## SECTOR REPORT

CHINA CHINA METALS AND MINING

## 

INDUSTRY OUTLOOK

This replaces a version in which we misstated the upside to our pessimistic fair values on page 1.

# Correction: Gold: In pursuit of fair value

## Ê

#### FUNDAMENTAL PERSPECTIVE Spot gold price seems close to its intrinsic value

Gold prices are generally impacted by two key factors: 1) the global economic environment and monetary policies, and 2) mining costs. In this report, we focus on just one aspect and evaluate the intrinsic value of gold based on global mining costs and the incentive price for new mine development. Thus, we believe the spot gold price is close to its fair value.

## OUTLOOK

#### Bottom at around USD1,229/oz, but incentive price is USD1,350/oz

Our analysis suggests the near-term bottom of gold price at USD1,229/oz on a fundamental perspective. We believe the fair value of gold should be about USD1,350/oz to attract investment in the mining sector. With gold prices between these two levels, we believe it is time to cherry-pick some interesting gold-mining stocks.

## **VALUATION**

#### We've been wrong on gold/equities, but miners look exciting now

Like most brokers, our gold price estimates have been fairly bullish, at USD1,670/oz (2.7% below consensus) for 2013 and USD1,595/oz (7.9% below consensus) for 2014. As a result, our view on the two gold stocks we cover has thus far been wrong.

However, we believe the recent sharp correction in both gold prices and equity share prices has made gold equities interesting. We believe gold price is close to its fair value of USD1,350/oz on a fundamental basis. Gold equities appear to have more than factored in this correction (Exhibits 13-16), having sharply underperformed the physical metal. While nearterm metal price risk remains, we think the medium-term outlook for gold equities has become more attractive.

As our commodity derivatives team is yet to update changes to its gold price estimates, we make no changes to our earnings estimates and target prices for Zijin and Zhaojin. However, we provide earnings and DCF-implied sensitivities on gold-price scenarios (Exhibits 17-19). We observe that our pessimistic scenario on gold prices for the next three years implies 26% upside potential for Zhaojin to HKD10.8/share and 18% upside potential on Zijin to HKD2.75/share.



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**BNPP RECOMMENDATIONS** 

Company

Zhaojin Mining

Zijin Mining

BBG Code

1818 HK

2899 HK

Company		Zhaojin	Mining
BBG Code		1	818 HK
Share Price			8.60
Target Price			14.00
1 Year - high			14.40
1 year - low			8.60
	 0.140		

Share

Price

8.60

2 33

Rating

BUY

BUY

Target

Price

14.00

3 40

Upside /

Downside

+62.8%

+45.9%



## VALUATION SUMMARY

Company	P/E	Yld (%)	
	FY1	FY2	FY2
Zijin Mining	8.8	8.7	3.6
Zhaojin Mining	12.5	9.0	3.9

Source: BNP Paribas estimates

#### When the dust settles - three key things to look for

As it has become very difficult to predict near-term gold prices, we believe investors will likely remain averse to investing in gold-mining companies.

However, when gold prices settle down, we believe investors who have so far stayed away from gold equities would have one inherent investment risk reduced significantly - a potential fall in gold prices.

At that point, the important thing to observe would be:

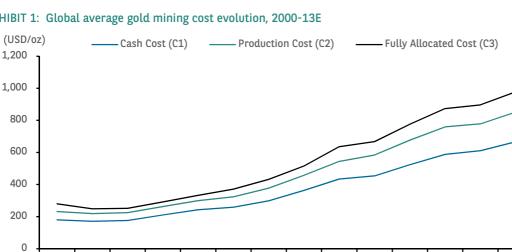
- What is the incentive price of gold for future mining project development? 1
- How much have the gold-mining equities been oversold in the recent sell-off and are there 2 undervalued stocks?
- Within the undervalued universe of gold-mining stocks, which stocks offer fundamental growth story 3 and are likely to outperform?

#### Evolution of global gold mining costs since 2000

#### Global mining costs have soared over the recent years

We have analysed data of 260 (2000) to 360 gold mines (2012) globally to analyse the evolution of goldmining costs. These mines together account for more than 90% of total global mined production on an annual basis. The difference between the number of mines in 2000 and 2012 stems from in-period closures and commissioning of some mines.

Exhibit 1 shows the weighted average mining costs of the industry over 2000-2013E, indicating a linear uptrend in mining costs over the last decade.



#### EXHIBIT 1: Global average gold mining cost evolution, 2000-13E

Sources: Brook Hunt: BNP Paribas estimates

2001

2002

2003

2004

2005

2000

Fully allocated average cash costs show a sharp 12% CAGR, from USD249/oz in 2001 to our estimate of USD978/oz in 2013. As Exhibit 2 indicates, it is no surprise that gold prices have seen a similar rally over the same period. In fact, gold prices have increased almost at the same intensity as global mining costs.

2006

2007

2008

2009

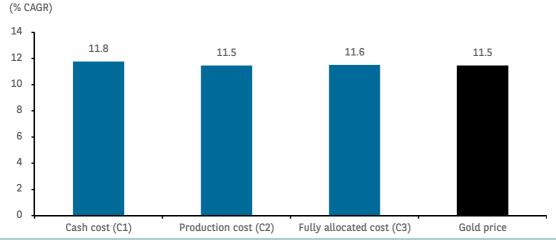
2010

2011

2012

2013E

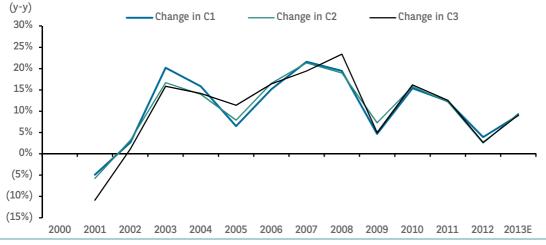
#### EXHIBIT 2: Gold price/mining cost CAGR, 2001-13E





While we have seen periods of slowdown in cost increases over the past decade (Exhibit 3), these have mostly coincided with periods of global economic slowdown, leading to a reduction in commodity prices and capital costs. Nonetheless, we have not seen a single year when costs have declined on a year-on-year basis.





Sources: Brook Hunt; BNP Paribas estimates

## Finding the near-term floor for gold price

Like we mentioned, gold prices in the near term seem at significant risk from the perspective of: a) global economic growth outlook, b) global monetary policies, and c) risk associated with the sovereign debt crisis in the EU. However, we try to assess a floor on near-term gold prices from a fundamental mining perspective.

For any mining commodity, the fair value of a metal/ore should ideally be benchmarked to the 90<sup>th</sup> centile cash cost of the industry. Ideally, a price should be at a 10-20% premium to the 90<sup>th</sup> centile cash cost producer. This is because it ensures a supply-demand balance. In periods of prices lower than this benchmark (periods of low demand), supply is curtailed as miners lose money, thereby enabling a downward supply mechanism. During periods of high prices (sustained higher demand), the price incentive enables miners to raise production to satisfy demand, enabling an upward supply mechanism.

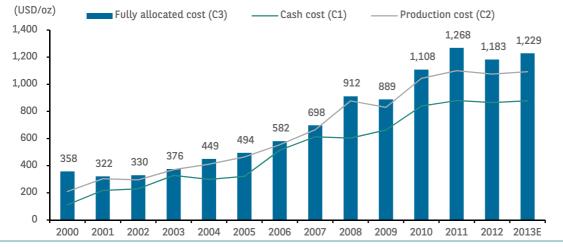
We acknowledge that gold is not an industrial commodity and is also a substitute for paper money. However, during the long-term cycle of any industry, prices tend to follow the direction of supply-demand balance.

With this in mind, we assess the near-term bottom for gold prices.

### What does the 90<sup>th</sup> centile cash cost of the mining industry tells us?

Exhibit 4 shows the evolution of the cash-cost curves for the 90<sup>th</sup> centile miner globally since 2000.

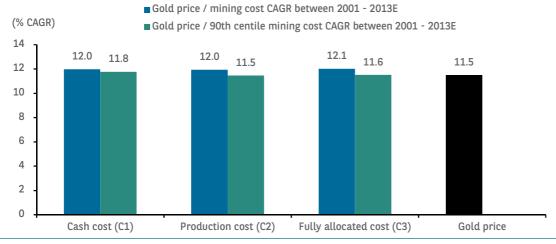




Sources: Brook Hunt; BNP Paribas estimates

We observe that the 90<sup>th</sup> centile mining costs has seen a similar cost escalation since 2000 compared to the average global mining industry as shown in Exhibit 5.



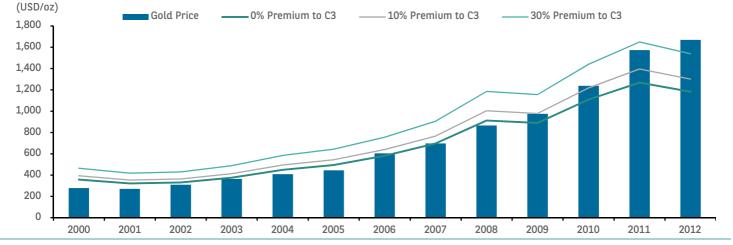


Sources: Brook Hunt; BNP Paribas estimates

However, the most important observation from this analysis is that during the entire period of 2000-2012, the average gold price was consistently at a 10-35% premium to the 90<sup>th</sup> centile C3 mining costs.

This in a way validates our view that, on a fundamental basis, gold prices are linked to marginal suppliers' cost of production.



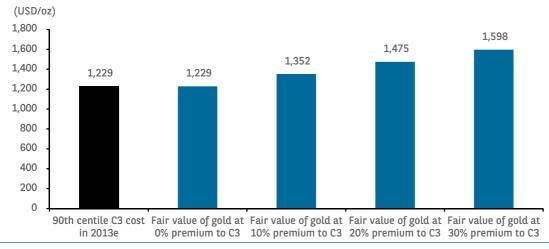


Sources: Brook Hunt; BNP Paribas estimates

We note estimate 2013 global average C3 costs for gold miners at USD1229/oz, 4% higher than the 2012 average of USD1,183/oz.

Using this as a benchmark and observing from Exhibit 6 that the minimum gold price premium to C3 since 2000 has been close to 0%, we believe that near-term bottom for the gold price should be USD1,229/oz. This means there is potential for gold prices to fall another 9% from current levels.





Source: BNP Paribas estimates

## Finding the incentive price for gold miners

Incentive price is different from the price premium demanded by the marginal producer. Incentive price implies a long-term gold price, which gives global gold miners the incentive to keep investing in developing new gold mines.

An incentive price in that sense is a hurdle rate gold price. We believe such an incentive gold price should enable the producer to recover his mining acquisition, mine development and mine operation cost, along with the expected project financing cost and still generate a project IRR of at least 10-15%.

For the gold mining industry, it takes up to 15 years to bring an open pit mine into production from first exploration. There are plenty of new projects being evaluated and advanced as miners invest in new geographies and develop long-held discoveries. However, with lengthening lead times in bringing new mines into production – due partly to more strict permitting guidelines – there will be a lag before this new production reaches the market.

Advanced new projects generally have operating costs ranging from USD250-1,000/oz, with the average project size at 150,000-200,000 ounce per year (5-6 tonnes). Returns from a new project will not only be a factor of operating costs, but also of capital costs.

As such, we believe new projects will likely require higher sustained prices to provide adequate returns. Capital costs have increased significantly from the level at the start of the last decade. Brook Hunt estimates that mine development costs in 2001 stood at around USD1,100 per average annual production ounce, compared to a capital intensity of USD3,300/oz/year for the anticipated production over the next 4-5 years – a three-fold increase.

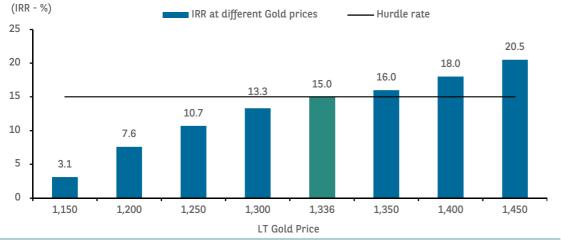
To build our incentive price model for gold miners, we made the following assumptions:

- 1 An average size of a new gold mine at about 150,000 oz (4.7 tonnes). We note that the average mine production of the top 360 mines globally is 175,000 oz (about 5.4 tonnes)
- 2 The average C1 mine cash cost (excluding depreciation, financing, royalty etc) of USD612/oz. This is the same as the current global average C1 cash cost of the industry.
- 3 An average mine life of 30 years to normalize the depreciation
- 4 A mine capex intensity of USD3,300/oz. We observe from our discussions with Brook Hunt that the average mine capex intensity in the industry was about USD1,000/oz in 2001 and has since grown almost three-fold to about USD3,300/oz currently.
- 5 We arrive at an average upfront mine capex of USD495m, based on our assumptions 1 and 4.
- 6 Projects will be financed by at least a 20:80 debt:equity ratio. Most global gold miners are cash-rich, so would have the flexibility to use internal accruals for mine development.
- 7 The project financing cost for such a debt will be at least 5%.
- 8 Finally, the minimum IRR hurdle rate a miner will need to invest in new asset development is 15%.

Based on the above assumptions, we have built a project model for a new gold mine project. We then look at the implied project IRR at different gold prices.

Exhibit 8 shows the results of the study. For a minimum 15% IRR on investment, we estimate a gold miner will desire a gold price of not less than USD1,336/oz.





Source: Brook Hunt; BNP Paribas estimates

#### Sensitivity analysis

We have made several assumptions to build our project model. Most of our assumptions are reasonable and we have erred on the side of caution in areas of uncertainty.

The exhibits below show our sensitivities to these assumptions, using a minimum 15% hurdle rate.

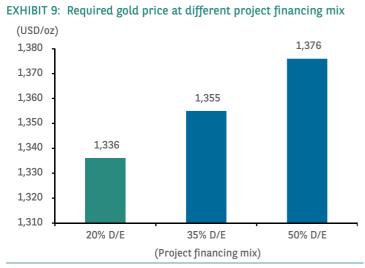
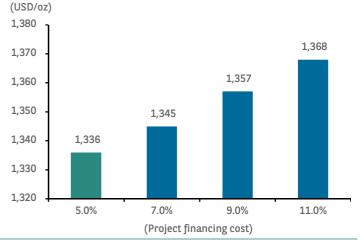
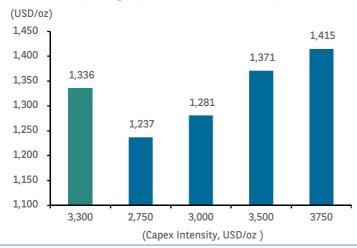


EXHIBIT 10: Required gold price at different project financing cost



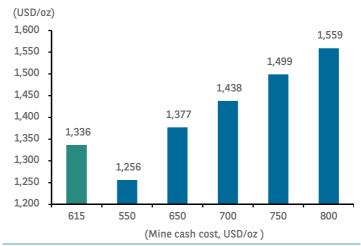
Source: BNP Paribas estimates





Source: BNP Paribas estimates

Source: BNP Paribas estimates



#### EXHIBIT 12: Required gold price at different mine cash cost

Source: Paribas estimates

16 APRIL 2013

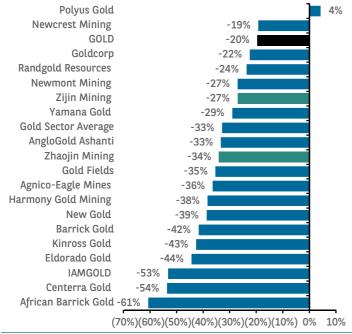
## Both Zhaojin and Zijin look undersold, but Zhaojin offers more value

For every 10% fall/rise in gold prices, we estimate Zhaojin's earnings would fall/rise 13.6% and Zijin's earnings by 10%. We have looked at two different recent time periods of gold price and gold equity price movements to understand the underperformance of these two stocks. Exhibit 14 shows share-price performances of gold equities against gold price since its peak in October 2012. Exhibit 13 shows the shareprice performances of gold equities against gold prices since the start of 2013.

Since January 2013 to date, gold prices have declined 20%, while the share price of Zijin has fallen 27% and that of Zhaojin 34%. Our earnings sensitivity to gold prices suggests that share prices should have declined 20% for Zijin and 27% for Zhaojin. As such, we believe Zijin and Zhaojin have been undersold by 7% each.

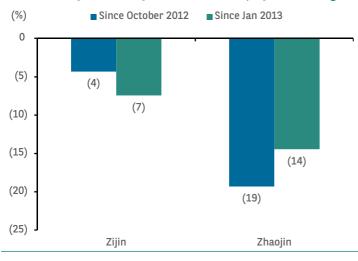
Since October 2012 to date, gold prices have declined 25%, while the share price of Zijin has declined 29% and that of Zhaojin 44%. Our earnings sensitivity to gold prices suggests that the share prices should have declined 25% for Zijin and 34% for Zhaojin. As such, we believe Zijin has been oversold by 4% and Zhaojin has been undersold by 10%.

#### EXHIBIT 13: Since 1 Jan 2013 (ytd performance)



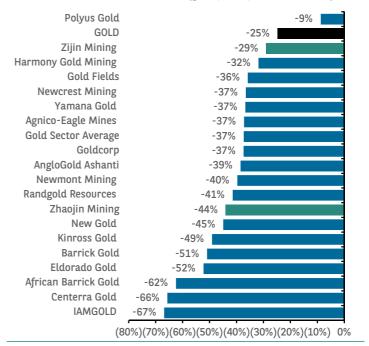
Source: Bloomberg

#### EXHIBIT 15: Zijin and Zhaojin's absolute underperformance to gold



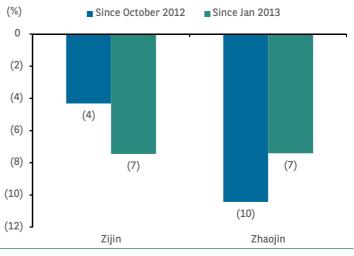
Source: Bloomberg

#### EXHIBIT 14: Since 4 October 2012 (gold price peak since 2012)



Source: Bloomberg

#### EXHIBIT 16: Zijin and Zhaojin's underperformance to gold based on earnings sensitivity



Source: Bloomberg

#### Valuation and earnings sensitivity

Our gold price estimates are derived from our Global Commodity Derivatives team in London. While the drop in gold prices has been dramatic, our price forecasts are yet to be adjusted. As such, we do not adjust our earnings estimates and target prices for Zijin Mining and Zhaojin Mining at the moment. For now, we look at various sensitivities to gold prices and the potential impact on our earnings estimates and DCF-implied valuations for the two companies, all else being equal.

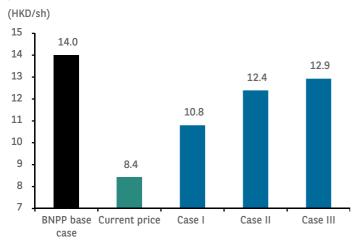
- Case I: For the remainder of 2013, we assume spot price will remain flat. For 2014-15, we assume no
  price increase from spot levels.
- Case II: For the remainder of 2013, we assume gold price will average 10% below the spot price. For 2014-15, we assume gold price will increase 5% y-y.
- **Case III**: For the remainder of 2013, we assume gold price will average 10% above spot price. For 2014-15, we assume no change from rest of the year average.

#### EXHIBIT 17: Zijin and Zhaojin - earnings sensitivity to gold price scenarios

		2013E	2014E	2015E
Gold price sensitivity				
BNPP base-case: Gold price estimate	(USD/oz)	1,670	1,595	1,550
Case I	(USD/oz)	1,427	1,350	1,350
Case II	(USD/oz)	1,331	1,398	1,467
Case III	(USD/oz)	1,524	1,487	1,487
Case I: % change from BNP base case	(% chg)	(15)	(15)	(13)
Case II: % change from BNP base case	(% chg)	(20)	(12)	(5)
Case III: % change from BNP base case	(% chg)	(9)	(7)	(4)
Zhaojin: base-case EPS estimates	(RMB)	0.77	0.75	0.74
Case I	(RMB)	0.61	0.58	0.59
Case II	(RMB)	0.55	0.61	0.67
Case III	(RMB)	0.67	0.68	0.69
Case I: % change from BNP base case	(% chg)	(20)	(23)	(21)
Case II: % change from BNP base case	(% chg)	(28)	(18)	(9)
Case III: % change from BNP base case	(% chg)	(12)	(10)	(7)
Zijin: base-case EPS estimates	(RMB)	0.27	0.28	0.25
Case I	(RMB)	0.23	0.23	0.21
Case II	(RMB)	0.21	0.24	0.23
Case III	(RMB)	0.25	0.26	0.23
Case I: % change from BNP base case	(% chg)	(15)	(17)	(17)
Case II: % change from BNP base case	(% chg)	(21)	(14)	(8)
Case III: % change from BNP base case	(% chg)	(9)	(8)	(5)

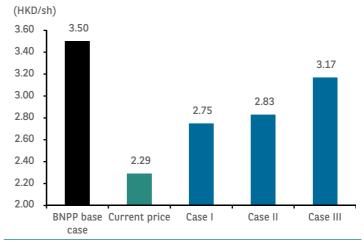
Source: Company





#### Sources: Bloomberg; BNP Paribas estimates

EXHIBIT 19: Zijin: sensitivity to DCF-implied value, all else being equal



Sources: Bloomberg; BNP Paribas estimates

## Zijin Mining

Profit and Loss (RMB m) Year Ending Dec	2011A	2012A	2013E	2014E	2015
Revenue	39,764	48,415	44,690	45,323	43,15
Cost of sales ex depreciation	(26,242)	(34,693)	(32,392)	(32,705)	(31,866
aross profit ex depreciation	13,522	13,722	12,298	12,618	11,293
Other operating income	135	221	221	221	22
)perating costs	(3,151)	(3,541)	(3,094)	(3,183)	(3,031
Derating EBITDA	10,505	10,402	9,425	9,655	8,48
Depreciation	(1,294)	(1,682)	(1,932)	(2,153)	(2,378
Goodwill amortisation	(1,201)	0	(1,002)	0	(2,570
Operating EBIT	9,211	8,720	7,493	7,502	6,10
	(496)	-	-	-	-
let financing costs Issociates	(496) 562	(804) 640	(203) 640	(172) 640	(86 64
	0	0	040	0	04
lecurring non operating income Ion recurring items	0	0	0	0	
-					
Profit before tax	9,276	8,556	7,930	7,970	6,66
ax	(2,366)	(2,403)	(2,286)	(2,298)	(1,920
Profit after tax	6,911	6,153	5,644	5,672	4,74
Ainority interests	(1,198)	(942)	(1,024)	(1,029)	(860
Preferred dividends	0	0	0	0	
Other items	0	0	0	0	
leported net profit	5,713	5,211	4,620	4,643	3,88
Ion recurring items & goodwill (net)	0	0	0	0	
ecurring net profit	5,713	5,211	4,620	4,643	3,88
Per share (RMB)					
Recurring EPS *	0.26	0.24	0.21	0.21	0.1
Reported EPS	0.26	0.24	0.21	0.21	0.1
DPS	0.07	0.07	0.07	0.07	0.0
irowth					
Revenue (%)	39.3	21.8	(7.7)	1.4	(4.8
Operating EBITDA (%)	23.6	(1.0)	(9.4)	2.4	(12.1
Derating EBIT (%)	25.9	(5.3)	(14.1)	0.1	(12.)
Recurring EPS (%)	(21.1)	(8.8)	(11.3)	0.5	(16.4
eported EPS (%)	(21.1)	(8.8)	(11.3)	0.5	(16.4
Derating performance	()	(0.0)	(==:-)	0.0	(
iross margin inc depreciation (%)	30.7	24.9	23.2	23.1	20.
perating EBITDA margin (%)	26.4	24.5	23.2	21.3	20. 19.
perating EBIT margin (%)	23.2	18.0	16.8	16.6	13.
let margin (%)	14.4	10.8	10.3	10.2	9.
ffective tax rate (%)	25.5	28.1	28.8	28.8	28.
Dividend payout on recurring profit (%)	25.5	27.9	31.5	31.3	37.
nterest cover (x)	19.7	11.6	40.1	47.3	78.
nventory days	74.0	98.7	132.7	135.4	143.
lebtor days	5.3	5.0	5.0	5.0	5.
reditor days	29.6	40.6	41.0	41.3	41.
perating ROIC (%)	70.4	44.7	29.2	27.3	21.
) perating ROIC - WACC (%)	60.2	34.5	19.0	17.1	11.
	28.2	20.7	15.6	15.4	12.
ROIC (%)	20.2				
ROIC (%) ROIC - WACC (%)	18.1	10.5	5.4	5.2	2.
		10.5 19.6	5.4 15.5	5.2 14.0	2. 10.

Sources: Zijin Mining; BNP Paribas estimates

#### Zijin Mining

Cash Flow (RMB m) Year Ending Dec	2011A	2012A	2013E	2014E	2015
Recurring net profit	5,713	5,211	4,620	4,643	3,880
Depreciation	1,294	1,682	1,932	2,153	2,378
ssociates & minorities	1,198	942	1,024	1,029	860
Other non-cash items	301	258	0	0	(
Recurring cash flow	8,505	8,093	7,576	7,826	7,117
Change in working capital	(2,115)	(2,685)	(1,932)	401	(2,170
Capex - maintenance	0	0	0	0	(1 452)
Capex - new investment	(7,476)	(7,996) <b>(2,588)</b>	(3,241)	(3,300)	(1,452
ree cash flow to equity Net acquisitions & disposals	<b>(1,086)</b>	(2,366)	<b>2,404</b> 0	<b>4,927</b> 0	3,495
Dividends paid	(1,343) (2,652)	(1,821)	(1,821)	(1,821)	(1,821
Non recurring cash flows	1,115	(1,940)	804	834	921
Vet cash flow	(3,966)	(6,349)	1,387	3,940	2,59
Equity finance	184	81	0	0	_,(
Debt finance	5,001	7,674	0	0	(
Movement in cash	1,219	1,407	1,387	3,940	2,59
	• •	• •			
er share (RMB)	0.39	0.37	0.35	0.36	0.33
ecurring cash flow per share			0.35	0.38	0.3
CF to equity per share	(0.05)	(0.12)			
alance Sheet (RMB m) Year Ending Dec	2011A	2012A	2013E	2014E	2015
Vorking capital assets	13,015	18,019	17,823	18,758	18,440
Vorking capital liabilities	(8,327)	(9,521)	(7,831)	(9,635)	(7,701
Net working capital	4,687	8,497	9,992	9,123	10,73
Tangible fixed assets	10,196	15,645	17,231	18,656	18,02
Operating invested capital	14,884	24,142	27,223	27,779	28,76
Goodwill	339	497	497	497	497
Other intangible assets	7,908	9,336	7,396	7,118	6,822
nvestments	4,142	4,987	4,987	4,987	4,98
Other assets	11,803	12,557	12,557	12,557	12,55
nvested capital	<b>39,076</b>	<b>51,518</b>	<b>52,659</b>	<b>52,937</b>	53,628 (14.227
Cash & equivalents Chort term debt	(4,917) 3,815	(6,315) 6,400	(7,702) 6,400	(11,642) 6,400	(14,237 6,400
.ong term debt *	5,348	9,642	9,642	9,642	9,643
Net debt	<b>4,246</b>	9,042 9,727	8,340	4,400	1,80
Deferred tax	226	<b>3,727</b> 447	447	447	447
Dther liabilities	4,470	7,761	7,761	7,761	7,76
Fotal equity	25,009	28,182	31,553	34,742	37,16
Minority interests	5,124	5,401	6,426	7,455	8,31
nvested capital	39,076	51,518	54,527	54,805	55,49
* includes convertibles and preferred stock which is	-	51,610	0-1,0=7	5-1,000	55,15
Per share (RMB)					
ook value per share	1.15	1.29	1.45	1.59	1.70
angible book value per share	0.77	0.84	1.08	1.24	1.3
inancial strength					
let debt/equity (%)	14.1	29.0	22.0	10.4	4.0
let debt/total assets (%)	8.1	14.4	12.2	5.9	2.4
Current ratio (x)	1.5	1.5	1.8	1.9	2.3
CF interest cover (x)	13.9	7.7	28.9	48.8	58.
/aluation	2011A	2012A	2013E	2014E	2015
tecurring P/E (x) *	7.1	7.8	8.8	8.7	10.4
ecurring P/E @ target price (x) *	10.4	11.4	12.8	12.7	15.
eported P/E (x)	7.1	7.8	8.8	8.7	10.4
lividend yield (%)	3.6	3.6	3.6	3.6	3.
/CF (x)	4.8	5.0	5.4	5.2	5.
/FCF (x)	(37.3)	(15.7)	16.9	8.2	11.
rice/book (x)	1.6	1.4	1.3	1.2	1.1
rice/tangible book (x)	2.4	2.2	1.7	1.5	1.4
	3.8	4.8	5.5	5.2	5.0
				_	
EV/EBITDA (x) ** EV/EBITDA @ target price (x) ** EV/invested capital (x)	4.6 1.3	5.8 1.1	6.6 1.0	6.3 1.0	6.9 0.9

Sources: Zijin Mining; BNP Paribas estimates

Zhaojin Mining

Profit and Loss (RMB m) Year Ending Dec	2010A	2011A	2012E	2013E	20148
Revenue	4,098	5,741	6,186	7,167	7,349
Cost of sales ex depreciation	(1,403)	(2,197)	(2,537)	(2,321)	(2,420)
Gross profit ex depreciation	2,695	3,544	3,649	4,847	4,928
Other operating income	109	110	118	137	141
Operating costs	(694)	(808)	(889)	(1,030)	(1,056)
Operating EBITDA	2,111	2,845	2,878	3,954	4,013
Depreciation	(384)	(480)	(495)	(655)	(779
Goodwill amortisation	0	0	0	0	(775
Operating EBIT	1,727	2,365	2,383	3,299	3,234
	-	-	-	-	-
Net financing costs Associates	(79) 4	(86) 7	(127) 7	(136) 7	(127)
	4	0	0	0	
Recurring non operating income	0	0	0	0	(
Non recurring items					
Profit before tax	1,652	2,287	2,263	3,169	3,114
Tax	(410)	(564)	(590)	(826)	(811
Profit after tax	1,242	1,723	1,674	2,344	2,303
Minority interests	(40)	(61)	(79)	(111)	(109
Preferred dividends	0	0	0	0	(
Other items	0	0	0	0	(
Reported net profit	1,202	1,662	1,595	2,233	2,194
Non recurring items & goodwill (net)	0	0	0	0	(
Recurring net profit	1,202	1,662	1,595	2,233	2,194
Per share (RMB)					
Recurring EPS *	0.82	0.57	0.55	0.77	0.75
Reported EPS	0.82	0.57	0.55	0.77	0.75
DPS	0.30	0.21	0.19	0.27	0.20
Growth					
Revenue (%)	46.5	40.1	7.8	15.9	2.5
Operating EBITDA (%)	61.8	34.8	1.1	37.4	1.5
Operating EBIT (%)	63.8	37.0	0.8	38.4	(2.0
Recurring EPS (%)	53.4	(30.9)	(4.0)	40.0	(1.8
Reported EPS (%)	59.4	(30.9)	(4.0)	40.0	(1.8
Operating performance					
Gross margin inc depreciation (%)	56.4	53.4	51.0	58.5	56.5
Operating EBITDA margin (%)	51.5	49.6	46.5	55.2	54.6
Operating EBIT margin (%)	42.1	41.2	38.5	46.0	44.0
Net margin (%)	29.3	28.9	25.8	31.2	29.8
Effective tax rate (%)	24.8	24.7	26.0	26.0	26.
Dividend payout on recurring profit (%)	36.4	36.8	35.0	35.0	35.0
Interest cover (x)	22.0	27.7	18.8	24.2	25.4
Inventory days	163.2	241.7	272.8	258.8	255.3
Debtor days	9.4	7.8	6.3	9.3	9.9
Creditor days	106.7	164.8	200.2	194.1	191.3
Operating ROIC (%)	52.7	51.4	38.4	42.6	37.:
Operating ROIC - WACC (%)	-	-	-	-	
ROIC (%)	26.6	27.6	22.6	27.5	25.3
ROIC - WACC (%)	-	-	-	-	
ROE (%) ROA (%)	24.1 14.7	27.8 15.9	22.5 13.2	26.6 16.6	22.1 14.0

Sources: Zhaojin Mining; BNP Paribas estimates

## Zhaojin Mining

Cash Flow (RMB m) Year Ending Dec	2010A	2011A	2012E	2013E	20148
Recurring net profit	1,202 384	1,662	1,595	2,233	2,194
Depreciation Associates & minorities	384	480 54	495 72	655 104	779 102
Other non-cash items	20	19	0	0	102
Recurring cash flow	1,642	2,215	2,161	2,991	3,074
Change in working capital	(562)	(137)	194	37	5,074
Capex - maintenance	(1,341)	(1,779)	(2,400)	(1,600)	(1,500)
Capex - new investment	(1,5 11)	(1,7,3)	0	0	(1,000)
ree cash flow to equity	(261)	299	(45)	1,428	1,651
Net acquisitions & disposals	(613)	(603)	0	0	_,
Dividends paid	(321)	(458)	(612)	(558)	(781)
Non recurring cash flows	81	114	22	13	22
Net cash flow	(1,114)	(648)	(635)	883	891
- Equity finance	0	0 0	0 0	0	C
Debt finance	(318)	1,112	(142)	(142)	(142)
Movement in cash	(1,432)	464	(777)	741	749
er share (RMB)					
Recurring cash flow per share	1.13	0.76	0.74	1.03	1.05
CF to equity per share	(0.18)	0.10	(0.02)	0.49	0.57
alance Sheet (RMB m) Year Ending Dec	2010A	2011A	2012E	2013E	2014E
Vorking capital assets	1,352	2,707	2,349	2,425	2,568
Vorking capital liabilities	(1,091)	(2,381)	(2,089)	(2,066)	(2,158)
let working capital	260	326	260	359	410
angible fixed assets	3,691	4,927	6,914	7,942	8,745
perating invested capital	3,951	5,253	7,174	8,301	9,155
Goodwill	559	587	587	587	587
ther intangible assets	2,550	2,828	2,746	2,664	2,582
nvestments	166	226	226	226	226
other assets	316	770	770	770	770
nvested capital	7,542	9,664	11,503	12,548	13,320
ash & equivalents	(782)	(1,246)	(469)	(1,209)	(1,959)
hort term debt	370	1,510	1,510	1,510	1,510
ong term debt *	1,560	1,649	1,649	1,649	1,649
let debt	1,148	1,913	2,690	1,950	1,201
Deferred tax	457	476	476	476	476
Other liabilities	42	30	30	30	30
Fotal equity	5,387	6,584	7,566	9,241	10,653
Minority interests	388	414	493	604	713
nvested capital	7,542	9,664	11,503	12,548	13,320
* includes convertibles and preferred stock which is I	being treated as debt				
er share (RMB)					
ook value per share	3.70	2.26	2.60	3.17	3.65
angible book value per share	1.56	1.09	1.45	2.06	2.57
inancial strength					
et debt/equity (%)	19.9	27.3	33.4	19.8	10.6
let debt/total assets (%)	12.2	14.4	19.1	12.3	6.9
Current ratio (x)	1.5	1.0	0.8	1.0	1.2
F interest cover (x)	(2.3)	4.5	0.6	11.5	14.0
Valuation	<b>2010A</b> 8.3	<b>2011A</b> 12.0	2012E	<b>2013E</b> 9.0	<b>2014</b> 9.1
ecurring P/E (x) *			12.5		
ecurring P/E @ target price (x) * enorted P/E (x)	13.5	19.6 12.0	20.4 12 5	14.6 9.0	14.8
eported P/E (x)	8.3 4.4	12.0 3.1	12.5 2.8	9.0 3.9	9.1 3.8
ividend yield (%)			2.8 9.3		
/CF (x)	6.1 (38 3)	9.0 66.8		6.7 14.0	6.5 12 1
/FCF (x)	(38.3)	66.8 2 0	(446.0)	14.0	12.1
rice/book (x)	1.9	3.0	2.6 4.7	2.2	1.9
rice/tangible book (x) V/EBITDA (x) **	4.4 5 2	6.3 5 9		3.3 5.8	2.7
	5.2	5.9 8.0	7.9 11.0	5.8	5.5
V/EBITDA @ target price (x) **	7.3	8.0	11.0	8.0	7.8
V/invested capital (x)	1.5	2.3	2.0	1.8	1.6

Sources: Zhaojin Mining; BNP Paribas estimates

## History of change in investment rating and/or target price

#### Zijin Mining (2899 HK)



Date	Reco	ТР
15-Apr-09	BUY	3.53
6-Aug-09	HOLD	4.67
15-Aug-10	BUY	4.40

kunal.agrawal started covering this stock from 26-Sep-2012

Price and TP are in local currency

Valuation and risks: Key risks to our DCF-based TP are a) lower than expected gold prices, b) further grade deterioration, c) production target miss. Sources: Bloomberg; BNP Paribas

#### Zhaojin Mining (1818 HK)



Kunal Agrawal started covering this stock from 26-Sep-2012

Price and TP are in local currency

Valuation and risks: Our valuation is based on DCF. Key downside risk include: a) lower-than-expected gold price, b) delays in project execution on new mine developments, and c) cash costs rising more than expectations.

Sources: Bloomberg; BNP Paribas

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Zijin Mining	5
Zhaojin Mining	5

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BUY (B). The upside is 10% or more.

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