Ma'aden

Underweight

Remain cautious

Price (SR)	17.4
12M target price (SR)	15.3
Potential upside (%)	↓ (11.9)

Stock details

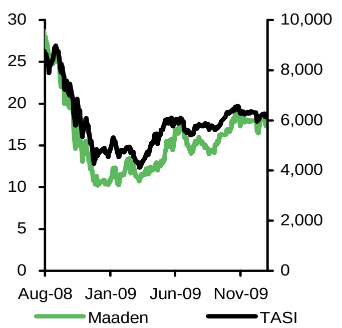
52-week range H/L (SR)			19.4/10.3
Market cap ($mn)			4,280
Shares outstanding (mn)			925
Listed on exchanges			TADAWUL
Price perf. (%)	**1M**	**3M**	**12M**
Absolute	(3.6)	2.7	54.2
Rel. to market	(0.2)	5.5	32.0
Avg daily turn.(mn)		**SR**	**US$**
3M		149.9	40.0
12M		160.3	42.7
Reuters code			1211.SE
Bloomberg code			MAADEN AB
Website			www.maaden.com.sa

Valuation multiples

	08	09E	10E
P/E (x)	78.9	113.8	32.7
P/B (x)	1.0	0.9	0.9
EV/EBITDA (%)	NA	71.4	27.6
Div yield (%)	-	-	-

Source: NCBC Research estimates

Share price performance



Source: Bloomberg

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Please refer to the last page for important disclaimer

We increase our price target to SR15.3 from SR10.9, but maintain our Underweight rating on the stock given the 11.9% downside potential. The increase in price target is primarily driven by increasing our valuations of the gold and phosphate businesses. We do not factor the recently announced aluminum project in our valuation as our initial analysis indicates limited potential for shareholder value creation.

- **Higher gold reserves due to higher gold prices.** We revise our valuation of Maaden's gold unit by increasing our valuation of gold reserves as well as adding the value of mineral resources. A higher gold price makes mining the previously economically unfeasible mineral resources more attractive. Thus, we expect more mineral resources to be re-classified as reserves due to higher gold prices, leading to higher gold production in the future.
- **Phosphate project nearing completion.** Although we do not materially change our revenue and cost assumptions, we increase our valuation of the phosphate unit, mainly due to changes in our capex and equity risk premium assumptions.
- **Aluminum project might not be value accretive.** Our preliminary analysis indicates that the recently announced aluminum project with Alcoa is not economically attractive. This is mainly due to the massive initial investments (SR40.5bn) that will make it very difficult to generate sufficient returns.

  Our analysis indicates the project needs to generate SR4.6bn of annual free cash flows in order to breakeven, assuming a 12% average cost of capital. To reach this level would require around 60% EBITDA margins, assuming aluminum prices of USD2,500/ton. Assuming 40% EBITDA margins, aluminum prices would need to reach USD3,842/ton (74% above current levels).

  We thus believe generating a positive NPV for the project on a standalone basis could be a challenge. At this point, we refrain from including the project in our valuation until we have further clarity on key issues such as financing.

Financials

		2008	2009E	2010E	2011E	2012E
Revenues	SR mn	460	718	906	2,795	4,844
EBITDA	SR mn	(0)	184	476	1,307	3,238
Net income	SR mn	203	141	492	223	583
Total debt	SR mn	820	8,780	13,413	14,458	13,498
Div per share	SR	-	-	-	-	-
EBITDA margin	%	(0.0)	25.7	52.5	46.8	66.8
Net margin	%	44.2	19.7	54.2	8.0	12.0
ROE	%	1.2	0.8	2.8	1.3	3.1
Debt-to-capital	%	4.6	34.1	43.5	44.9	41.9
EPS	SR	0.2	0.2	0.5	0.2	0.6

Source: Company, NCBC Research estimates

Investment summary

We increase Maaden's price target from SR10.9 per share to SR15.3, but maintain our **Underweight** rating on the stock. Our valuation implies 11.9% downside potential from current levels.

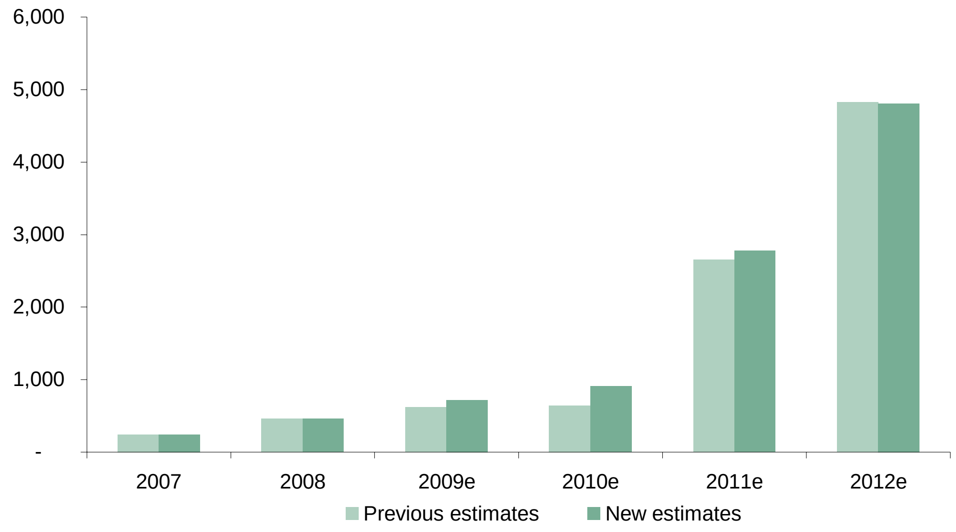
Increasing 2009-11e Revenue Estimates

Although Maaden's net income for 9M09 has been lower than our estimates, the top line figure was higher than what we originally estimated, mainly due to the rise in gold prices.

On the back of higher gold prices, we increase our price and production assumptions for gold over our forecast period, resulting in an upward revision to our revenue estimates.

Exhibit 1: We revise our consolidated revenue estimates upward

Revenues in SAR millions, unless otherwise stated



Source: Company, NCBC Research

Valuing Cash at Net Levels, Not Gross

We believe Maaden's large cash holdings have caused some confusion in the market in terms of the appropriate method of valuing this cash. While Maaden's gross cash levels are worth some SR10 per share, we believe valuing the cash at net levels (including the offsetting debt) is more appropriate. Since our initiation, we have been very clear in our stand on this issue:

- Although Maaden has gross cash around SR10 per share, gross debt is also in the ballpark of SR10 per share. As a result, the net cash position does not add significantly to the equity value. Moreover, the aluminum project is expected to push the company into a significant net debt rather than net cash position.
- Holding cash balances and not utilizing them actually adds a Zakat (Islamic tax) burden on the company. This by itself is value destructive.
- Companies are expected to generate returns that are at least equal to the company's cost of capital. Given the low returns that can be generated on

these cash balances, especially in a low interest rate environment, we think holding less cash is actually desirable.

Rising Gold Prices Leads to an Increase in Our Valuation of the Gold Unit

Based on the company's results up to the 9M09 and our estimates for the 4Q09, we estimate that gold sales for 2009e will reach a total of 174,453 ounces, below management guidance by 5%, but above our previous assumptions by 6%.

Going forward, we are increasing our expectations for production levels to 10% above management's estimates over 2010-14e instead of the 10% discount that we had estimated earlier. This adjustment takes into account the increase in gold price, which could lead to an increase in the economically mineable mineral resources. We value reserves using a Discounted Cash Flow (DCF). Our estimates indicate that the value of reserves is SR1.76bn, or approximately SR1.9 per share.

We expect the company to complete a feasibility study during 2010 of the Central Arabian Gold Project, which is not currently classified as gold reserves. However, due to the increase in gold prices, we feel that attaching a value to the non-reserves resources is necessary. We apply a market approach which factors in 17 recent transactions in the gold business. We value the non-reserve resources at SR930mn, or approximately SR1.0 per share.

Increase in Our Valuation of the Phosphate Unit

Maaden Phosphate Company (MPC) was established in 2007 as a JV between Maaden and SABIC (70% Maaden, 30% SABIC). The company will be a fully integrated diammonium phosphate (DAP) producer that will mine for phosphate in Al Jalamid (north of Saudi Arabia) and transport the concentrate to be processed in Ras Al-Zour (east of Saudi Arabia).

From our discussions with management, we understand that MPC is scheduled to start operations in 4Q10 and is expected to start commercial production in June 2011. The project's margins are expected to be high due to the low cost of production stemming from the integrated production model and access to low cost energy, natural gas and sulphur.

We increase our valuation of the phosphate unit (attributable to Maaden) from SR8.8bn to SR10.1bn. There are two main reasons for the upward revision:

- We reduce our long term maintenance capital expenditure assumptions. Based on our discussions with management, we now think maintenance capex should be lower than our previous assumptions, which leads to a higher valuation.
- We apply a lower discount rate on future cash flows. Market sentiment has improved since our initiation in July 2009 which results in lower risk premiums, and a higher valuation for the business.

Aluminium Business Might Not Be Value Accretive

In December 2009, Maaden announced an agreement with Alcoa to build a SR40.5bn (USD10.8mn) integrated aluminium project which is scheduled to start production in 2013e and 2014e.

The analysis provided in this report is based on the limited currently available public information and could change significantly as the company provides more information. Given our difficulty in determining potential value accretion from the project, we are not factoring it in our valuation until we have further clarity on details such as financing, potential sales mix and margins.

Exhibit 2: Capacity, production and sales to third parties

In Thousand tons

	Planned capacity	Expected production^	Sales to third parties ^^
Bauxite mine	4,000	3,600	-
Alumina Refinery	1,800	1,620	288
Aluminum smelter	750	666	261
Rolling mill	250-450 *	405	405

Source: Company, NCBC estimates

^ Assume capacity utilization of 90%

^^ Assuming all bauxite will be consumed internally

* We assume 450 tons per annum

Our estimates indicate that the cost savings from the company's access to low cost energy and the integrated model of production will result in good margins for the business, relative to global and regional producers.

However, given the significant initial investments which are required, we believe generating sufficient returns which would cover its cost of capital may be difficult to achieve. Although we acknowledge the wider economic and social benefits the project could deliver to the country, we do not believe the project itself will provide value to investors in Maaden. Our analysis indicates that by investing SR40.5bn and assuming a 12% discount rate, the project has to generate at least SR4.6bn of free cash flows (FCF) annually to breakeven from a shareholder value perspective.

In order to achieve SR4.6bn of FCF, we estimate the project needs to generate 57% EBITDA margins, assuming aluminium prices of USD2,500 per ton. Assuming 40% EBITDA margins, the aluminium price would need to reach USD3,842 per ton.

To put these figures into perspective, we note that aluminium prices peaked in 2008 before the global crisis and averaged around USD2,600 per ton for the year (similar to the 2007 average). At the same time, Alcoa generated 16% and 9% EBITDA margins in 2007 and 2008, respectively.

The table below provides our estimates of the impact of the project on Maaden's share price under different aluminium price and margin assumptions. *(Please go to page 13 for detailed analysis)*

Exhibit 3: Sensitivity analysis of NPV per share (assuming 60% ownership)

In SAR per share

		Aluminum price (USD/ton)					
		2,000	**2,200**	**2,500**	**2,800**	**3,000**	**3,500**
EBITDA margin %	**30%**	(10.3)	(9.7)	(8.8)	(7.8)	(7.2)	(5.7)
	35%	(9.0)	(8.2)	(7.2)	(6.1)	(5.3)	(3.5)
	40%	(7.6)	(6.8)	**(5.5)**	(4.3)	(3.5)	(1.4)
	45%	(6.2)	(5.3)	(3.9)	(2.5)	(1.6)	**0.7**
	50%	(4.9)	(3.8)	(2.3)	(0.8)	**0.3**	**2.9**
	55%	(3.5)	(2.4)	(0.7)	**1.0**	**2.2**	**5.0**
	60%	(2.2)	(0.9)	**0.9**	**2.8**	**4.0**	**7.1**
	65%	(0.8)	**0.5**	**2.5**	**4.6**	**5.9**	**9.2**

Source: NCBC Research estimates

Valuation

Sum of the Parts (SOTP)

We estimate Ma'aden's Enterprise value (EV) using the SOTP method. To arrive at Ma'aden's equity value, we adjust the enterprise value by adding cash and investments and deducting debt and debt-like items. The table below summarizes Ma'aden's SOTP valuation. Please note that we do not include the aluminum project in our valuation of Maaden.

Exhibit 4: Sum of the parts valuation

In SAR millions, unless otherwise stated

	Unit	EV	% ownership	EV Maaden	EV %
Maaden Gold Company	SR mn	2,692	100%	2,691	24%
Maaden Phosphate Company	SR mn	14,465	70%	10,125	90%
Maaden Corporate	SR mn	(1,569)	100%	(1,569)	-14%
Sub-Total	**SR mn**	**15,586**		**11,247**	**100%**
Enterprise value attributable to Maaden				**11,247**	
Cash and short term investments	**SR mn**			12,499	
Debt outstanding (attributable to Maaden)	SR mn			(9,389)	
End of service and employees savings plan	SR mn			(109)	
License fees payable	SR mn			(106)	
Maaden equity value	**SR mn**			14,142	
Shares outstanding	SR mn			925	
Fair value per share	**SR**			**15.3**	
Downside potential	%			(11.9%)	

Source: NCBC Research estimates

Valuation of the Phosphate Business

In order to value the phosphate business, we explicitly forecast expected free cash flows over 2010-20e. According to the life-of-mine plan (LoMP), Maaden expects to deplete phosphate reserves over 20 years assuming annual production of 11.6mn tons of ore. Thus, we do not assume indefinite growth, but instead we assume 2% annual growth in FCFF over 2020-30e. We use 12.5% as our discount rate.

Although we have not significantly changed our revenue and cash cost assumptions, our valuation increases as a result of reducing the long term required maintenance capital expenditure and the discount rate used.

Exhibit 5: DCF valuation of the phosphate business

In SAR millions, unless otherwise stated

		2010e	2011e	2012e	2013e	2014e	2015e	…	2030e
NOPAT		(41)	202	1,304	1,542	1,640	1,733		
Depreciation		-	818	1,637	1,506	1,401	1,303		
Capex		(5,000)	(827)	(327)	(452)	(420)	(521)		
Change in WC		(636)	(593)	(481)	19	15	10		
FCFF		**(5,677)**	**(400)**	**2,133**	**2,615**	**2,636**	**2,526**		**2,813**
Enterprise Value	**14,465**								

Source: NCBC research estimates

Valuing the Gold Business

We believe there still exists some confusion in the market regarding the valuation of Maaden's gold business due to the differences between its reserves and mineral resources. The impact of this misunderstanding can result in a significant overvaluation of the gold resources. We value gold reserves and other mineral resources separately and the sum represents the value of the gold business.

We highlight that non-reserve mineral resources often require significant exploration and capital expenditure to build the mine and infrastructure. These expenditures by themselves reduce the value of the resources. In addition, actual recoverability of resources can be significantly different than originally estimated, adding more uncertainty to the valuation. As a result, we used separate and distinct valuation methodologies for 1) Reserves and 2) Non-reserve Resources. *(Please refer to the Appendix for an explanation of the different approaches)*

Valuation of Gold Reserves Using an Income Approach

In order to value the gold reserves, we are using a DCF, estimating free cash flows based on expected sales, costs, working capital and capex and discounting using an appropriate discount rate. We apply this methodology in valuing Maaden's gold reserves as we have more visibility into expected production levels and planned capex.

Based on gold futures prices, management forecast of production until 2014, estimated operating costs and investment requirements, we estimate expected free cash flows over 2010-14e. We use a discount rate of 10.4% with no terminal value as we assume that operating reserves will be depleted over 2010-2014e, in-line with management's reports.

Exhibit 6: Valuation of gold reserves using the income approach (DCF)

In SAR millions, unless otherwise stated

		2010e	2011e	2012e	2013e	2014e	2015e
NOPAT		465	347	304	181	124	-
Depreciation and amortization		73	140	127	115	104	-
Capex		(10)	(9)	(7)	(3)	(2)	-
Change in working capital		45	31	69	64	108	(76)
Chg in other operating assets/liab		-	(17)	-	(24)	-	(25)
FCFF		**574**	**492**	**492**	**332**	**334**	**(101)**
PV of FCFF	**1,761**						

Source: NCBC Research estimates

Based on our valuation of Maaden's gold unit, we attach 65% of the value to gold reserves, while the balance is due to non-reserves mineral resources.

Valuation of Non-Reserve Mineral Resources Using a Market Approach (Comparables)

For non-reserve mineral resources, the income/DCF approach is impractical due to the high uncertainty of the level of underground resources, recoverability of resources, required exploration, required capital expenditure and the difficulty in determining the timing of production.

However, in order to arrive at an appropriate market level valuation for these resources, we have analyzed a number of recent gold market transactions for projects with reported mineral resources. Based on 17 recent transactions, it is clear that the markets only attach a fraction of the gold price to mineral resources. The tremendous discount from the gold price at which these transactions were valued can be attributed to required capex, required exploration, operating costs, environmental costs, taxes, and above all the uncertainty of underground resources and the recoverability of these resources.

In order to value Maaden's non-reserve resources, we use the average implied value per ounce of 17 recent transactions, and adjust these values for the recent increases in gold price, and then we multiply this adjusted implied value by the amount of Maaden's non-reserve resources. We assume gold price at USD1,100/oz, which is in line with long term analyst forecasts.

The table below presents our analysis. The result is that we value Maaden's non-reserve mineral resources at SR930.7mn, or 35% of the value of the overall gold unit.

Exhibit 7: Valuation of Maaden's non-reserve mineral resources using recent comparable transactions

Transaction	Date	Implied value (USD/oz)	Gold (USD/oz)	Price adj	Adjusted implied value (USD/oz)
Bounty	Nov-08	1.27	818.05	1.34	1.70
White well	Jun-08	13.73	925.4	1.19	16.32
Durack	May-08	14.44	886.5	1.24	17.91
Kalgoorlie West	May-08	36.50	886.5	1.24	45.29
Three Rivers	May-08	15.95	886.5	1.24	19.80
Cetlic, Reducastle & Euro	May-08	9.83	886.5	1.24	12.20
Minjar	Apr-08	28.64	877.55	1.25	35.90
Comet & Kurrajong	Mar-08	8.27	916.88	1.20	9.92
Mt Korong	Jan-08	30.18	925.99	1.19	35.85
Eucalyptus	Dec-07	13.11	833.92	1.32	17.29
Burnakura	Oct-07	20.61	796.59	1.38	28.46
Tuckabianna	Aug-07	6.23	673.4	1.63	10.18
Riverina	Aug-07	27.44	673.4	1.63	44.82
Coolgardie	Jun-07	11.57	649.65	1.69	19.60
Youanmi	May-07	12.68	660.5	1.67	21.12
Kikalocka	Jan-07	78.66	653.2	1.68	132.46
Menzies	Mar-06	7.80	550	2.00	15.59
Average (USD/oz)		**19.82**			**28.49**
Mineral resources (thousand oz)					**10,003**
Less: reserves (thousand oz)					1,293
Maaden net resources (thousand oz)					**8,710**
Value (USD mn)					248.2
Value (SR mn)					**931**

Source: Snowden Mining Industry Consultants, NCBC research estimates

We believe our valuation for Maaden's gold resources here is appropriate and is more robust than an ad-hoc approach often used amongst equity market investors, which is to multiply the total mineral resources by the gold price less operating costs. Although this might sound correct intuitively, this approach suffers serious drawbacks given that it:

- Ignores the high uncertainty of the quantity, grade and recoverability of mineral resources. In Maaden's case, around 40% of the mineral resources are classified as inferred resources, not even measured or indicated resources.
- Ignores the significant required exploration and capital expenditure that will actually bring gold to the surface. These can actually be very significant and in and by themselves reduces the value of mineral resources materially.
- Completely ignores time value of money. This factor is especially important for mining companies as it takes many years for a mine to start production.

The transactions that we list in our analysis clearly shows that those closely involved in the gold business actually apply a steep discount to the value of resources, taking into account the myriad uncertainties we have listed. Thus, a simple approach, often used as a short-cut by equity investors, will likely result in significant overvaluation of resources.

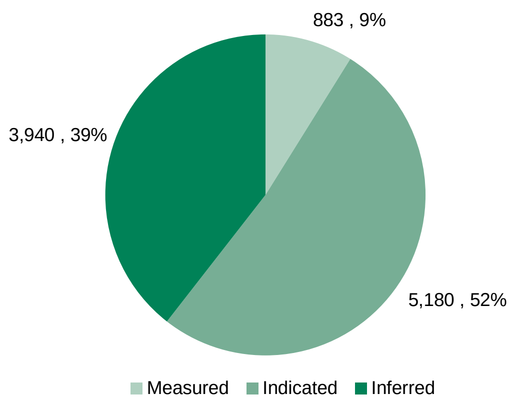
Gold Business

Gold Mineral Resources

Maaden through Ma'aden Gold Company (100%-owned subsidiary based in Jeddah) has historically been dependent on gold mining which currently constitutes almost all of Maadens' revenue. By the end of 2008, Maaden had 10mn ounces of gold in mineral resources, 1.3mn of which was classified as reserves. Maaden currently operates five mines and is developing a mining property in Al Duwayhi, in addition to five exploration projects.

Exhibit 8: Gold mineral resources by type

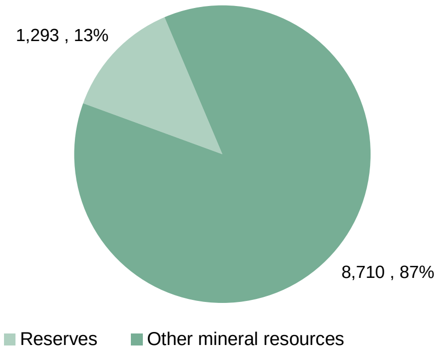
In Thousand ounces, % of total



Source: Company, NCBC Research

Exhibit 9: Reserves relative to total mineral resources

In Thousand ounces, % of total



Source: Company, NCBC Research

Gold Revenue Drivers

Over 2005-08, Maaden's gold sales dropped sharply from 200,000 ounces per year to 127,745 ounces. Moreover, Maaden's actual production for 2008 was 20% lower than estimated by management. Thus, in our initiation report of 13 July 2009, we applied a 10% discount to managements 2008-14e production estimates to arrive at our production forecasts, given the track record of production to date.

However, based on the recently rising gold prices and from discussions with Maaden's management, we understand that gold reserves from currently operational mines could increase as a result of the higher gold prices. According to management, exploiting gold resources that previously were not economically mineable is very probable due to the rise in gold prices. In order to account for this change, we have adjusted our model and now, instead of applying a 10% discount to management's estimated 2010-14e production levels, we are now applying a 10% premium to their estimates. This will have an important impact on our gold revenue projections.

Exhibit 10: Gold production assumptions

In Ounces

	2010e	2011e	2012e	2013e	2014e
New assumption	199,100	163,900	138,600	79,200	56,100
Old assumption	162,900	134,100	113,400	64,800	45,900

Source: Company, NCBC Research

It is important to note that our gold production assumptions only factor in currently operational mines as forecasted by management. Exploration, determining reserves, completing feasibility studies, setting up infrastructure (especially water supplies), mining, and actually extracting and selling gold could take many years and is surrounded by significant uncertainties. In our opinion, any attempt to estimate production levels for potential future mines (resources) is not appropriate given these uncertainties.

Since our initiation in July 2009, the price of gold has increased significantly, exceeding previous market expectation. We update our price assumption and base them on the latest prices of gold futures in order to reflect current market expectation.

Exhibit 11: Gold price assumptions

US dollars per ounce

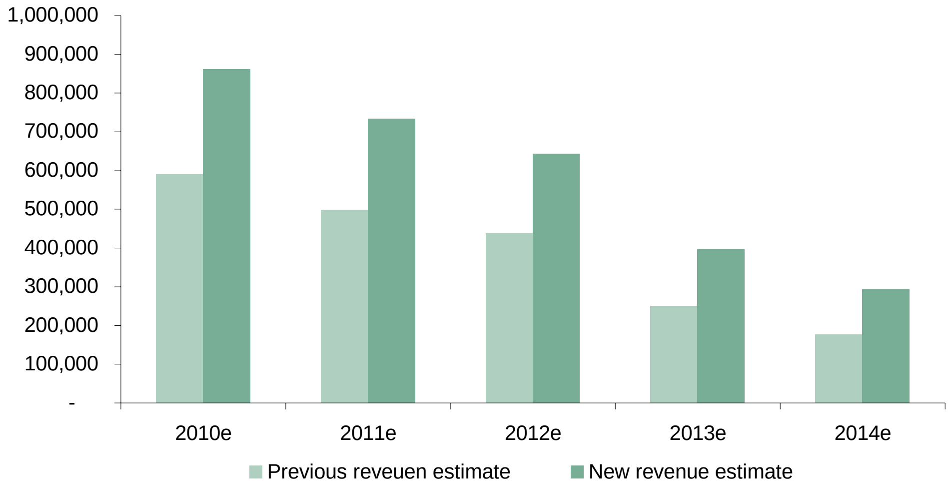
	2010e	2011e	2012e	2013e	2014e
New assumption	1,114	1,128	1,160	1,200	1,200
Old assumption	966	991	1,029	1,029	1,029

Source: Bloomberg, NCBC Research

As a result of the adjustment to both production and prices, we revise our revenue estimate for 2010-14e upward. However, the trend is still the intact. We continue to expect revenue to decline going forward as currently operational mines are depleted and approach the end of their lives.

Exhibit 12: We revise our revenue estimates upward

In SAR thousands, unless otherwise stated



Source: Company, NCBC Research estimates

Phosphate business

Maaden established in 2007 a JV with SABIC (70% Maaden, 30% SABIC) called Maaden Phosphate Company (MPC). MPC will mine for phosphate in Al Jalamid, north of Saudi, and use it to produce phosphoric acid and diammonium phosphate (DAP) in Ras Al Zour (Eastern Province) which are used as fertilizers. In addition to DAP and phosphoric acid, MPC will produce ammonia and sulphuric acid in Ras Al Zour. Most of the ammonia, sulphuric acid and phosphoric acid will be consumed internally in order to produce DAP. MPC is expected to start operation by the end of 2010.

MPC will be a fully integrated DAP producer (from phosphate mine to DAP) and will receive natural gas and sulphur, which are required to produce ammonia and sulphuric acid, from Aramco at a subsidized price. As a result, MPC will be one of the most profitable phosphate fertilizer producers globally, we believe.

MPC will use the North-South railway project which is currently being built by the Saudi government to transport phosphate concentrate from the north of Saudi to the chemical complex in Ras Al Zour (east). However, we note that any delay here could lead to significant increase in the cost of production as shipments would have to be made via trucks until the railway is completed. In addition to the railway, the Saudi government is building a sea port in Ras Al Zour which should enable MPC to export.

Main operational assumptions

We have not made material changes to our main operational assumptions for this business since our initiation report in July. We highlight our assumptions below:

- **Commercial production to begin in mid 2011:** Maaden recently announced that the project is 83.2% complete (as of September 2009) and expected to start operations in October 2010. However, we understand from our discussions with management that commercial production will begin in mid 2011.
- **Delay by 6-months in the North-South railway:** We assume a delay in the railway project and that Maaden will start commercial production six months before the railway is completed. This will increase operating costs for a short period as Maaden will have to rely on trucks for transportation.
- **Capacity utilization of 85%:** The long-term utilization rate of the phosphate fertilizers industry has been around 85%. Given the long term nature of the project, we assume a flat 85% capacity utilization.
- **Natural gas cost:** Currently, all Saudi-based companies receive subsidized natural gas at USD0.75 per MBTU. However, we expect this to change in 2012e. Although management has not confirmed this change, we assume Maaden will receive natural gas at USD1.5 per MBTU after 2012e. From our discussion with management, we understand that the actual pricing agreement will be signed at a later stage, as is the case with all other projects.

MPC profitability analysis

We are largely maintaining our revenue assumptions for the phosphate project. The change in our valuation is mainly attributed to adjustments in estimated long term maintenance capex and discount rate.

The table below illustrates our assumptions for the company's sales to third parties. Sales to third parties were calculated based on planned capacity, 85% utilization rate and adjusting for internal consumption.

Exhibit 13: Capacity, production and sales to third parties ^

In Thousand tons

	Planned capacity	Expected production	Sales to third parties
DAP	2,920	2,482	2,482
Phosphoric Acid	1,520	1,292	137.6
Ammonia	1,090	926.5	355.6
Sulfuric Acid	5,020	4,267	211.1

Source: Company, NCBC estimates

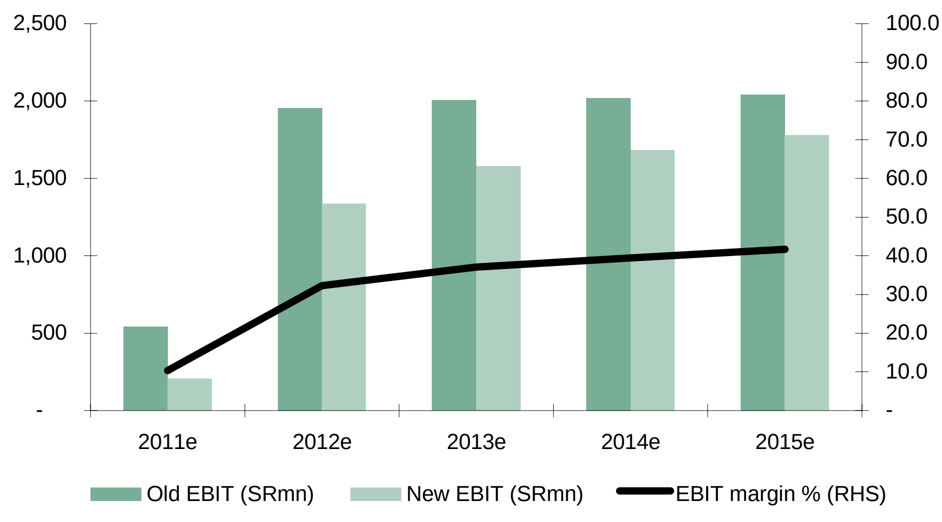
The below table illustrates our new and previous estimates of phosphate project. We slightly adjust our revenue estimates downward as we assume less sulphuric acid will be sold to third parties relative to our previous estimates. On the cost side, we adjust the estimated operating costs downward in order to factor in our assumption of a lower inflation rate environment.

However, we have adjusted our estimated depreciation expenses upward in earlier years which results in lower operating margins. We do not regard this as an important adjustment as it does not affect our DCF valuation.

The combination of changes in revenues and costs has resulted in lower EBIT margins. Currently, we estimate long term EBIT margin (for the phosphate project) to stand at around 43%.

Exhibit 14: Slight downward adjustments to EBIT estimates

In SAR'000(LHS), % (RHS)



Source: Company, NCBC Research estimates

Aluminium business

Maaden announced on December 20, 2009 an agreement with Alcoa to build a SR40.5bn (USD10.8bn) aluminium project. The project will be 60% owned by Maaden and 40% owned by Alcoa.

The project was part of the company's original expansion plan, but was planned to be a 51:49 JV between Maaden and Rio Tinto Alcan. In December 2008 Rio Tinto Alcan announced that due to the economic crisis, they would not go ahead with the project. In December 2009, Maaden announced that Alcoa will be the new partner.

According to Maaden's announcement, the project will be split into two stages. Stage 1, expected to come on stream in 2013, consists of an aluminium smelter with capacity of 740 thousand tons/year and an aluminium rolling mill with an initial capacity between 250-450 thousand tons/year.

Stage 2, expected to come on stream a year after stage 1, consists of a Bauxite mine with annual capacity of 4mn tons and an alumina refinery with an annual capacity of 1.8mn tons.

Exhibit 15: Capacity, production and sales to third parties

In Thousand tons

	Planned capacity	Expected production^	Sales to third parties ^^
Bauxite mine	4,000	3,600	-
Alumina Refinery	1,800	1,620	288
Aluminum smelter	750	666	261
Rolling mill	250-450 *	405	405

Source: Company, NCBC estimates

^ Assume capacity utilization of 90%

^^ Assuming all bauxite will be consumed internally

* We assume 450 tons per annum

Maaden has not announced the mix of debt and equity financing that will be used in the project. However, our analysis indicates that 60% debt and 40% equity is the most likely scenario. Under this scenario, we note that Maaden's leverage will increase to extremely high levels, especially for a company in such a cyclical business.

Securing financing for such a large project looks to be one of the main hurdles the company will face. Shortly after the joint announcement by Maaden and Alcoa, Moody's announced that it is reviewing Alcoa's credit rating and could potentially downgrade Alcoa to below investment grade due to the increased debt it will have to take on to support this project. Given that Alcoa's cash flow outlook and balance sheet look to be stronger than Maaden's, we believe this move by Moody's will make it even more challenging for Maaden to secure financing. This situation has been exacerbated by the recent events in Dubai where debt issued by government linked organizations has turned out not to be fully backed by the Dubai government as was previously assumed by the market. Potential solutions to this include direct government support through low cost loans, or explicit government guarantees on any debt raised, which would lower the costs.

It is important to note that our analysis is based on the publically available information at the time of this report. Thus, the analysis can be significantly different as the company provides more information in the future. Given the high uncertainty, we do not factor the JV in Maaden's forecasted financial statement or our valuation of Maaden.

A key issue we would like to highlight is that our analysis is based on the economic impact of the project on Maaden and to Maaden shareholders. Looking at the project from a bigger picture point of view, we believe it could have a positive impact on the overall economy of the country through the spill over effects on related businesses and industries and by providing employment opportunities to the rising youth of the Kingdom.

Analysis of NPV

In order to value the impact of the project on Maden's stock price, we have built a valuation model of the aluminium project based on a number of simplified assumptions. Our initial analysis indicates that the project is not value accretive, at least based on the information we currently have.

Basic assumptions

To simplify the illustration of our analysis, we have worked the NPV analysis backward using optimistic assumptions in order to highlight how difficult it would be for the project to actually add shareholder value. Then, we analyze how sensitive the NPV is to aluminium prices, EBITDA margins and discount rate assumptions. The following are the main assumption that we will use to analyze the project's impact on Maaden's value per share.

Exhibit 16: Basic assumptions of the aluminium project

Driver	Value
Required initial Capex	SR40.5bn (distributed over 4 years 2011-14)
Life of the project	Until 2050e
Long term aluminium price	USD2,500/ton (10-year avg is USD 1,920/ton)
Capacity utilization %	90%
Start of production	2013 for stage 1 and 2014 for stage 2
EBITDA margin	40%
Interest cost on debt	0% (Assuming interest-free loan from the Saudi gov.)
Working capital requirements	None (to simplify the analysis)
Pre-operating expenses	None (to simplify the analysis)
Zakat (Islamic tax) rate	2.5% of EBT
Discount rate	12%

Source: Company, NCBC Research estimates

The long-term aluminium price assumption is actually more than 10% higher than what commodity analyst are assuming for the long-term and is around the averages of 2007 and 2008 (the peak of the cycle). The EBITDA margin is assumed at 40% which is significantly higher than other producers. Alcoa's EBITDA margin in 2007 and 2008 were 16% and 9%, respectively when the aluminium price averaged around USD2,600/ton.

The assumption of interest free loan on a project that could be financed 60% debt and 40% equity is very aggressive. However, we assume that Maaden will secure all necessary financing from the government as securing financing from the public markets may be difficult given the potential downgrade on Alcoa and recent events in Dubai. Additionally, assuming no required working capital investments and no pre-operating expenses will be incurred until the commissioning of commercial production make the project looks artificially better. Factoring these in will push NPV and IRR to lower levels.

Results of the analysis

Based on the assumptions that we highlighted, we note that project's income statement will look very strong because of the high margins, but, and most importantly for investors in Maaden, the value generated from the project is not as compelling. **The reason for this is the massive capital expenditure required to generate these earnings;** resulting in a low return on investment.

The table below presents the base case scenario of NPV per share (assuming 60% ownership) and the IRR of the project, based on the assumptions above. We will present the average revenue, EBITDA and free cash flows to the firm (FCFF) from 2015 until the end of the project. We choose not present 2011-14e, although we factor them in our calculations, as FCFF will be skewed downward because of capital expenditure.

Exhibit 17: Results of base case scenario

	Long term average	Implied assumptions
Revenue	SR 8.3bn	Aluminium USD 2,500/ton
EBITDA	SR 3.3bn	40% of revenue
Free cash flows to firm (FCFF)	SR 3.2bn	39% of revenue
Project IRR	8.0%	
Per share impact on Maaden	Negative SR 5.5/share	

Source: Company, NCBC Research estimates

In order to understand the impact of the main drivers, we calculated what FCFF is required for the project to generate zero NPV (breakeven) assuming a 12% discount rate. The answer was approximately SR4.6bn of FCFF. In order to achieve such a level of free cash flows, we ran a sensitivity analysis of FCFF to the main drivers:

- Everything else being equal, what is the required aluminium price for the project to breakeven (NPV = Zero)?
- Everything else being equal, what is the required EBITDA margin for the project to breakeven (NPV = Zero)?

Exhibit 18: Sensitivity analysis of NPV

		Implied Assumptions
EBITDA sensitivity analysis, everything else is equal		
Revenue	SR 8.3bn	Equal base case
EBITDA	SR 4.7bn	**57% of revenue**
Free cash flows to firm (FCFF)	SR 4.6bn	56% of revenue
Project IRR	12%	
Per share impact on Maaden	Zero	
Aluminium price sensitivity analysis, everything else is equal		
Revenue	SR 11.8bn	**Aluminium USD 3,842/ton**
EBITDA	SR 4.7bn	Equal base case as % of revenue
Free cash flows to firm (FCFF)	SR 4.6bn	36% of revenue
Project IRR	12%	
Per share impact on Maaden	Zero	

Source: NCBC Research estimates

The above table indicates that under our base case revenue scenario and capital expenditure, EBITDA margin has to be 57% for the project to generate the required SR4.6bn of FCFF. Below that level, the project will have a negative NPV.

Similarly, under our base case EBITDA margin scenario, the price of aluminium has to be USD3,842/ton (74% above current market price) in order to breakeven.

The idea of sustaining a long term 57% EBITDA margin or aluminium price of USD 3,842/ton are not realistic, we believe. We think both scenarios are difficult to achieve. The table below presents a sensitivity analysis of NPV to both aluminium price and EBITDA margin. This analysis highlights the difficulty of achieving positive shareholder value.

Exhibit 19: Sensitivity analysis of NPV per share (assuming 60% ownership)

Units SR per share

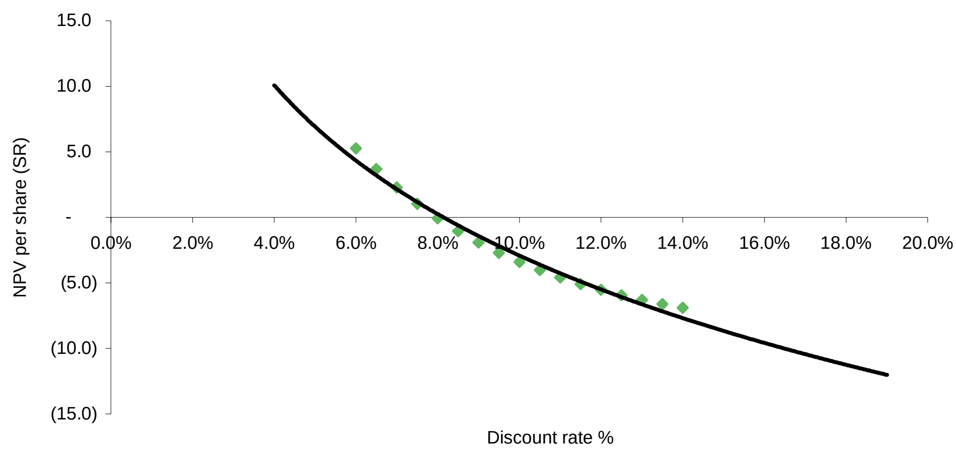
		Aluminum price (USD/ton)					
		2,000	**2,200**	**2,500**	**2,800**	**3,000**	**3,500**
EBITDA margin %	**30%**	(10.3)	(9.7)	(8.8)	(7.8)	(7.2)	(5.7)
	35%	(9.0)	(8.2)	(7.2)	(6.1)	(5.3)	(3.5)
	40%	(7.6)	(6.8)	**(5.5)**	(4.3)	(3.5)	(1.4)
	45%	(6.2)	(5.3)	(3.9)	(2.5)	(1.6)	**0.7**
	50%	(4.9)	(3.8)	(2.3)	(0.8)	**0.3**	**2.9**
	55%	(3.5)	(2.4)	(0.7)	**1.0**	**2.2**	**5.0**
	60%	(2.2)	(0.9)	**0.9**	**2.8**	**4.0**	**7.1**
	65%	(0.8)	**0.5**	**2.5**	**4.6**	**5.9**	**9.2**

Source: NCBC Research estimates

Finally, we would like to understand the impact of changing the discount rate. In our base case, we used 12% discount rate, which we think is appropriate given the nature of the project. We reached the 12% using the standard WACC formula assuming zero cost of debt (assume fully financed by the government) and beta of 1.1 (Alcoa's raw beta using two years of weekly returns is 2.01).

However, understanding the impact of changing the discount rate reinforces our opinion. For the project to breakeven, under our base case assumption, the project requires a very low discount rate (8.0% to be specific). The chart below presents the impact of different discount rates on the project's NPV (attributable to Maaden).

Exhibit 20: Sensitivity of NPV per share (SR) to the discount rate %



Source: NCBC Research estimates

Conclusion

Based on available information and our assumptions, we believe the aluminium project is not value accretive, despite the expected good profits. The reason, as we discussed earlier, is the massive capital expenditure that is required to make these profits which results in a low IRR.

We do understand the importance of the project to the overall economy as it boosts the country's industrial base, assists in diversifying the country away from a pure oil based economy, and how it opens the doors for related business along the supply chain and the positive impact on employment. However, from a value creation perspective for Maaden shareholders, we are not as optimistic.

Financials

Exhibit 21: Income statement

In SAR millions, unless otherwise stated

	2008	2009E	2010E	2011E	2012E
Net sales	**460**	**718**	**906**	**2,795**	**4,844**
% change	88.5%	56.0%	26.3%	208.4%	73.3%
COGS	(239)	(329)	(406)	(2,396)	(3,325)
Gross Profit	**221**	**389**	**501**	**399**	**1,519**
Other operating expenses	(309)	(302)	(171)	(191)	(172)
Operating profit	**(88)**	**87**	**330**	**209**	**1,347**
Operating margin (%)	(19.2)	12.1	36.4	7.5	27.8
EBITDA	**(0)**	**184**	**476**	**1,307**	**3,238**
Murabaha Income	290	317	317	375	548
Interest expense	-	-	-	-	(540)
Minority interest	2	6	12	(61)	(391)
Pre-tax profit	**203**	**410**	**659**	**523**	**964**
Tax (Zakat)	-	(269)	(168)	(300)	(381)
Net income	**203**	**141**	**492**	**223**	**583**
% change	2.2	(30.6)	248.5	(54.6)	160.8
Net income margin (%)	44.2	19.7	54.2	8.0	12.0
EPS	**0.2**	**0.2**	**0.5**	**0.2**	**0.6**

Source: Company, NCBC Research estimates

Exhibit 22: Balance sheet

In SAR millions, unless otherwise stated

	2008	2009E	2010E	2011E	2012E
Cash & equivalents	4,145	3,172	3,125	3,424	3,736
Short term invest.	7,190	9,517	9,374	10,272	11,209
Accounts receivable	21	34	41	366	713
Inventory	167	208	261	382	381
Other current assets	973	645	608	572	508
Total current assets	12,496	13,577	13,410	15,016	16,547
Net fixed assets	8,863	14,298	19,169	18,908	17,354
Total assets	**21,358**	**27,875**	**32,579**	**33,923**	**33,902**
Accounts payable	2,429	513	395	469	410
Other current liab	1,144	1,463	1,155	1,103	1,120
Total current liab	3,573	1,976	1,549	1,572	1,530
Total debt	820	8,780	13,413	14,458	13,498
Other liabilities	139	157	175	168	174
Total liabilities	**4,531**	**10,912**	**15,137**	**16,198**	**15,202**
Share capital	9,250	9,250	9,250	9,250	9,250
Add. paid in capital	5,250	5,250	5,250	5,250	5,250
Minority interest	639	634	621	682	1,073
Reserves & surplus	1,688	1,829	2,320	2,543	3,126
Total equity	**16,827**	**16,962**	**17,442**	**17,726**	**18,699**
Total equity & liab	**21,358**	**27,875**	**32,579**	**33,923**	**33,902**

Source: Company, NCBC Research estimates

Exhibit 23: Cash flow statement ^

In SAR millions, unless otherwise stated

	2008	2009E	2010E	2011E	2012E
Cash flow from op. (a)	3,028	(1,327)	(116)	615	2,539
Cash flow from inv.(b)	(6,158)	(5,525)	(5,025)	(837)	(337)
CAPEX	(6,416)	(5,525)	(5,025)	(837)	(337)
Free cash flow	(3,129)	(6,852)	(5,141)	(222)	2,201
Cash flow from fin.(c)	11,181	8,207	4,950	1,419	(952)
Dividends paid	-	-	-	-	-
Debt	820	7,960	4,633	1,044	(1,499)
Equity addition	10,500	-	-	-	-
Net chg. in cash (a+b+c)	8,052	1,355	(191)	1,197	1,250
Cash at start of the year	2,695	11,335	12,690	12,499	13,696
Segregation of MPC	588	-	-	-	-
Cash at end of the year	11,335	12,690	12,499	13,696	14,946

Source: Company, NCBC Research estimates

^ Due to the nature of short term investments, we treat it as cash in the cash flows statement

Exhibit 24: Key financial ratios

	2008	2009E	2010E	2011E	2012E
Per share ratios (SR)					
EPS	0.2	0.2	0.5	0.2	0.6
FCF per share	(3.4)	(7.4)	(5.6)	(0.2)	2.4
Div per share	-	-	-	-	-
Book value per share	18.2	18.3	18.9	19.2	20.2
Valuation ratios (x)					
P/E	78.9	113.8	32.7	71.9	27.6
P/FCF	(5.1)	(2.3)	(3.1)	(72.3)	7.3
P/BV	1.0	0.9	0.9	0.9	0.9
EV/sales	28.6	18.3	14.5	4.7	2.7
EV/EBITDA	NA	71.4	27.6	10.1	4.1
Div yield (%)	-	-	-	-	-
Profitability ratios (%)					
Gross margins	48.0	54.2	55.2	14.3	31.4
Operating margin	(19.2)	12.1	36.4	7.5	27.8
EBITDA margins	(0.0)	25.7	52.5	46.8	66.8
Net profit margins	44.2	19.7	54.2	8.0	12.0
ROE	1.2	0.8	2.8	1.3	3.1
ROA	1.0	0.5	1.5	0.7	1.7

Source: Company, NCBC Research estimates

Appendix: Mineral resources

Valuing mineral resources is difficult, mainly due to the high uncertainty of quantity, grade and recoverability of resources. This is also magnified by the uncertainty in required exploration, capital expenditure and infrastructure requirements. Before we discuss the methodologies to value mineral resources, we highlight that mineral resources are classified based on geological evidence into three different categories.

Exhibit 25: Mineral resources classification

Mineral Resources: This refers to concentration of material of intrinsic economic interest in the earth's crust with reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated, or interpreted from specific geological evidence and knowledge. Mineral resources are sub-divided in the order of increasing geological confidence into Inferred, Indicated, and Measured categories.

Inferred Mineral Resources: This refers to that part of a mineral resource for which quantity, grade, and mineral content can be estimated on the basis of geological evidence and limited sampling. These estimates are reasonably assumed but not verified for geological and grade continuity. They are based on information that may be of uncertain quality and reliability.

Indicated Mineral Resources: This refers to that part of a mineral resource for which quantity, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling, and testing of information, gathered through appropriate techniques, and drill holes that are spaced closely enough for geological and grade continuity to be assumed.

Measured Mineral Resources: This refers to that part of a mineral resource for which quantity, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques. The locations are spaced closely enough to confirm geological and grade continuity.

Ore Reserves: This refers to the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Ore reserves are sub-divided in order of increasing confidence into: probable ore reserves and proven ore reserves.

Source: NCBC Research

In principal, the fundamental valuation method of mining companies is similar to any other business: net present value of future cash flows. However, mines have finite lives. As a result, one of the adjustments made is not to use a terminal value as this would grossly over value the mine or project.

Although the idea is straight forward, applying such analysis to a real world mining company is very challenging; mainly due to the high uncertainties related to quantity, grade and recoverability of resources. This is also magnified by the uncertainty in required exploration, capital expenditure and infrastructure requirements

The three generally accepted valuation approaches for mining projects are:

- Income Approach
- Market Approach
- Cost Approach

The **Income Approach** is based on the principle of anticipation of benefits and includes all methods that are based on the income or cash flow generation potential of the Mineral Property. We use this method to value Maaden's reserves as cash flows are less uncertain relative to other non-reserve mineral resources. We use the discounted cash flows, which is one method that falls under the income approach, to value gold reserves.

The **Market Approach** is based primarily on the principle of substitution and is also called the Sales Comparison Approach. The Mineral Property being valued is compared with the transaction value of similar Mineral Properties, transacted in an open market. We use this approach to value Maaden's mineral resources that are not classified as reserves.

The **Cost Approach** is based on the principle of contribution to value. The appraised value method is one commonly used method where exploration expenditures are analyzed for their contribution to the exploration potential of the Mineral Property.

These approaches are the generally accepted approaches by most exchange regulatory authorities. However, not every approach is acceptable is every case. For example, the income approach is generally not acceptable to value exploration projects due to the high uncertainty associated with these assets.

In our valuation of Maaden's gold business, we applied the income approach to value reserves and the market approach to value the other mineral resources.

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Overweight:	Target price represents expected returns in excess of 15% in the next 12 months
Neutral:	Target price represents expected returns between -10% and +15% in the next 12 months
Underweight:	Target price represents a fall in share price exceeding 10% in the next 12 months
Price Target:	Analysts set share price targets for individual companies based on a 12 month horizon. These share price targets are subject to a range of company specific and market risks. Target prices are based on a methodology chosen by the analyst as the best predictor of the share price over the 12 month horizon

OTHER DEFINITIONS

NR:	Not Rated. The investment rating has been suspended temporarily. Such suspension is in compliance with applicable regulations and/or in circumstances when NCB Capital is acting in an advisory capacity in a merger or strategic transaction involving the company and in certain other situations
CS:	Coverage Suspended. NCBC has suspended coverage of this company
NC:	Not Covered. NCBC does not cover this company