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Precious Metals (Citi)
CEEMEA | South Africa

South African Platinum Sector

Hospital Pass

- Industry Overview

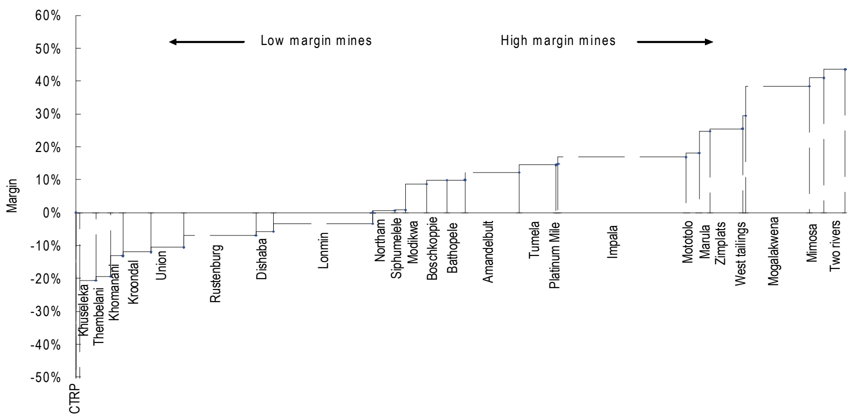
Johann Steyn
+27-11-944-0087
johann.steyn@citi.com

Craig Irwin
craig.irwin@citi.com

Lonmin's recent decision NOT to cut production, but only delay capex, places AMS under renewed pressure, in our view. Everyone that needed to act has now acted, bar AMS. We maintain that the company finds itself in a bigger predicament than the market appreciates. Sell, TP R400.

- **LON delays** — LON's recent announcement of delaying growth ambitions was inline with our thinking, as highlighted previously in "Steering the Ship through Stormy Waters" and "Tiring Balance Sheets*".
- **But not enough** — The potential effect of LON's change in strategy on our S/D outlook is that our FY12, 13, and 14 surplus would decrease by 0k, 47k, and 112k ounces to 293k, 217k, and 131k ounces respectively. This is not enough to improve PGM prices, in our view.
- **Ball in AMS's court** — With AQP, RBP and LON having taken action, we believe the only company left to act is AMS. In this note, we update our margin analysis and reiterate our view that AMS's restructuring needs to be urgent, and significant. Unless it is, it may run out of balance sheet faster than the market expects (refer: "Strategic Review: Sensing Cold Feet").
- **IMP emerging as winner** — All of this is playing into IMP's favor. Its low-cost assets and strong balance sheet allows it to continue spending capital to access high-yielding Merensky ounces, while peers are cutting back. This will put IMP in an even stronger margin position relative to its peers when market conditions improve; something not adequately reflected by the market, in our view. Buy, TP R190.

Figure 1. SA platinum sector 1HCY13E FCF margin chart*, including base metal credits (%, 6E)



Source: Citi Research

Contents

Summary

LON's recent decision to delay capital and growth ambitions have increased the pressure on AMS to cut production, in our view. In this note, we recap the actions taken to date by LON (and others) and asses the implications on:

- Our Supply-demand outlook for platinum
- The outlook for PGM prices
- Other market participants and their strategies, especially AMS

We conclude that:

- The market should remain in surplus. LON's change in strategy will only remove 0k, 47k and 112k ounces in FY12, 13 and 14 respectively. This is insufficient to eliminate our current 293k, 264k and 243k ounce surplus estimate for FY12, 13 an 14 respectively.
- As a result, PGM prices are unlikely to improve on the back of LON's change in strategy (especially when seen in context of the CitiE +1.0m ounces of cumulative surpluses over the past three years).
- AMS is now the only company left to act. Unless it closes significant production, the sector – and more so itself – will continue to struggle in the medium term in our view. We believe a change in mindset is needed. Rather than arguing: "*If we close production, everyone else will benefit, but us*" it should start realising: "*Unless we close production, we (and our shareholders) are likely to hurt more than anyone else*".
- IMP is the silent winner. While most companies in the PGM space are fighting for survival, IMP can continue with its capital programs (focused on accessing high yielding Merensky ounces) even if PGM prices decline another 30%.

Figure 2. Citi mining valuation comparatives sheet (calendarised)

									P/E			EV/EBITDA			FCF yield (%)	
	TP Curr.	RIC codes	Rating	Current price	TP	CY12e DY (%)	ETR* (%)	Current P/DCF	2011	2012e	2013e	2011	2012e	2013e	2011	2012e
Barrick gold	USD	ABX.N	Buy	34.1	50.0	2.2	48.7	0.9	7.3	8.4	7.3	5.3	6.7	5.6	1.0	-6.3
Impala Platinum	ZAR	IMPJ.J	Buy	132.1	190.0	1.8	45.6	0.6	11.5	13.4	12.2	5.6	6.6	5.9	3.2	1.5
African Rainbow	ZAR	ARIJ.J	Buy	159.6	220.0	3.5	41.3	0.8	9.4	10.2	9.4	3.9	4.1	3.6	2.6	4.5
Northam	ZAR	NHMJ.J	Buy	25.9	36.0	0.3	39.6	0.7	34.0	28.8	13.9	17.1	14.1	7.4	-10.9	-13.3
Rio Tinto	GBP	RIO.L	Buy	32.2	43.5	3.5	38.7	0.6	6.0	8.3	6.8	2.9	4.0	3.2	9.3	-1.7
Newcrest	AUD	NCM.AX	Buy	24.3	32.0	2.1	33.6	1.0	17.6	17.7	12.5	9.7	9.0	6.7	-2.6	-1.0
BHP Billiton	GBP	BLT.L	Buy	19.9	22.0	3.9	14.7	0.9	8.6	10.0	9.3	5.1	5.7	5.3	7.9	4.5
Aquarius	GBP	AQP.L	Neutral	0.4	0.4	0.0	14.4	0.7	10.8	-17.5	10.4	2.8	9.0	4.7	-34.7	-13.3
Exxaro	ZAR	EXXJ.J	Buy	178.5	190.0	4.8	11.2	0.9	7.9	8.3	8.0	11.4	13.2	13.2	11.5	1.1
RBPlat	ZAR	RBPJ.J	Neutral	47.5	52.0	0.0	9.5	1.1	25.4	45.6	24.7	9.2	12.3	10.1	-1.6	-3.4
Newmont	USD	NEM.N	Neutral	47.2	49.0	2.9	6.7	1.1	10.9	12.8	11.0	8.7	6.7	6.4	3.4	-2.4
AngloGold Ashanti	ZAR	ANGJ.J	Neutral	276.0	290.0	1.5	6.6	1.7	10.2	10.8	10.6	5.0	5.2	4.8	10.0	4.6
Lonmin	GBP	LMI.L	Neutral	7.5	7.6	0.2	2.1	1.1	14.0	43.9	32.0	4.4	6.9	6.9	-7.0	-3.5
Anglo American	GBP	AAL.L	Neutral	20.2	20.0	2.6	1.4	0.5	6.5	11.4	8.6	3.8	5.4	4.1	8.5	1.0
Assore	ZAR	ASRJ.J	Neutral	296.0	280.0	3.0	-2.4	1.2	8.8	8.8	9.2	6.3	6.9	7.1	5.4	8.8
Anglo Platinum	ZAR	AMSJ.J	Sell	432.0	400.0	0.0	-7.4	1.2	28.3	117.3	48.3	8.2	21.3	14.4	4.5	-0.2
Gold fields	ZAR	GFIJ.J	Sell	109.3	95.0	3.0	-10.0	1.8	9.7	9.7	9.1	4.0	4.3	3.8	7.8	10.2
Harmony	ZAR	HARJ.J	Sell	81.4	65.0	0.7	-19.4	2.0	17.1	16.7	22.2	9.4	7.3	6.5	1.2	5.1
Randgold	GBP	RRS.L	Sell	62.9	49.2	1.2	-20.6	1.2	24.2	16.6	12.6	14.9	10.4	7.7	1.3	-0.1
Kumba Iron Ore	ZAR	KIOJ.J	Sell	541.2	380.0	8.0	-21.7	1.2	9.1	10.6	9.7	4.8	5.6	5.4	12.7	10.8

Source: Citi Research, Powered by dataCentral

*Expected total return, Priced as at 10/08/2012

Evasive reaction

LON: protecting its wickets

LON's recent announcement that it will be delaying capital and growth ambitions was inline with our thinking, as highlighted previously in "Steering the Ship through Stormy Waters" and "Tiring Balance Sheets*".

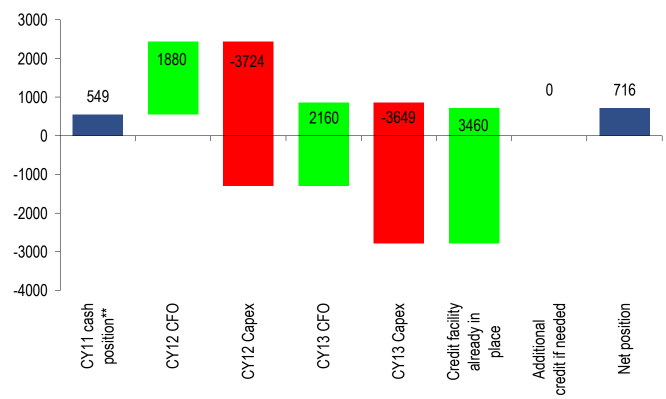
Under its new strategy, we now expect FY12, 13 and 14 production to level off at 750,000 ounces (Pt) down from our previous 750,000, 796,000, and 862,000 ounces respectively.

The main reason for delaying its capital program is to protect its vulnerable balance sheet. Following this action, our cash flow analysis suggests that it will save about R700m on its balance sheet over the next 18 months.

Even so, its decision to cut/delay capex only buys them time, in our view. If spot prices prevail, LON still risks having to recapitalize its balance sheet, potentially through a rights issue.

The action from LON also follows recent mine closures and capex delays at AQP and RBP. Please refer "Marikana Closure and Mimosa Risk*", "Another Closure" and "Protecting its Balance Sheet".

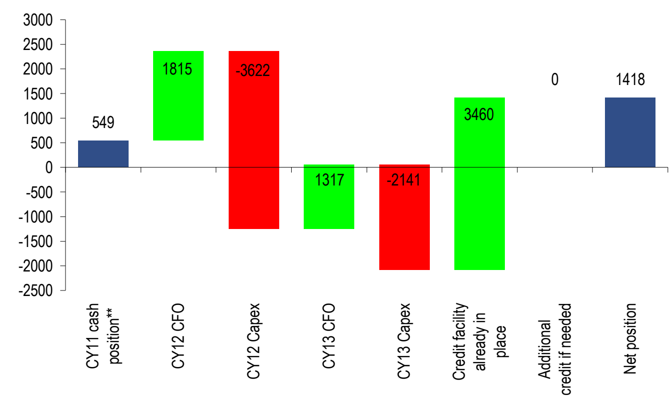
Figure 3. LON CY12E/13E cash flow* - before restructuring



Source: Citi Research

*At spot prices – Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

Figure 4. LON CY12E/13E cash flow* - after restructuring



Source: Citi Research

*At spot prices - Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

But not enough

Market still in surplus

In our July 16th note "Growing surplus, despite SA supply cuts", we highlighted that we still expect the platinum market to be in surplus of 293,000, 264,000 and 243,000 ounces in FY12, 13, and 14 respectively (*Figure 5*). If we include the effect of LON's recent capital delays (and assume the demand scenarios remain unchanged), then our surplus outlook may decrease to 293,000, 217,000 and 131,000 ounces in FY12, 13 and 14 respectively.

The figure below is an excerpt from our July 16 note:

Figure 5. Citi Platinum supply-demand outlook (000 ounces) (excerpt from "Growing surplus, despite SA supply cuts")

	2007	2008	2009	2010	2011	2012F	2013F	2014F	2015F
Demand									
Auto catalysts									
Europe	2055	1970	970	1495	1465	1321	1338	1410	1464
North America	850	505	370	405	380	440	448	491	509
China	175	145	85	100	110	138	152	158	171
Japan	610	610	395	550	500	652	618	614	610
Rest of the world	455	420	365	525	650	696	726	756	780
Total	**4145**	**3650**	**2185**	**3075**	**3105**	**3247**	**3283**	**3429**	**3534**
Jewellery									
Europe	200	205	185	175	175	184	193	197	200
North America	225	200	135	175	185	194	204	210	216
China	1070	1060	2080	1650	1680	1764	1852	1908	1965
Japan	540	530	335	325	315	302	293	293	311
Rest of the world	75	65	75	90	125	123	120	120	123
Jewellery recycled	655	695	565	735	820	726	668	659	659
Net jewellery demand	**1455**	**1365**	**2245**	**1680**	**1660**	**1841**	**1995**	**2069**	**2156**
Investment									
Europe	195	105	385	140	155	16	43	37	37
North America	30	60	105	465	10	21	27	23	23
Japan	-60	385	160	45	250	25	40	28	28
Rest of the world	5	5	10	5	45	27	30	32	32
Total	**170**	**555**	**660**	**655**	**460**	**89**	**141**	**120**	**120**
Industrial									
Europe	350	335	290	326	398	408	419	435	451
North America	420	380	250	370	452	463	476	493	511
China	295	205	0	200	244	250	257	266	276
Japan	225	210	160	205	250	256	263	272	283
Rest of the world	555	595	440	580	707	725	745	772	800
Total	**1845**	**1725**	**1140**	**1681**	**2050**	**2103**	**2160**	**2238**	**2321**
Total platinum demand	**7615**	**7295**	**6230**	**7091**	**7275**	**7280**	**7579**	**7856**	**8130**
Supply									
Mine supply									
Southern Africa	5240	4695	4865	4915	5195	4967	5097	5312	5427
Russia	915	805	785	825	835	815	798	767	752
North America	325	325	260	210	350	325	381	376	371
Rest of world	120	115	115	110	100	120	120	120	120
Total	**6600**	**5940**	**6025**	**6060**	**6480**	**6227**	**6396**	**6575**	**6669**
Auto catalyst recycling									
Europe	215	385	299	375	445	417	450	468	487
North America	605	630	421	580	640	707	750	780	811
China	10	15	23	10	10	62	74	89	102
Japan	35	60	54	65	60	90	97	105	113
Rest of the world	70	45	44	55	70	70	76	82	89
Total	**935**	**1135**	**840**	**1085**	**1225**	**1346**	**1447**	**1524**	**1602**
Total platinum supply	**7535**	**7075**	**6865**	**7145**	**7705**	**7573**	**7843**	**8099**	**8271**
Supply-demand surplus/(deficit)	**-80**	**-220**	**635**	**54**	**430**	**293**	**264**	**243**	**141**

Source: Citi Research, Johnson Matthey

Prices unlikely to move

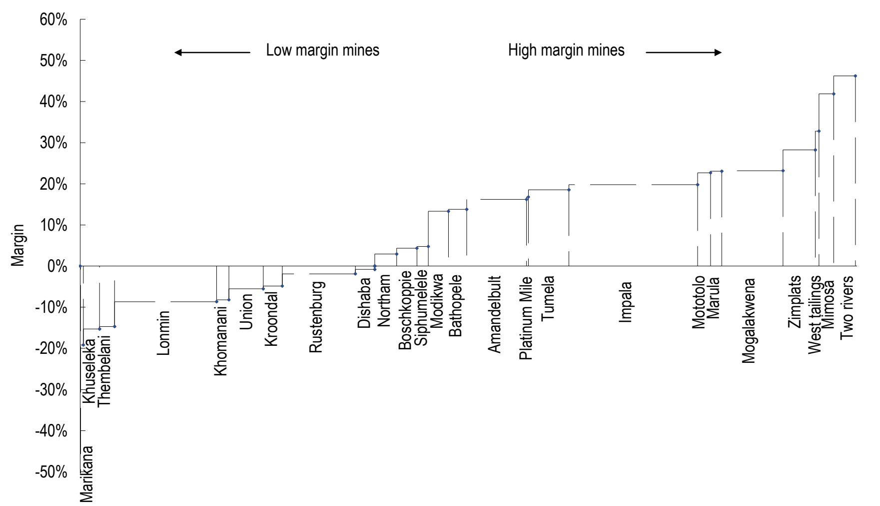
As a result, we view it as unlikely that LON’s lowered production outlook will have any material impact on PGM prices. Significantly more is required in order to get the market back on track. As we show in the following section, the ball is now solely in AMS’s court.

AMS: Receiving a Hospital Pass

Only one left to act

AMS is now the only company left to act. Even though LON's 2H12 position looks worse than AMS on our margin chart (*Figure 6*), we highlight that we estimate this is only temporary as its CY12 capex budget is back-end loaded. With its capex budget falling from R3.44bn in CY12 to R2bn in CY13, it should improve its position significantly (at least relative to AMS) in 1HCY13 (*Figure 7*).

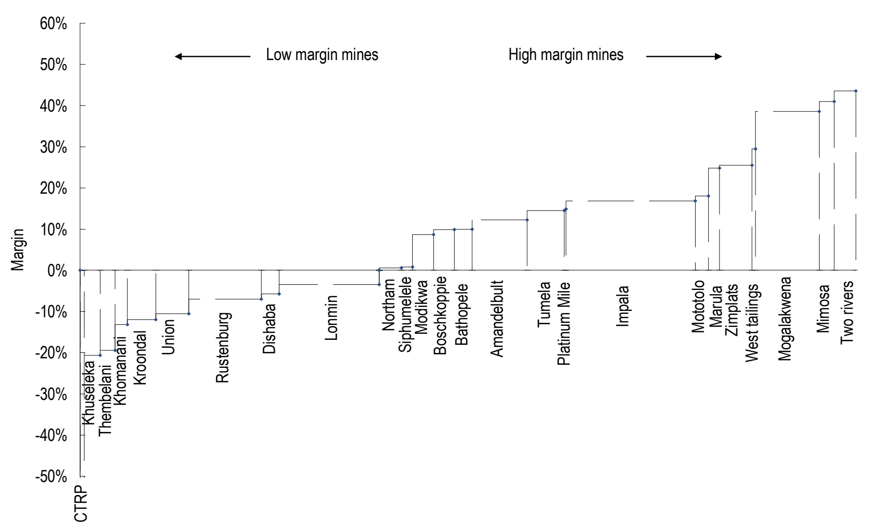
Figure 6. SA platinum sector 2HCY12E FCF margin chart*, including base metal credits (%, 6E)



Source: Citi Research

*Based on spot prices - Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

Figure 7. SA platinum sector 1HCY13E FCF margin chart*, including base metal credits (%, 6E)



Source: Citi Research

*Based on spot prices - Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

The implication of this is that AMS will now be the sole custodian of the remaining cash burning assets in the platinum industry. As highlighted in "Strategic Review: Sensing Cold Feet", we estimate that 24% of AMS's assets are cash burning after capex.

If spot prices prevail, we estimate that AMS (in its current form) can go the next 18-24 months without balance sheet restructuring. This is mainly due to the R12.5bn rights issue and balance sheet restructuring in 2010. Thanks to this, AMS has total debt facilities of R25bn, R6.0bn of which have already been drawn (*Figure 8*). If spot prices prevail, AMS would have to draw down a further ~R6.0bn of debt, which would place it at a debt/equity ratio of 28% and net debt/EBITDA ratio of 2.85x, close to the generally accepted covenant ratio of 3.0x.

Figure 8. AMS debt facilities (Rm)

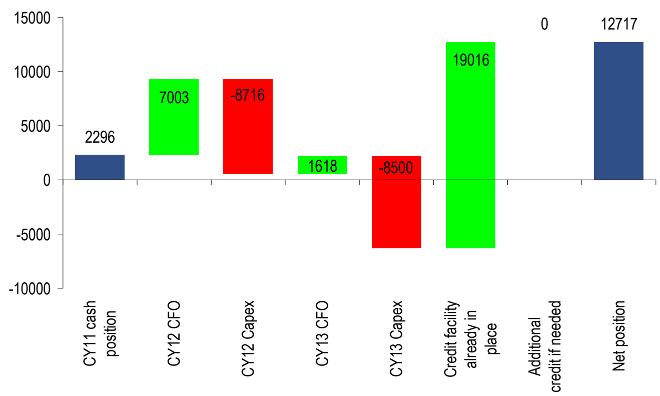
Debt facilities (as at 31-12-2011) Committed	Facility amount	Utilized amount	Available Funds
ABSA bank Ltd	2,000		
Anglo American SA Finance Ltd	6,100	4,996	
Credit Agricole Corp&investment bank	0		
FirstRand bank Ltd	2,857	500	
Nedbank Ltd	4,462	462	
Standard Bank Ltd	4,000		
Standard Chartered Bank Ltd	750		
	20,169	**5,958**	**14,2111**
Uncommitted - callable on demand			
Anglo American SA Finance Ltd	2,500		
Investec Bank Ltd	400		
Citibank	405		
Old Mutual Specialised Finance Ltd	1,500		
	4,805	**0**	**4,8055**
Total	**24,974**	**5,958**	**19,0166**

Source: Company reports, Citi Research

Balance sheet restructuring may entail another rights issue

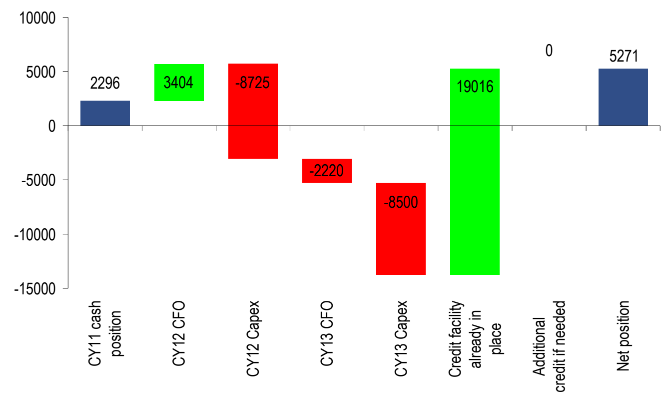
However, if prices decline another 15% in rand-terms, we caution that AMS may run into balance sheet problems (even without paying dividends) sooner than the market thinks. As shown in *Figure 10*, we estimate AMS would have to draw ~R15bn of its remaining R19bn facilities if this scenario occurs. This would raise its debt/equity ratio to 44% and net debt/EBITDA to 4.5x, well beyond normal covenant ratios. As a result, we do not think AMS will be able to access the remaining part of its facilities to this extent. Another equity raising or rights issue will therefore be likely in our view.

Figure 9. AMS CY12E/13E cash flow at spot* (Rm)



Source: Company reports, Citi Research estimates
*At spot prices – Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

Figure 10. AMS CY12E/13E cash flow at spot* less 15% (Rm)



Source: Company reports, Citi Research estimates
*At spot prices – Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, R8.00/$

Urgent action required

AMS will not have the luxury of "riding out" these difficult times, in our view.

We therefore think that urgent, and significant, action is required to protect shareholders from the latter scenario. In our conversations with investors around the world, we have picked up that there is a view that AMS can "ride out" these difficult times by waiting for other industry participants (mostly AQP and LON) to take strain and close production.

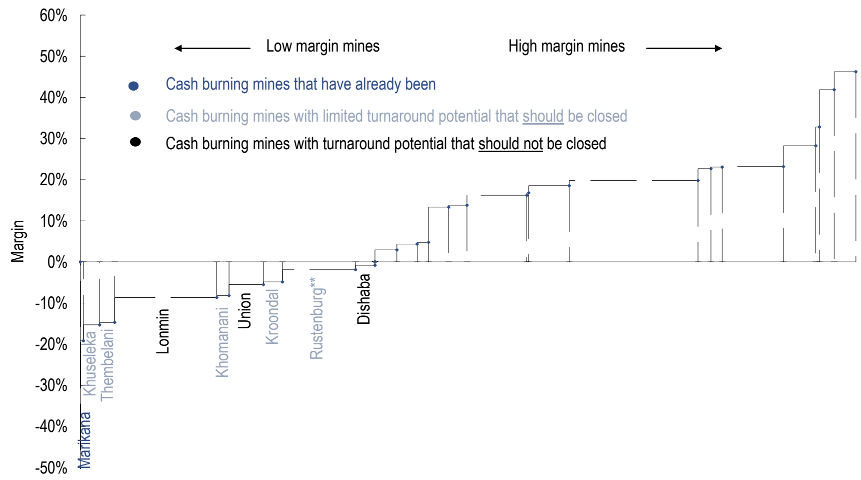
In our view (and supported by the analysis above), this is not the case. We believe the sooner AMS acts, the better.

We maintain that an improvement in PGM prices is unlikely to come from improving macroeconomic conditions over the next 12-24 months. Recent supply cuts by AQP have also done little to move prices, supportive of our long-held view of cumulative surpluses over the past three years.

Restructuring has become an urgent priority

As a result, we estimate that a further 500k ounces (Pt) of cuts are needed. Mines that we argue should be closed in this environment include Khuseleka (AMS), Thembelani (AMS), Khomanani (AMS) and Kroondal (AQP/AMS), given their cash-burning nature and low turnaround potential.

Figure 11. SA platinum sector 2H12E FCF margin chart*, including base metal credits (%, 6E)



Source: Citi Research estimates

*Based on spot prices – Pt: $1,424/oz, Pd: $590/oz, Rh: $1,165/oz, Cu: $7,500/t, Ni: $16,500/t, R8.00/$

**Includes Khuseleka, Thembelani, Khomanani, Siphumelele and Bathopele

Encouraging early signs

The top management reshuffling recently is encouraging and a step in the right direction, in our view (please refer: "Positive Change at the Top"). This, together with remarks like: "*We will remove unprofitable ounces from the market"* and "*we are reviewing…the shape and size of our portfolio…*" are encouraging in our view.

Sensing cold feet

Early signs suggest that the restructuring may not be as extensive as what we believe it should be

According to our analysis (*Figure 6*), these remarks imply that AMS will cut 500-600k ounces of cash burning (i.e. unprofitable) production. However, when challenging management on this, we got the sense that these levels of production cuts are highly unlikely. As a result, we believe there is risk that AMS's strategic review may again fall short of market expectations and of what it will take to fundamentally get itself (and the industry) back on track.

The ability to execute on the "shape and size" argument to any significant extent is also questionable. It is unlikely in our view that AMS will find any willing buyers for its high cost assets in the current environment, so closures may be the only way to restructure. Challenges to closing any significant amount of production include:

- **The need for Merensky:** AMS's Rustenburg mines, although high cost and cash burning, is an important source of Merensky for its smelters. Even though it has claimed before that it can treat near 100% UG2 ore through its concentrators and smelters, we wonder if this is indeed the case.

- **Labour:** We estimate that closing Khuseleka, Thembelani and Khomanani would entail retrenching about 8,000-12,000 people. Given the 18,000 people retrenched in 2009/10, AMS might find it difficult to convince Government and unions that more restructuring is needed.

- **BEE credentials:** As far as we know, part of AMS's BEE credentials were obtained at mine-site in Rustenburg. Closing these mines, without additional BEE deals, may compromise its BEE credentials. However, during its results presentation, AMS stated that this will not be a hurdle at all.

The proof is in the pudding: Maintain Sell, TP R400

Its stretched valuation suggests that the market is not fully appreciating the predicament AMS finds itself in.

AMS's strategic review is the key upside risk to our bearish view on the stock. However, early indications make us wonder if the review will be extensive enough to fundamentally change the story for AMS.

It finds itself in a very difficult situation. If it cuts production significantly it will probably send a negative signal to the market, and de-rate. If it does not, it will continue to struggle and may run out of balance sheet.

This double-edged sword, together with a stretched valuation, to us suggests the market is not fully appreciating the predicament AMS finds itself in. Maintain Sell, TP R400.

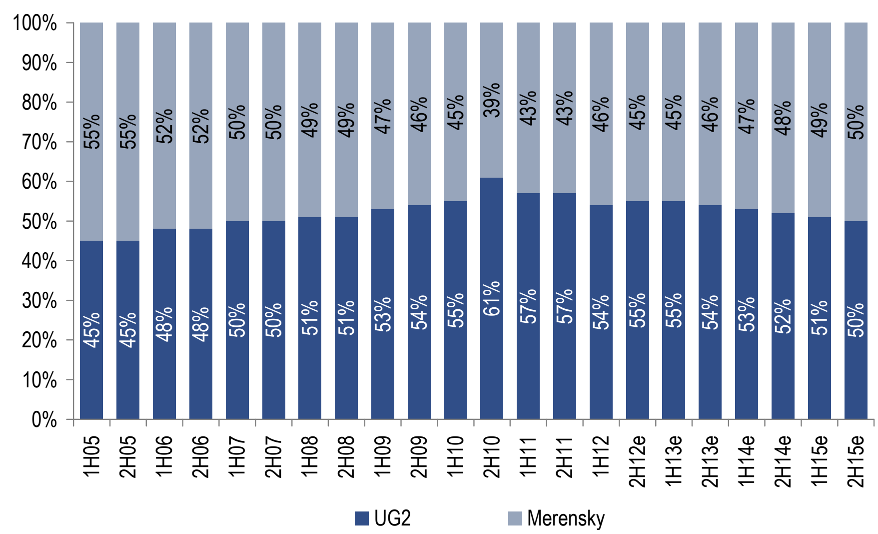
IMP emerging as winner

Business as usual

Another phenomenon that is developing in the SA platinum sector is the extent to which IMP is expanding it competitive position. As highlighted in "Tiring Balance Sheets*", we estimateIMP is the only company that can continue with its current strategy (i.e. spending capex to access high-yielding, low-cost Merensky ounces), even if rand-PGM prices decline 30% from spot. This is while most of its competitors (especially AMS, LON and AQP) are trying to devise strategies on how to cut capex and save their balance sheets.

This competitive advantage is not (yet) appreciated by the market, in our view. This characteristic will most likely only be recognized when market conditions improve and the extent of IMP's lead is realized. We maintain our bullish view on the stock, Buy, TP R190.

Figure 12. IMP lease UG2 vs Merensky split



Source: Company reports, Citi Research

Figure 13. Expected ramp-up schedule of IMP's Merensky shafts (000 Pt ounces)

Shaft	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
20-Shaft	0	10	30	60	90	110	140	150	150	150	150
16-Shaft	0	0	0	30	70	100	130	150	185	185	185
17-Shaft	0	0	0	0	0	0	50	100	150	180	180
Total new Merensky ounces	0	10	30	90	160	210	320	400	485	515	515
% Merensky	42	43	45	45	47	49	50	50	50	50	50

Source: Company reports, Citi Research

Valuation and Risks

Patience is a virtue

Our thesis on the sector remains unchanged – refer to our 23 May note "Value Has Emerged, But Patience Required". We prefer IMP and NHM (both Buys) in the current environment. Apart from macroeconomics, both these stocks have had company-specific issues over the past 12 months that have weighed on valuations. We believe a recovery at IMP's Lease operations, and a recovery at NHM's Zondereinde operations and growth from Booysendal, can cause these equities to re-rate even in currently depressed macroeconomic conditions. We maintain our Neutral recommendations on RBP, LON and AQP and our Sell on AMS.

Figure 14. Citi mining valuation comparatives sheet (calendarised)

	TP Curr.	RIC codes	Rating	Current price	TP	CY12e DY (%)	ETR* (%)	Current P/DCF	P/E 2011	P/E 2012e	P/E 2013e	EV/EBITDA 2011	EV/EBITDA 2012e	EV/EBITDA 2013e	FCF yield (%) 2011	FCF yield (%) 2012e
Barrick gold	USD	ABX.N	Buy	34.1	50.0	2.2	48.7	0.9	7.3	8.4	7.3	5.3	6.7	5.6	1.0	-6.3
Impala Platinum	ZAR	IMPJ.J	Buy	132.1	190.0	1.8	45.6	0.6	11.5	13.4	12.2	5.6	6.6	5.9	3.2	1.5
African Rainbow	ZAR	ARIJ.J	Buy	159.6	220.0	3.5	41.3	0.8	9.4	10.2	9.4	3.9	4.1	3.6	2.6	4.5
Northam	ZAR	NHMJ.J	Buy	25.9	36.0	0.3	39.6	0.7	34.0	28.8	13.9	17.1	14.1	7.4	-10.9	-13.3
Rio Tinto	GBP	RIO.L	Buy	32.2	43.5	3.5	38.7	0.6	6.0	8.3	6.8	2.9	4.0	3.2	9.3	-1.7
Newcrest	AUD	NCM.AX	Buy	24.3	32.0	2.1	33.6	1.0	17.6	17.7	12.5	9.7	9.0	6.7	-2.6	-1.0
BHP Billiton	GBP	BLT.L	Buy	19.9	22.0	3.9	14.7	0.9	8.6	10.0	9.3	5.1	5.7	5.3	7.9	4.5
Aquarius	GBP	AQP.L	Neutral	0.4	0.4	0.0	14.4	0.7	10.8	-17.5	10.4	2.8	9.0	4.7	-34.7	-13.3
Exxaro	ZAR	EXXJ.J	Buy	178.5	190.0	4.8	11.2	0.9	7.9	8.3	8.0	11.4	13.2	13.2	11.5	1.1
RBPlat	ZAR	RBPJ.J	Neutral	47.5	52.0	0.0	9.5	1.1	25.4	45.6	24.7	9.2	12.3	10.1	-1.6	-3.4
Newmont	USD	NEM.N	Neutral	47.2	49.0	2.9	6.7	1.1	10.9	12.8	11.0	8.7	6.7	6.4	3.4	-2.4
AngloGold Ashanti	ZAR	ANGJ.J	Neutral	276.0	290.0	1.5	6.6	1.7	10.2	10.8	10.6	5.0	5.2	4.8	10.0	4.6
Lonmin	GBP	LMI.L	Neutral	7.5	7.6	0.2	2.1	1.1	14.0	43.9	32.0	4.4	6.9	6.9	-7.0	-3.5
Anglo American	GBP	AAL.L	Neutral	20.2	20.0	2.6	1.4	0.5	6.5	11.4	8.6	3.8	5.4	4.1	8.5	1.0
Assore	ZAR	ASRJ.J	Neutral	296.0	280.0	3.0	-2.4	1.2	8.8	8.8	9.2	6.3	6.9	7.1	5.4	8.8
Anglo Platinum	ZAR	AMSJ.J	Sell	432.0	400.0	0.0	-7.4	1.2	28.3	117.3	48.3	8.2	21.3	14.4	4.5	-0.2
Gold fields	ZAR	GFIJ.J	Sell	109.3	95.0	3.0	-10.0	1.8	9.7	9.7	9.1	4.0	4.3	3.8	7.8	10.2
Harmony	ZAR	HARJ.J	Sell	81.4	65.0	0.7	-19.4	2.0	17.1	16.7	22.2	9.4	7.3	6.5	1.2	5.1
Randgold	GBP	RRS.L	Sell	62.9	49.2	1.2	-20.6	1.2	24.2	16.6	12.6	14.9	10.4	7.7	1.3	-0.1
Kumba Iron Ore	ZAR	KIOJ.J	Sell	541.2	380.0	8.0	-21.7	1.2	9.1	10.6	9.7	4.8	5.6	5.4	12.7	10.8

Source: Citi Research, Powered by dataCentral

*Expected total return, Priced as at 10/08/2012

Input price assumptions

Figure 15. Citi input price assumptions

December year end	FY09	FY10	FY11	FY12e	FY13e	FY14e	FY15e	FY16e	LT real	LT Nominal
US$/oz										
Platinum price	1,173	1,610	1,722	1,534	1,565	1,650	1,700	1,750	1,500	1,722
Palladium price	246	525	734	660	700	800	850	775	600	689
Rhodium price	1,444	2,678	2,000	1,336	1,250	1,350	1,500	1,800	2,250	2,582
Gold price	960	1,226	1,585	1,645	1,695	1,655	1,540	1,350	1,050	1,205
3PGE+Au basket price	907	1,348	1,441	1,409	1,483	1,513	1,526	1,494	1,295	1,486
ZAR/USD exchange rate	8.37	7.33	7.23	8.27	8.81	8.92	9.27	9.64	10.00	10.00
R/oz										
Platinum price	9,812	11,808	12,450	12,686	13,788	14,718	15,759	16,870	15,000	17,220
Palladium price	2,054	3,851	5,307	5,458	6,167	7,136	7,880	7,471	6,000	6,890
Rhodium price	12,077	19,633	14,460	11,049	11,013	12,042	13,905	17,352	22,500	25,820
Gold price	8,028	8,993	11,460	13,604	14,933	14,763	14,276	13,014	10,500	12,050
3PGE+Au basket price	7,589	9,884	10,418	10,431	11,342	12,257	13,221	13,968	12,690	14,568

Source: Citi Research, I-net, Bloomberg

Risks

Upside risks to our view include a weakening in the ZAR/USD exchange rate, PGM prices rising above our expectations and better-than-expected operational performances. Conversely, downside risks include a stronger ZAR, lower-than-expected PGM prices and a failure to deliver on operational objectives.

Appendix A-1

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