul>
BLCP	<ul style="list-style-type: none"> <li>Estimate 2012e Ebitda and multiply by EGCO EV/Ebitda 2012e</li> <li>Deduct net debt</li> <li>Multiply by coal supply risk factor of 90%</li> <li>Multiply by 50% ownership</li> </ul>
Hongsa	<ul style="list-style-type: none"> <li>Estimate Ebitda on full commissioning and multiply by EGCO EV/Ebitda 2012e</li> <li>Deduct capex</li> <li>Multiply by 50% development risk factor</li> <li>Multiply by 40% ownership</li> </ul>
BIC	<ul style="list-style-type: none"> <li>Estimate 2012e Ebitda and multiply by average Chinese power sector EV/Ebitda 2012e</li> <li>Deduct net debt</li> <li>Adjust for OH and 70% ownership of ZP</li> </ul>
CORPORATE	<ul style="list-style-type: none"> <li>Deduct Banpu corporate net debt</li> <li>Multiply Banpu corporate OH by average Indo/Australia EV/Ebitda 2012e</li> </ul>

# Centennial: EBITDA and comps approach

ILLUSTRATIVE ONLY

## Applying EV/EBITDA multiple of New Hope Coal

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RATIONALE FOR SELECTING A COMPARABLE PEER					
New Hope Coal is selected as a comparable peer because of similarity in product type, production stage, and volume growth profile					
	Centennial Coal	New Hope Coal	Rey Resources	Whitehaven	Gloucester
Production type	Thermal	Thermal	Thermal	Met/Thermal	Met/Thermal
Production stage	Exploiting	Exploiting	Developing	Exploiting	Exploiting
Volume growth profile 3-years CAGR* (2011-2014)	6%	5%	-	41%	54%
ASP growth profile	60% of total volume has a potential of being repriced	10% of total volume has a potential of being repriced	-	-	-

ASSUMPTIONS FOR FORECASTING 2012E EBITDA		
	2012E	NOTE
<b>Sale volume (Mt)</b>		
-Domestic	9	Based on indicative volume forecasts in 1Q12's analyst presentation
-Export	7	
<b>ASP (A\$/t)</b>		
-Domestic	44	Using implied export ASP and sale volumes breakdown (export vs. domestic) to calculate implied domestic ASP
-Export	119	
<b>Cash cost ex. royalty (A\$/t)</b>		
Domestic	35	Based on 2011's implied calculation
Export	68	
<b>Royalty (%)</b>	7.2%	Using historical data

\* From broker reports

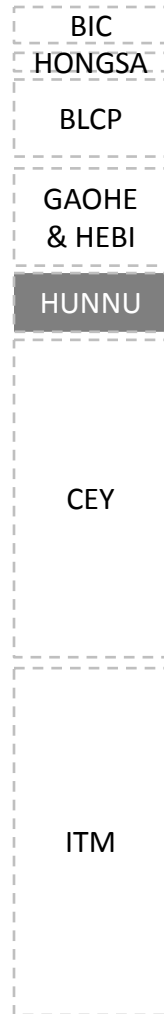
# Hunnu: EV/t resource and comps approach

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Using EV/t Resource multiple of SouthGobi Resources

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RATIONALE FOR SELECTING A COMPARABLE PEER		
EV/t resources of SouthGobi Resources is selected because the company has the closest similarity in terms of product type and coal quality among other peers (most peers are coking coal only producers – i.e. Mongolia Mining, Mongolia Energy and Aspire Mining)		
	HUNNU	SOUTHGOBI
CV (Kcal/kg)	6,000 – 6,500	6,000 – 7,300
Total moisture	3.99% to 6.51%	-
Ash	17.5% to 39.0%	8.0% to 19%
Sulphur	0.28% to 0.65%	-
Volatile matters	22.0% to 42.4%	< 19%
Total Resources	843.5	803
Total M&I	695	548
Total Reserves		176
Productions	3.0 – 5.0 Mt	-

# China Coal: EBITDA and comps approach

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## Applying EV/EBITDA multiple of China Coal Energy

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RATIONALE FOR SELECTING A COMPARABLE PEER				
China Coal Energy is selected as comparable company to Gaohe and Hebi because of the similarity in production growth profile				
PRODUCTION VOLUME GROWTH* (%)	2012E	2013E	2014E	2015E
SHENHUA ENERGY	9%	7%	18%	7%
CHINA COAL	11%	11%	-1%	0%
YANZHOU	10%	15%	51%	

\* From broker reports

GAOHE: ASSUMPTIONS FOR FORECASTING 2013E EBITDA		
	2013E	NOTE
Production (Mt)	6.0	At full capacity
ASP (Rmb/t)	740	Linkage to benchmark coal price
Cash cost (Rmb/t)	310?	Based on 2011 's costs (Assumed 50% fixed and 50% variable )

HEBI: ASSUMPTIONS FOR FORECASTING 2013E EBITDA		
	2013E	NOTE
Production (Mt)	1.7	Stable from 2011's
ASP (Rmb/t)	800	Linkage to benchmark coal price
Cash cost (Rmb/t)	480	Assumed stable cash costs from 2011's figure



# BLCP: EBITDA and comps approach

ILLUSTRATIVE ONLY

## Applying EV/EBITDA multiple of RATCH

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RATIONALE FOR SELECTING A COMPARABLE PEER						
EGCO is most ideal for selecting as comparable company due to similarity in production growth profile, but its EBITDA numbers consolidated only few power plants (contribution from remaining assets is booked into equity income) make EV/EBITDA multiple to be misleading.						
GLOW's capacity will peak out in 2012 (showing 35% YoY capacity growth for the year) and the company will fully recognise earnings in 2013						
RATCH is, then, chosen as comparable company because of its similarity in capacity growth profile to BLCP						
	CAPACITY GROWTH* (%)				EV/EBITDA** (x)	
	2012E	2013E	2014E	2015E	2012E	2013E
EGCO	0.4%	0%	0%	0%	13.2	19.5
RATCH	6%	1%	1%	1%	8.2	8.1
GLOW	35%	0%	0%	0%	10.9	8.9

ASSUMPTIONS FOR FORECASTING 2012E EBITDA		
	2012E	NOTE
Utilization (%)	95%	Taking average of historical data
Availability payment (THB/kwh)	0.67	Based on 2011's figure
Energy payment (THB/kwh)	0.83	Based on 2011's figure
Coal cost (US\$/t)	86	Based on 2011's figure – Subtracting EP revenue (equivalent to fuel cost) with other variable cost
Other variable cost (THB mn)	498	5% of EP revenue and link to utilization rate
Fuel cost (THB mn)	9,847	Adding coal cost with other variable cost
O&M (THB mn)	238	Based on 2011's figure (cash cost minus fuel cost assumptions)
Cash costs (THB mn)	10,085	

\* From broker reports  
 \*\* Bloomberg consensus

# HONGSA: EBITDA and DCF

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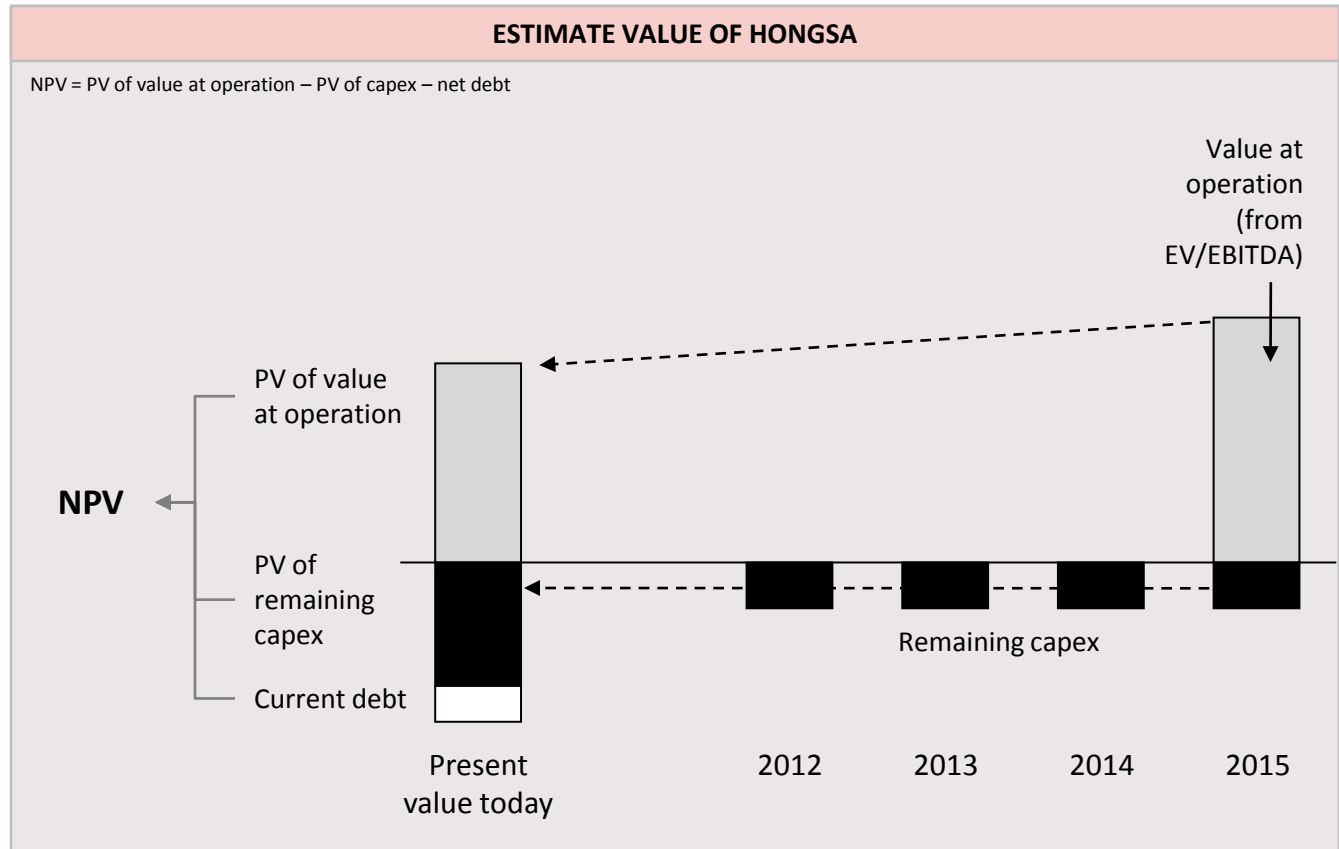
Applying EV/EBITDA multiple of RATCH and adjust with capex and net debt

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**RATIONALE FOR SELECTING A COMPARABLE PEER**  
 Applying the same EV/EBITDA multiple that BLCP got (operation, no growth)



# BIC: EBITDA and comps approach

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Applying EV/EBITDA multiple of China power peers

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RATIONALE FOR SELECTING A COMPARABLE PEER	
Average EV/EBITDA multiple of China power peers is applied to the valuation.	

ASSUMPTIONS FOR FORECASTING 2012E EBITDA				
	LUANNAN	ZHENGDING	ZOUPING	NOTE
Utilization (%)	69%	83%	79%	Based on 2011's figure
Steam produced (Mt)	0.8	1.3	3.1	Using utilization hours and multiply with steam capacity
Coal consumption (Mt)	0.3	0.28	0.52	Using coal consumption by plant that Banpu provided in focus section of 2005's analyst presentation to calculate the consumption rate at full capacity and then linked the outcome with changes in utilization rates
Power tariff (RMB/kwh)	0.44	0.38	0.39	Based on 2011's figure
Steam tariff (RMB/t)	26	102	105	Based on 2011's figure
Coal cost (RMB/t)	671	645	839	Based on 2011's figure and linked it with the change in JPU prices
O&M (RMB mn)	47	10	50	Based on 2011's figure
Cash cost (RMB mn)	251	191	485	

# Agenda

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1. Objectives
2. DCF analysis
3. SOTP multiples analysis
4. Who we are

# Our services

## AWR Lloyd's professional client services

*AWR Lloyd provides professional services in three key areas*

### Corporate finance strategy

- Value-maximizing corporate strategy
- M&A and BD strategy
- Capital structure and financial planning
- Corporate restructuring
- Investor relations and market signals analysis
- Stock market, IR and IPO strategy
- Takeover contingency

### Corporate finance transactions

- Equity capital placement
- Project finance advisory
- Commercial agreements
- M&A
- Divestments and privatizations
- IPOs
- Strategic equity investment
- Public equity investment

### Industry and project studies

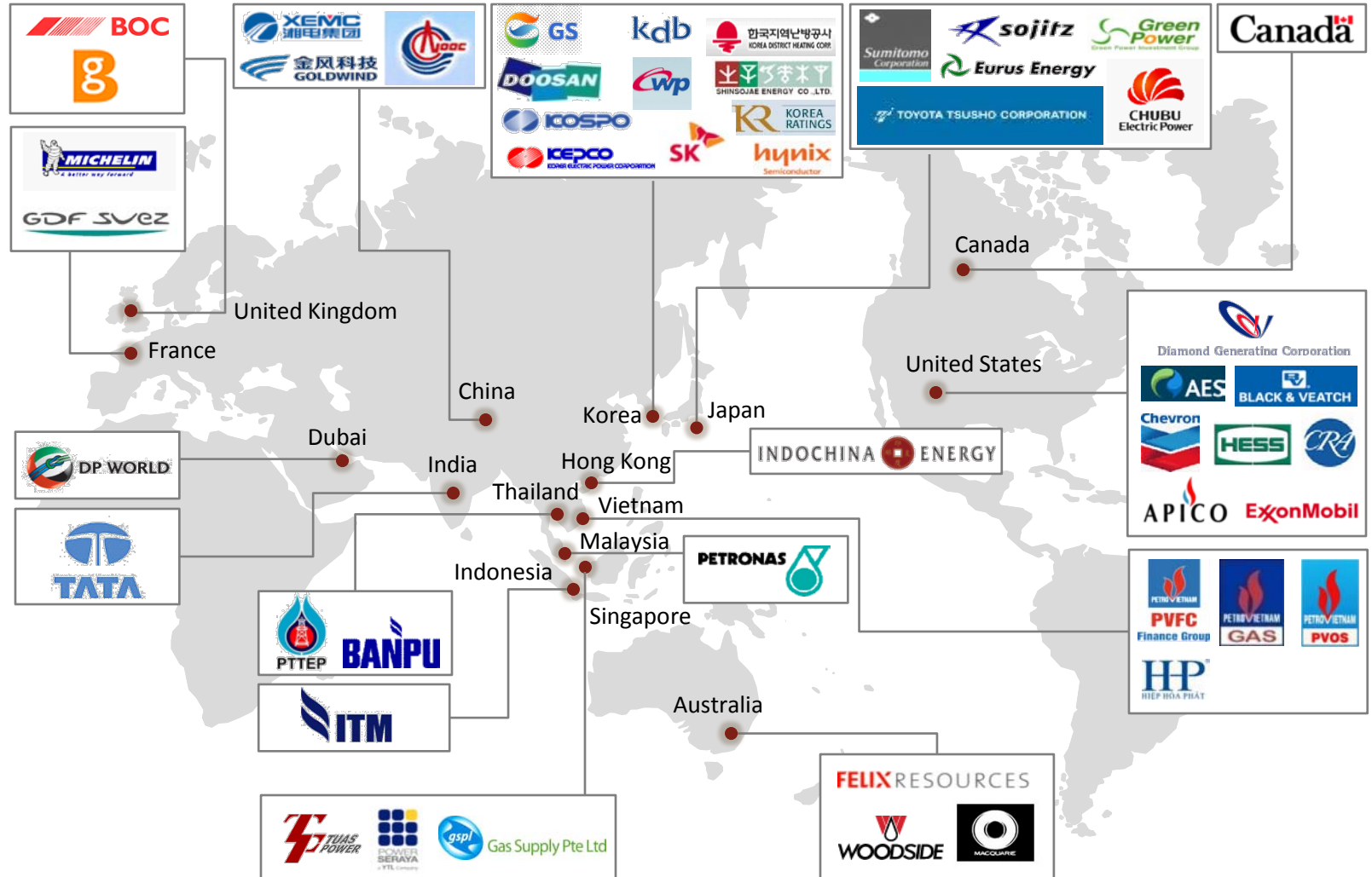
- Pre-feasibility studies
- Financial modeling and economic feasibility
- Market and industry studies:
  - Gas/LNG
  - Power
  - Renewables
  - Coal
  - Minerals and metals
- Infrastructure

# A selection of our clients

AWR Lloyd works with a range of blue-chip industry clients and mid-sized players

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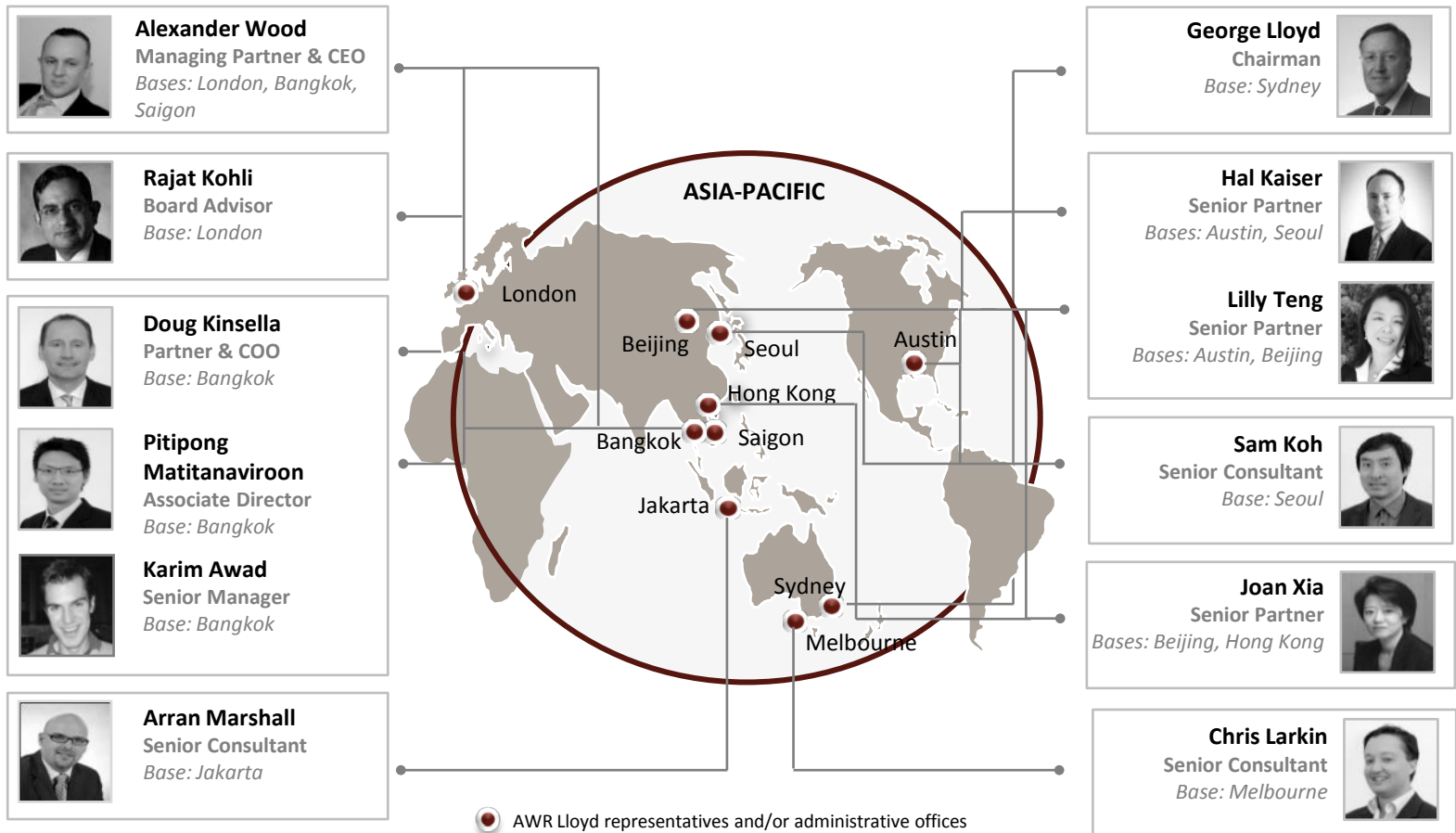


# AWR Lloyd's senior management

The firm's Partners, Associate Directors and Senior Consultants

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# Our sectors

## AWR Lloyd's industry specialization

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**GROUP 1: MINING & METALS**

**COAL**



**MINING & METALS**



**STEEL & ALLOYS**



**GROUP 2: GAS & POWER**

**GAS & LNG**



**POWER**



**RENEWABLES**



**GROUP 3: OIL & PETCHEM**

**E&P - OIL & GAS**



**OIL - MIDSTREAM**



**REF & PETROCHEM**



**GROUP 4: INFRA. & PLANTATIONS**

**INFRASTRUCTURE**



**IND. & REAL ESTATE**



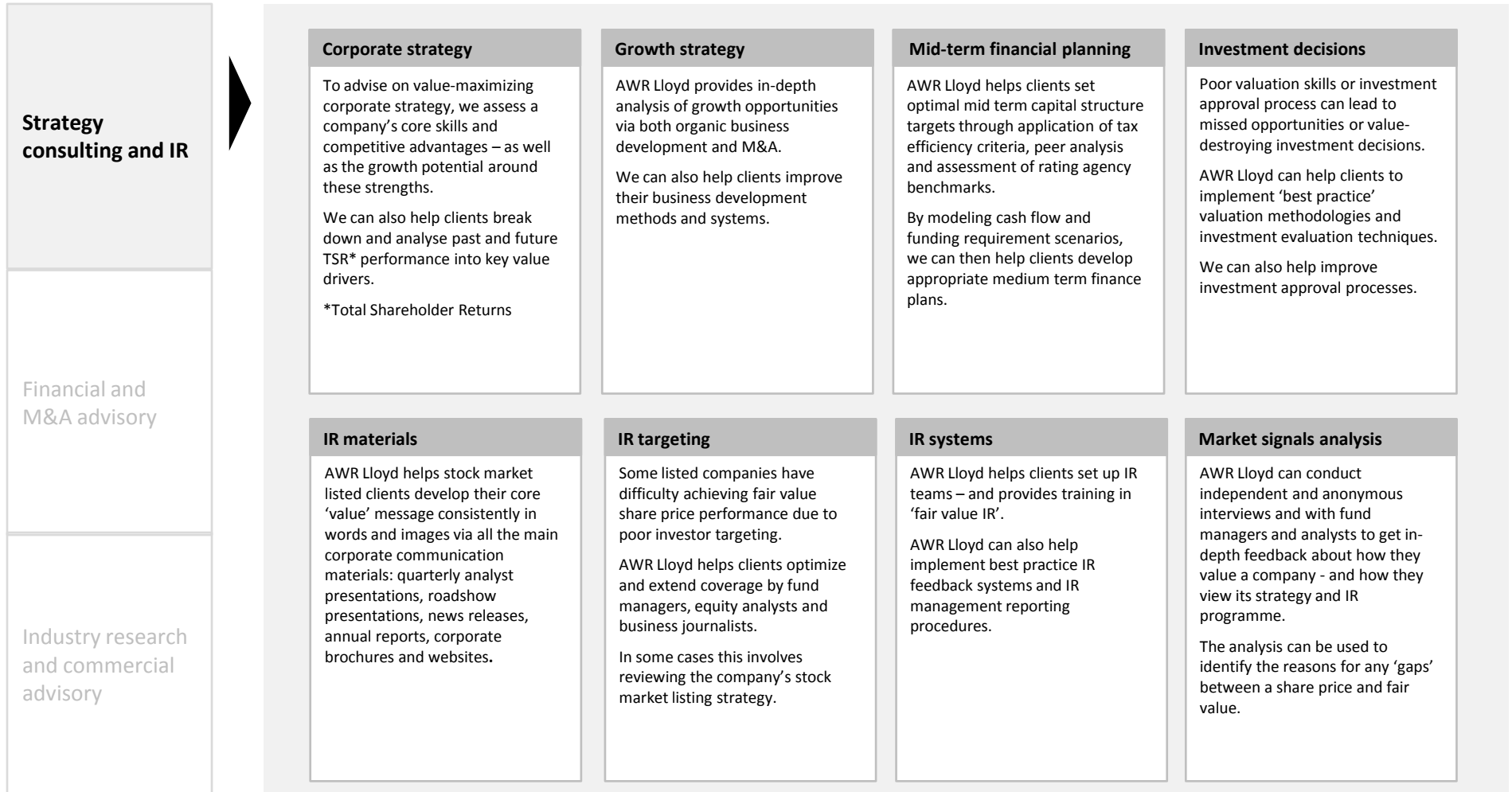
**PLANTATIONS**





# Strategy consulting and IR

## Professional services



# Focus on IR services

## Professional services

Strategy consulting and IR

Financial and M&A advisory

Industry research and commercial advisory

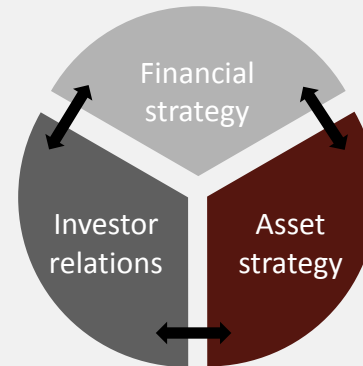
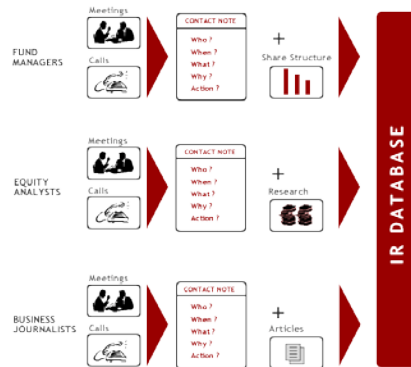
### IR materials

AWR Lloyd helps stock market listed clients develop their core 'value' message consistently in words and images via all the main corporate communication materials: quarterly analyst presentations, roadshow presentations, news releases, annual reports, corporate brochures and websites.



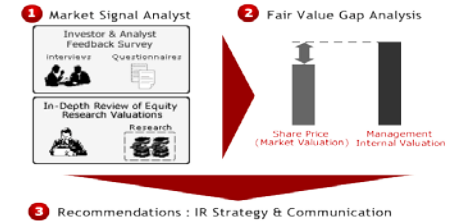
### IR systems

AWR Lloyd helps clients set up IR teams – and provides training in 'fair value IR'. AWR Lloyd can also help implement best practice IR feedback systems and IR management reporting procedures.



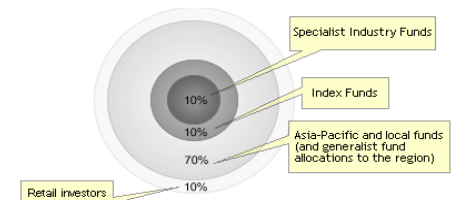
### Market signals analysis

AWR Lloyd can conduct independent and anonymous interviews and with fund managers and analysts to get in-depth feedback about how they value a company – and how they view its strategy and IR programme. The analysis can be used to identify the reasons for any 'gaps' between a share price and fair value.



### IR targeting

Some listed companies have difficulty achieving fair value share price performance due to poor investor targeting. AWR Lloyd helps clients optimize and extend coverage by fund managers, equity analysts and business journalists. In some cases this involves reviewing the company's stock market listing strategy.



## Professional services

Strategy  
consulting and IR

**Financial and  
M&A advisory**

Industry research  
and commercial  
advisory

AWR Lloyd is first and foremost an M&A firm. We are keenly aware of the risk of actually destroying shareholder value through M&A and so we always pay particular attention to dynamics of valuation in any deal.

And, importantly, the firm doesn't just 'give advice'. We also act as managers, facilitators and negotiators-driving deals forward to successful conclusions.

AWR Lloyd works with clients on:

- Mergers
- Acquisitions
- Divestments
- Privatizations
- Restructuring deals
- Strategic investments.

We advise on all critical aspects including:

- Planning
- Targeting
- Screening
- Short-listing
- Evaluation
- Transaction structuring.

# Professional services

## Industry research and commercial advisory

Strategy consulting and IR

Financial and M&A advisory

Industry research and commercial advisory

AWR Lloyd conducts special industry studies assessing the demand outlook, corporate structure, regulatory framework, cost economics and price dynamics of particular industries in the Asia-Pacific region. These studies help our resources clients plan entry and growth strategies in new markets. The studies can also be linked to valuation models for scenario and risk analysis of projects and investment transactions. Alternatively our studies can help governments and major consumers plan long term energy and raw materials procurement strategies.

### Pre-feasibilities study

AWR Lloyd can conduct pre-feasibility studies for greenfield and brownfield projects. Our studies include analysis of the dynamics and structure of potential market demand, pricing, competitors, competitive advantages, preliminary technical parameters, infrastructure, transport and logistics, sponsors, management, HR, socio-environmental issues, development costs, operating cost scenarios and net present value.

We provide recommendations in relation to potential financing structures and overall techno-economic feasibility. AWR Lloyd relies very much on local resources and connections to gather intelligence and on grass-roots analysis to support recommendations.

### Country long term fuel supply strategy

AWR Lloyd can advise governments, energy ministries and major energy consumers in the Asia-Pacific region in relation to their long term energy fuel supply strategies for both the mobile (e.g. transport) and stationary (e.g. power) energy markets. We analyze all of the major strategic criteria: economics, security (and reliability) of supply and environmental issues.

We provide recommendations on the alternative merits of coal, oil, gas, LNG, nuclear and renewable fuel supplies – and the pros and cons of alternative sources of supply both domestically and internationally. AWR Lloyd also advises on the logistics and infrastructure of energy fuel supply– and on strategies for managing fuel price risks.

### LNG market studies

AWR Lloyd has extensive experience working for both suppliers and buyers of LNG. The LNG market in Asia is already a significant component of the regional energy market and is growing rapidly.

AWR Lloyd provides research and analysis covering the full LNG chain: LNG upstream market supply conditions in the Pacific and Atlantic basins, assessment of the pros and cons of alternative suppliers, LNG contracts (HOA, SPA...), citygas market studies, power market potential and transportation pricing.

### New energy technology potential

AWR Lloyd can provide studies assessing the potential for new energy technologies in the Asia-Pacific region. We analyse the economics of new technologies at their current stage of development - as well as their potential economics in the future.

AWR Lloyd focuses on the present value of costs per unit of energy delivered. A present value approach provides the correct framework for including the impact of both up-front capital expenditure and operating costs – and for assessing the attractiveness of the new technology as an investment. Overall the approach provides a way that the economics of a technology can be compared in a meaningful way to competing technologies.

We also consider the relative environmental and security benefits of the technology – and the potential for governmental and regulatory support. Finally we assess the market potential and provide advice in relation to different commercialization strategies and business models.

### Power sector PPA and merchant market studies

AWR Lloyd provides multi-layered independent assessments of how much a new plant is needed by the power market depending on its fuel, position in the transmission network and technology.

We use our proprietary database and software on the Asian power generation, transmission and distribution sector combined with an on-the-ground first-hand evaluation of the project to model potential demand scenarios and to assess risks.

We can construct detailed revenue and/or cashflow projection models and provide analysis of key scenarios and sensitivities. Many PPAs were agreed in the 1990s and so are due for renegotiation within the next ten years – or transition to merchant or semi-merchant status. In these cases, AWR Lloyd can help re-assess the risks involved and provide supporting market analysis

### Commercial Advisory

AWR Lloyd also helps Asian clients directly in originating, developing and negotiating commercial contracts in the energy sector. Our experience in this area includes advising:

- Large industrial companies on electricity and steam procurement strategies and contracts.
- Power companies on gas and LNG procurement strategies and contracts
- Oil and gas companies on gas and LNG supply contracts
- Power companies on their electricity and steam supply contracts
- Oil tank farm and terminal companies on developing tank lease agreements with major oil refining and trading companies
- Oil trading companies on securing short and long term lease agreements for crude oil and petroleum product storage tanks

# For more information on AWR Lloyd

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