

South African Platinum Sector

Tiring Balance Sheets*

- **Under water** — We estimate that 30% of the South African (SA) platinum industry is cash burning after capex at spot prices. This is as depressed economic conditions in Europe are weighing on prices, while margins are further compressed by rising labor demands and safety stoppages in SA.
- **Stretching balance sheets** — The situation has already taken its toll on company balance sheets. If spot prices prevail, our analysis suggests that LON may either have to cut capex and growth targets, or issue more shares. AQP may have to abandon its R1.2bn offer for Booyssendal South or dilute shareholders. AMS, IMP, NHM and RBP should be safe for next 12-24 months if spot prices prevail.
- **How low can it go?** — If rand PGM prices fall 15-30%, we estimate AMS, NHM and RBP will also have to recapitalize balance sheets. IMP's low-cost assets and strong balance sheet should prevent it from diluting shareholders, even under this scenario.
- **Resolution** — 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. As a result, we estimate that a further c.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).
- **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 think a recovery at IMP's Lease operations, and a recovery at NHM's Zondereinde operations and growth from Booyssendal, can cause these equities to re-rate even in currently depressed macroeconomic conditions.

■ Industry Overview

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Figure 1. Assessment of the probability of rights issues / equity raisings if spot prices prevail (Rm)

	Total debt facility	Unutilized facilities	Cash on balance sheet	CY12E/13E FCF at spot	Debt/equity if debt facilities fully utilized	Ability to raise more debt if needed	Probability of rights issue/equity raising
Anglo American Platinum	24974	19016	2296	-8595	44%	Low	Low
Impala Platinum	3811	3811	3334	1206	7%	High	Low
Lonmin	7580	3460	549	-3333	31%	Low	Medium / High
Northam*	1000	1000	1698	-1289	10%	High	Low
Aquarius*	2000	2000	2755	-3270	29%	Low	Medium / High
RBPplat	750	600	1099	-1032	5%	High	Medium

Source: Company data, Citi Research estimates *Including R1.2bn Booyssendal South transaction

*CORRECTION: The previous version of this note incorporated incorrect cash flow data for Royal Bafokeng Platinum. We now present both cash flow from operations and capex on a 67% attributable basis. The data has been corrected in Figures 1,4,20,21,33 and 34. Consequently, we have corrected textual references on pages 1, 4 and 9.

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures

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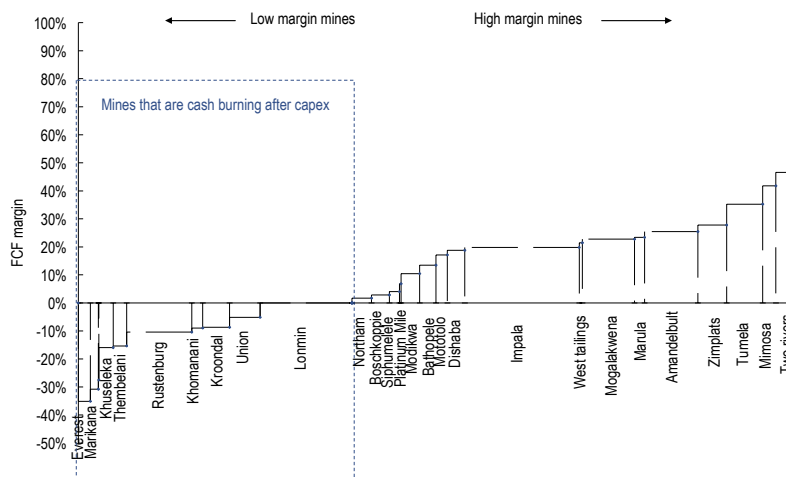
Under Water

30% of industry is cash burning

We estimate that 30% of the SA platinum industry is cash burning after capex at spot prices (*Figure 2*). This is as depressed economic conditions in Europe is weighing on prices, while margins are further compressed by rising labor demands and safety stoppages in SA.

1,30m ounces (~30%) of SA platinum sector is cash burning

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



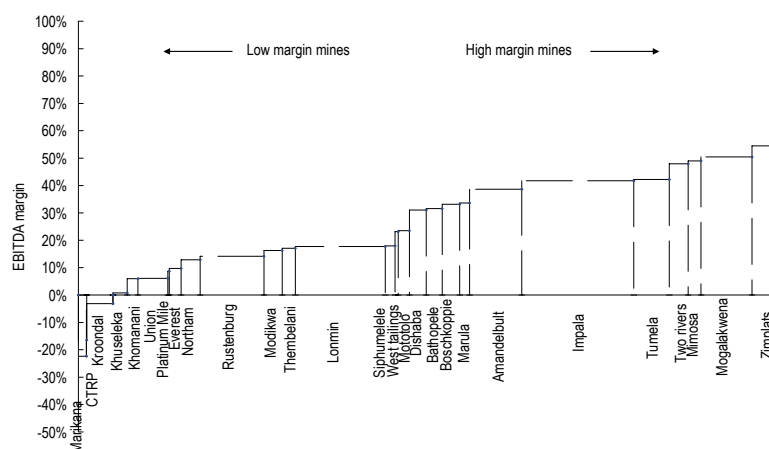
Source: Citi Research estimates

*Based on spot prices – Pt: \$1,425/oz, Pd: \$575/oz, Rh: \$1,250/oz, Cu: \$7,500/t, Ni: \$16,500/t, R8.15/\$

We also estimate that 8% of production has negative operating margins at spot prices (*Figure 3*). This includes Marikana (AQP/AMS), CTRP (AQP), Kroondal (AQP/AMS) and Khuseleka (AMS).

400koz (8%) have negative operating margins

Figure 3. SA platinum sector 2H12E EBITDA margin chart*, including base metal credits (% , 6E)



Source: Citi Research estimates

*Based on spot prices – Pt: \$1,425/oz, Pd: \$575/oz, Rh: \$1,250/oz, Cu: \$7,500/t, Ni: \$16,500/t, R8.15/\$

The depressed conditions have already forced AQP to close its Marikana and Everest mines, while RBP has delayed capital programmes. We caution that further evasive action may be required if the current macro environment prevails, or deteriorates.

Stretching Balance Sheets

LON, AQP and RBP most vulnerable if spot prices prevail

The situation has already taken its toll on company balance sheets. If spot prices prevail, our analysis suggests that LON may either have to cut capex and growth targets, or raise additional funding. AQP may have to abandon its R1.2bn offer for Booyendal South or recapitalize its balance sheet. AMS, IMP, NHM and RBP should be safe for next 12-24 months if spot prices prevail.

Detailed cash flow analysis and commentary for each company is provided on pages 5-9).

Figure 4. Assessment of the probability of rights issues / equity raisings if spot prices prevail (Rm)

	Total debt facility	Unutilized facilities	Cash on balance sheet	CY12E/13E FCF at spot	Debt/equity if debt facilities fully utilized	Ability to raise more debt if needed	Probability of rights issue/ equity raising
Anglo American Platinum	24974	19016	2296	-8595	44%	Low	Low
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Source: Company reports, Citi Research estimates

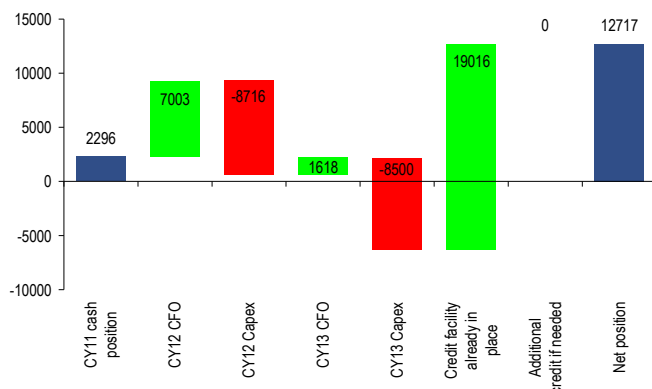
*Including R1.2bn Booyendal South transaction

Anglo American Platinum: Saved by 2010 rights issue

Even if spot prices prevail for the next 24 months, our analysis suggests AMS will not need to raise more funds. This is despite the fact that a significant portion of its production will be cash burning, and due mainly to its R12.5bn rights issue in 2010.

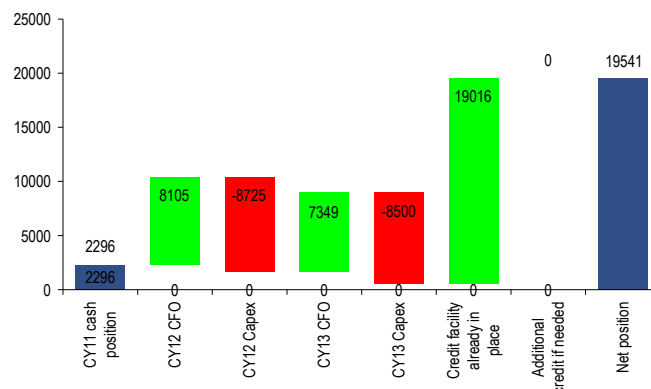
AMS has total debt facilities of R25bn; R20bn of which is committed and R5bn uncommitted (callable on demand). Of the R25bn debt facility R19bn remains available for use.

Figure 5. AMS CY12E/13E cash flow at spot (Rm)



Source: Company reports, Citi Research estimates

Figure 6. AMS CY12E/13E cash flow at CitiE (Rm)



Source: Company reports, Citi Research estimates

Figure 7. 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	14,211
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	4,805
Total	24,974	5,958	19,016

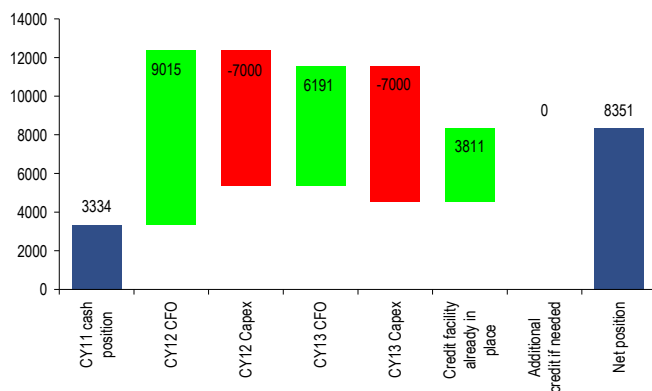
Source: Company reports, Citi Research

Impala Platinum: The benefit of being the lowest-cost producer

IMP's low-cost assets and strong balance sheet makes balance sheet restructuring highly unlikely, in our view. All its operations are cash-generative at spot prices, even during its currently intensive capex phase.

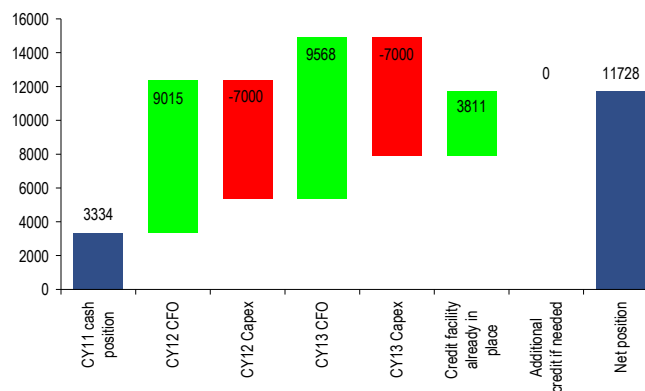
IMP has total debt facilities of R3.8bn, all of which are still available for use.

Figure 8. IMP CY12E/13E cash flow at spot (Rm)



Source: Company reports, Citi Research estimates

Figure 9. IMP CY12E/13E cash flow at CitiE (Rm)



Source: Company reports, Citi Research estimates

Figure 10. IMP debt facilities (Rm)

Debt facilities (as at 31-12-2011)			
Committed	Facility amount	Utilized amount	Available Funds
Standard Bank - Revolving credit facility	111	0	111
Standard Bank Ltd	3,700	0	3,700
Total	3,811	0	3,811

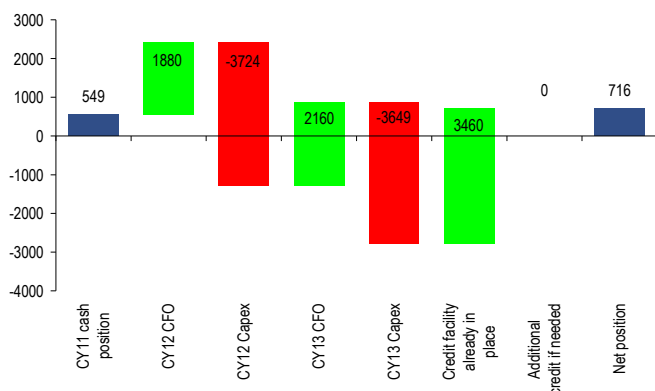
Source: Company reports, Citi Research

Lonmin: Too close for comfort

If spot prices prevail for the next 12 months, we caution that LON may either have to cut capex and growth targets, or raise additional funding. We doubt whether it will be able to raise more debt as its debt/equity ratio will exceed 30% if its current debt facilities are drawn down. Shareholder dilution is therefore possible, in our view.

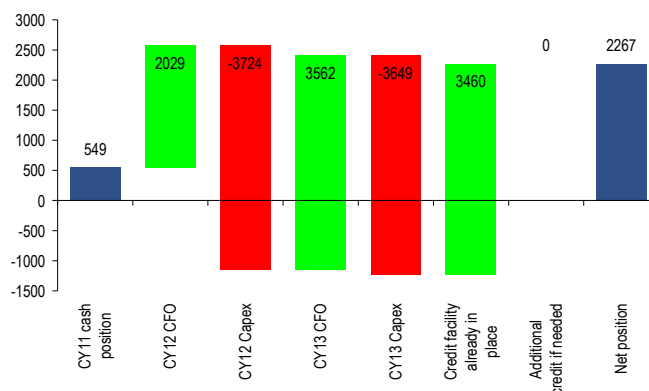
LON has total bank debt facilities of R7.6bn, of which R3.5bn remains available for use.

Figure 11. LON CY12E/13E cash flow at spot (Rm)



Source: Company reports, Citi Research estimates

Figure 12. LON CY12E/13E cash flow at CitiE (Rm)



Source: Company reports, Citi Research estimates

Figure 13. LON debt facilities (Rm)

Debt facilities (as at 31-03-2012)

Committed	Facility amount	Utilized amount	Available Funds
USD syndicate debt facility*	5,600	3,720	1,880
ZAR bilateral facility - FNB	660	133	527
ZAR bilateral facility - Investec	660	133	527
ZAR bilateral facility - Std Bank	660	133	527
Total	7,580	4,120	3,460

Source: Company reports, Citi Research

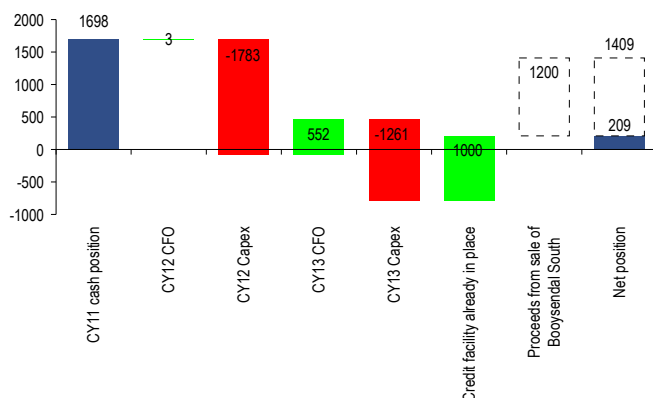
*Backed by BNP Paribas SA, Citigroup Global markets Ltd, HSBC Bank Plc, RBS and Standard Chartered

Northam: Shareholder dilution unlikely, even if Booyensdal South deal falls through

We expect NHM to be able to fully finance Booyensdal from its balance sheet if spot prices prevail, with or without the R1.2bn proceeds from the sale of Booyensdal South to AQP. Even if PGM prices were to fall further and NHM to require more funding, we are comfortable that NHM would be able to raise more debt.

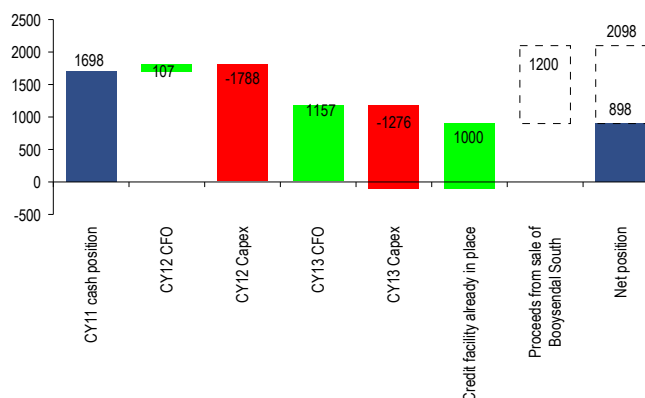
NHM currently has a R1.0bn revolving credit facility with Nedbank. Even if this facility were fully utilised, NHM would have a debt/equity ratio of only 10%. We are therefore comfortable that it would be able to raise more debt, should it need to, rather than dilute shareholders.

Figure 14. NHM CY12E/13E cash flow at spot (Rm)



Source: Company reports, Citi Research estimates

Figure 15. NHM CY12E/13E cash flow at CitiE (Rm)



Source: Company reports, Citi Research estimates

Figure 16. NHM debt facilities (Rm)

Debt facilities (as at 31-12-2011)

Committed	Facility amount	Utilized amount	Available Funds
Revolving credit - Nedbank	1,000	0	1,000
Total	1,000	0	1,000

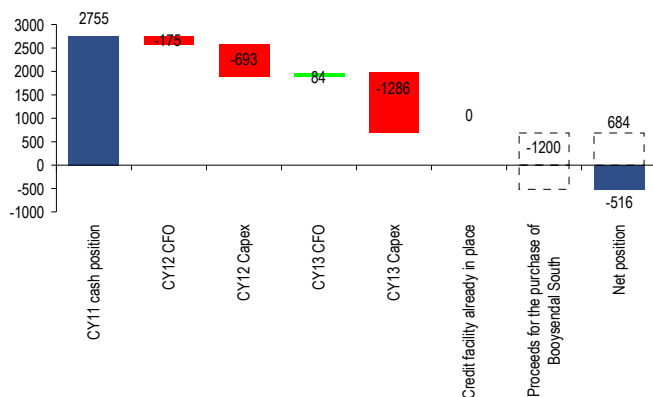
Source: Company reports, Citi Research

Aquarius Platinum: Will battle to fund Booyensdal South

Should spot prices prevail, we believe AQP would either have to 1) abandon its R1.2bn offer for NHM's Booyensdal South, or 2) recapitalize its balance sheet.

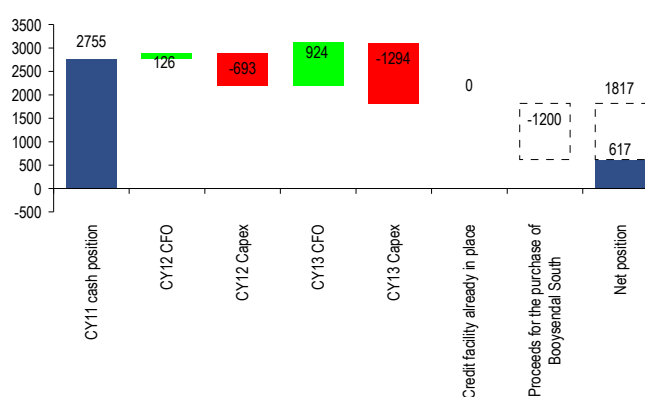
AQP currently has R2.0bn (\$250m) of loans in the form of convertible notes. We believe AQP would find it difficult to raise additional debt, should it need to. This is as the convertible notes already place it at a debt/equity ratio of 29%; while Kroondal is cash-burning and the fate of Mimosa is still uncertain, given Zimbabwean indigenization policies. It might therefore be forced to abandon the Booyensdal South offer, or dilute shareholders, in our view.

Figure 17. AQP CY12E/13E cash flow at spot (Rm)



Source: Company reports, Citi Research estimates

Figure 18. AQP CY12E/13E cash flow at CitiE (Rm)



Source: Company reports, Citi Research estimates

Figure 19. AQP debt facilities (Rm)

Debt facilities (as at 31-12-2011)

Committed	Facility amount (Rm)	Utilized amount (Rm)	Available Funds (Rm)
Convertible notes	2000	2000	0
Total	2000	2000	0

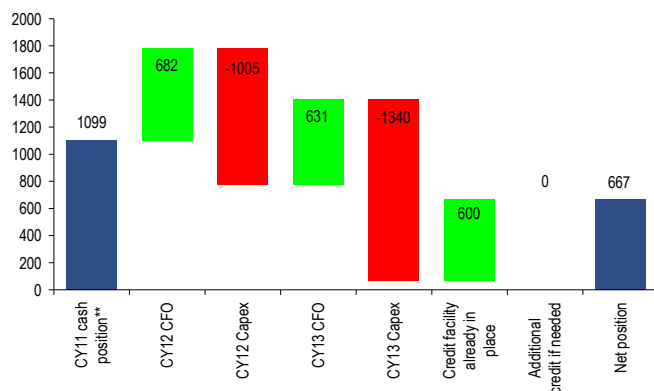
Source: Company reports, Citi Research

Royal Bafokeng Platinum: Equity raising required

Should spot prices prevail, we think RBP could be forced to 1) raise more equity than the initially anticipated R700m (CitiE: R1.14bn) in 2014, or 2) raise equity earlier than expected, or 3) raise its debt/equity ratio above its targeted 20%.

RBP currently has two debt facilities with Nedbank Capital. The total facility is R750m, of which R600m remains unutilised. Even if these facilities were fully drawn, RBP would only have a debt/equity ratio of 5%. It therefore has a lot of scope to raise more debt, in our view.

Figure 20. RBP CY12E/13E cash flow at spot* (Rm)

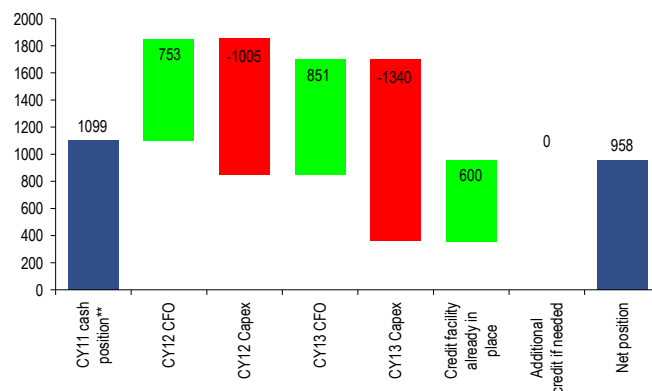


Source: Company reports, Citi Research estimates

*Presented on a 67% attributable basis

*Excluding R265m investment in Nedbank preference shares

Figure 21. RBP CY12E/13E cash flow at CitiE* (Rm)



Source: Company reports, Citi Research estimates

*Presented on a 67% attributable basis

*Excluding R265m investment in Nedbank preference shares

Figure 22. RBP debt facilities (Rm)

Debt facilities (as at 31-12-2011)

Committed	Facility amount	Utilized amount	Available Funds
Nedbank Capital - working capital	250	150	100
Nedbank Capital - revolving credit	500	0	500
Total	750	150	600

Source: Company reports, Citi Research

How Low Can It Go?

A further 15-30% fall could spell trouble for AMS and NHM as well

Should rand PGM prices fall another 15-30%, our analysis suggests that AMS, NHM and RBP would also likely have to recapitalize their balance sheets.

AMS' recapitalization would most likely have to come from a rights issue or equity raising as it would have a debt/equity ratio of 44% (*Figures 23 and 24*).

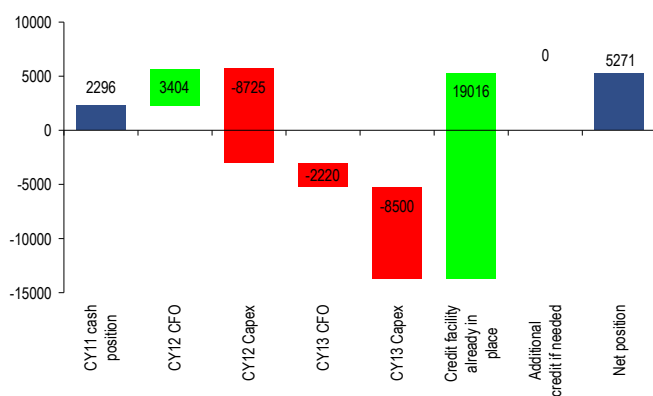
We conclude that NHM would have to access more debt, and potentially issue shares (*Figures 29 and 30*).

RBP may be forced to 1) raise equity earlier than 2014 (as previously expected), or 2) increase its debt/equity ratio by raising more debt (*Figures 33 and 34*).

IMP's low-cost assets and strong balance sheet should prevent it from diluting shareholders even under this scenario (*Figures 25 and 26*), on our analysis.

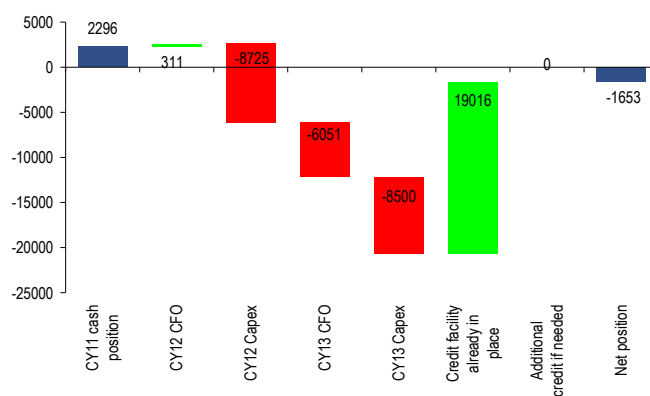
Detailed cash flow analyses per company for a 15% and 30% contraction in rand-PGM prices are provided in *Figures 23-34* below:

Figure 23. AMS CY12E/13E cash flow at spot less 15% (Rm)



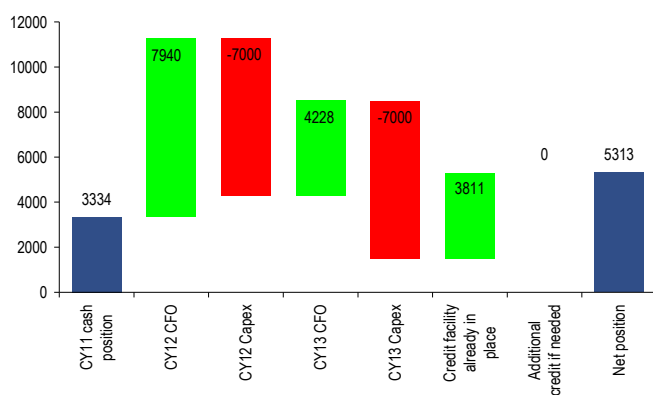
Source: Company reports, Citi Research estimates

Figure 24. AMS CY12E/13E cash flow at spot less 30% (Rm)



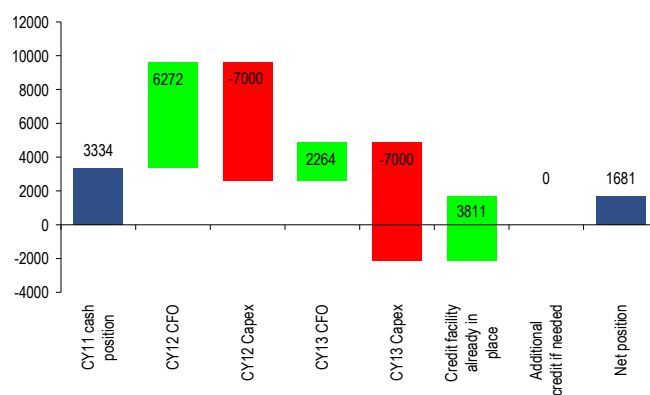
Source: Company reports, Citi Research estimates

Figure 25. IMP CY12E/13E cash flow at spot less 15% (Rm)



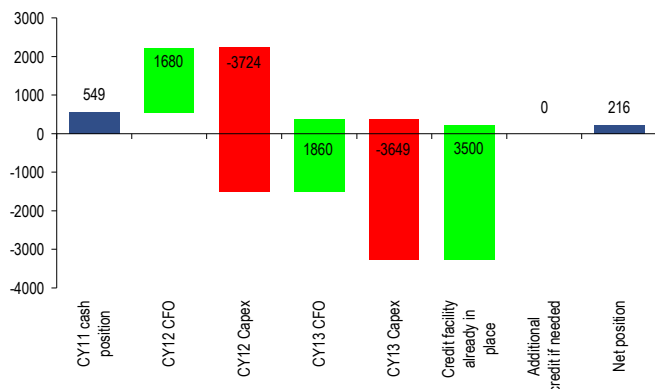
Source: Company reports, Citi Research estimates

Figure 26. IMP CY12E/13E cash flow at spot less 30% (Rm)



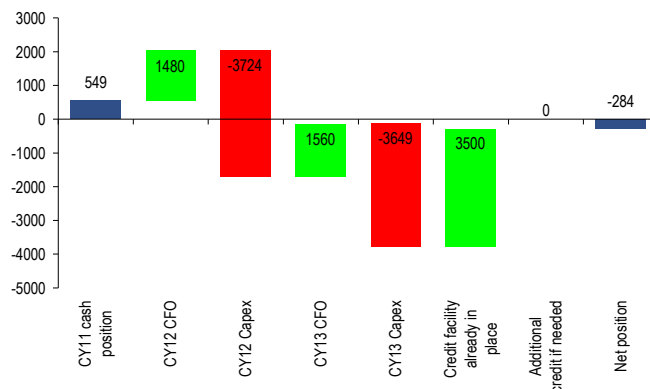
Source: Company reports, Citi Research estimates

Figure 27. LON CY12E/13E cash flow at spot less 15% (Rm)



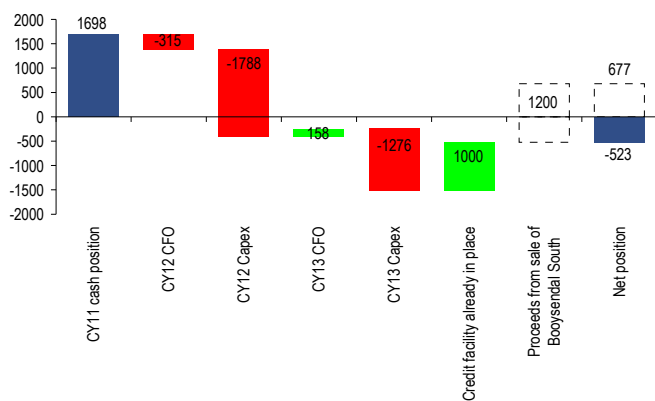
Source: Company reports, Citi Research estimates

Figure 28. LON CY12E/13E cash flow at spot less 30% (Rm)



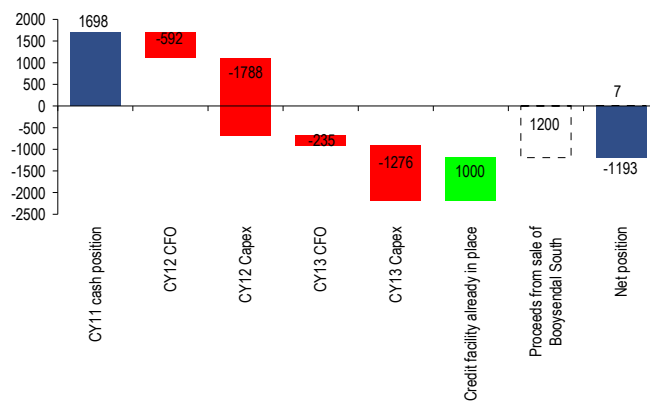
Source: Company reports, Citi Research estimates

Figure 29. NHM CY12E/13E cash flow at spot less 15% (Rm)



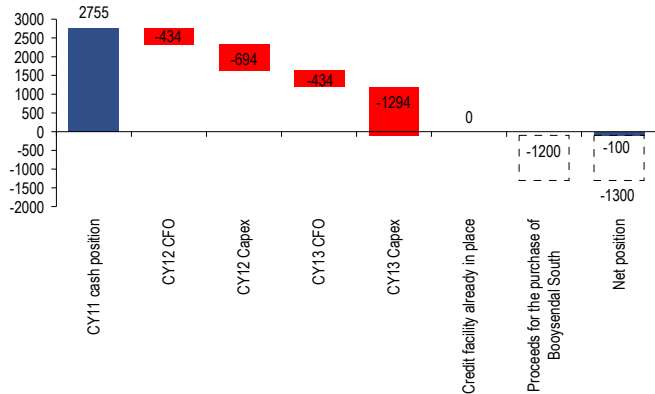
Source: Company reports, Citi Research estimates

Figure 30. NHM CY12E/13E cash flow at spot less 30% (Rm)



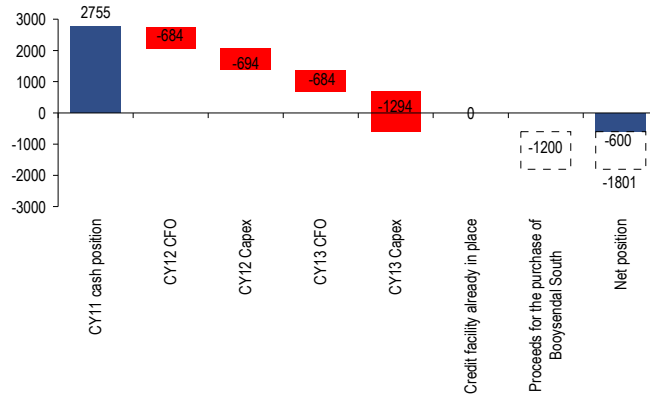
Source: Company reports, Citi Research estimates

Figure 31. AQP CY12E/13E cash flow at spot less 15% (Rm)



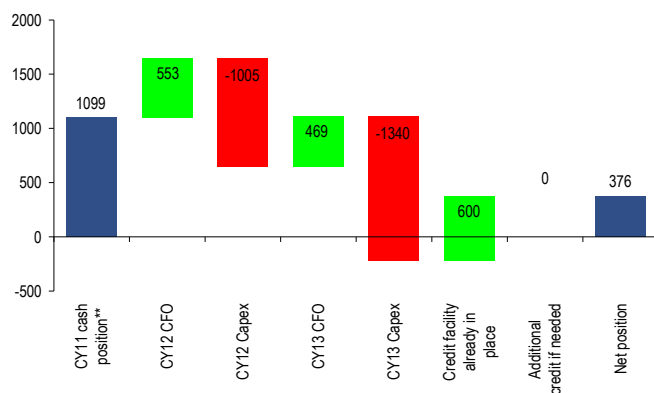
Source: Company reports, Citi Research estimates

Figure 32. AQP CY12E/13E cash flow at spot less 30% (Rm)



Source: Company reports, Citi Research estimates

Figure 33. RBP CY12E/13E cash flow at spot less 15%* (Rm)

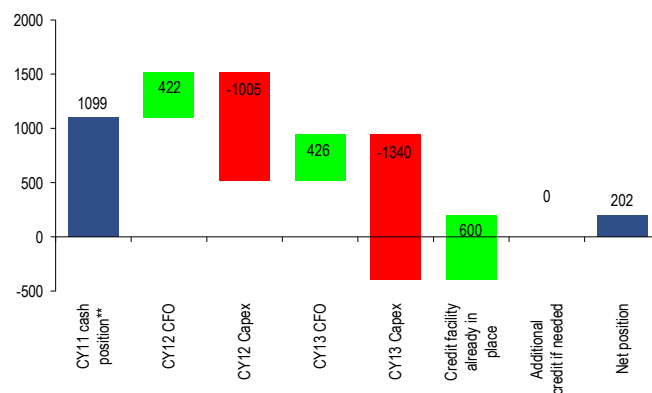


Source: Company reports, Citi Research estimates

*Presented on a 67% attributable basis

*Excluding R265m investment in Nedbank preference shares

Figure 34. RBP CY12E/13E cash flow at spot less 30%* (Rm)



Source: Company reports, Citi Research estimates

*Presented on a 67% attributable basis

*Excluding R265m investment in Nedbank preference shares

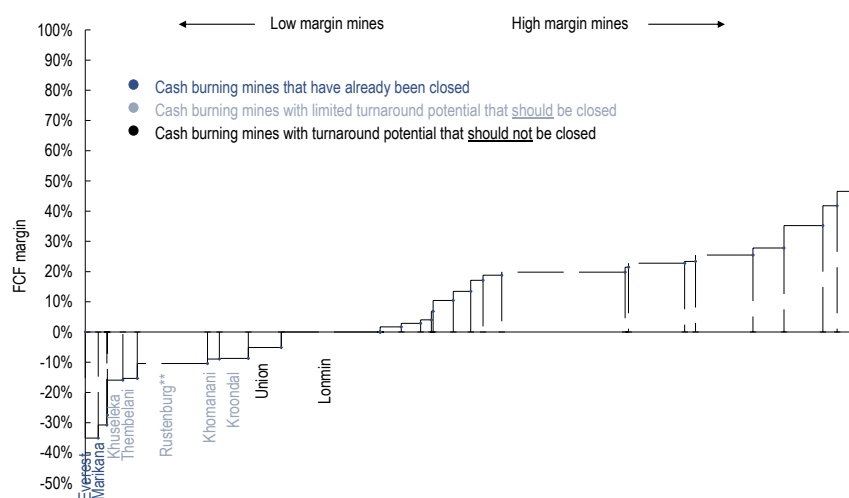
Resolution

500koz more supply cuts needed

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.

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 turn-around potential.

Figure 35. SA platinum sector 2H12E FCF margin chart*, including base metal credits (% , 6E)



Source: Citi Research estimates

*Based on spot prices – Pt: \$1,425/oz, Pd: \$575/oz, Rh: \$1,250/oz, Cu: \$7,500/t, Ni: \$16,500/t, R8.15/\$

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

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 Booyssendal, 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 36. Citi mining valuation comparatives sheet (calendarised)

	TP Curr.	RIC codes	Rating	Current price	TP	CY12e DY (%)	ETR* (%)	Current P/DCF	P/E			EV/EBITDA			FCF yield (%)	
									2011	2012e	2013e	2011	2012e	2013e	2011	2012e
Northam	ZAR	NHMJ.J	Buy	23.05	42	0.4	83	0.5	28.3	21.8	8.9	14.1	11.0	5.0	-12.1	-14.7
Aquarius	AUD	AQP.L	Neutral	0.735	1.25	0.0	70	0.4	12.0	-28.8	10.5	3.1	7.0	3.9	-17.0	-16.4
Impala Platinum	ZAR	IMPJ.J	Buy	130.13	205	2.2	60	0.5	10.7	11.0	9.4	5.3	5.5	4.5	3.5	3.4
Barrick gold	USD	ABX.N	Buy	37.45	57	2.0	54	1.0	8.0	8.0	6.9	5.7	5.9	5.2	0.9	-1.5
Rio Tinto	GBP	RIO.L	Buy	30.605	45	3.5	51	0.6	5.8	7.2	5.9	2.8	3.1	2.5	9.8	5.7
Newcrest	AUD	NCM.AX	Buy	23.5	32	2.2	38	1.0	16.1	14.6	10.1	9.0	7.9	5.9	-2.6	-0.4
African Rainbow	ZAR	ARIJ.J	Buy	167.99	220	3.9	35	0.8	9.5	10.2	8.8	4.0	4.1	3.5	2.5	4.8
Lonmin	GBP	LMI.L	Neutral	7.67	9.71	0.4	27	0.7	13.5	18.2	9.8	4.3	4.7	3.4	-1.8	16.3
BHP Billiton	GBP	BLT.L	Buy	18.3	23	4.2	30	0.8	7.7	8.2	7.4	4.7	4.8	4.3	9.0	6.5
Anglo American	GBP	AAL.L	Neutral	21.09	25	2.9	21	0.6	6.8	7.9	6.7	4.0	4.3	3.4	8.2	7.2
Newmont	USD	NEM.N	Neutral	48.49	56	3.0	18	1.1	11.2	10.5	9.5	8.9	5.8	5.5	3.3	1.4
Exxaro	ZAR	EXXJ.J	Buy	194.98	220	6.0	19	1.0	8.3	7.6	6.2	11.4	8.6	6.5	11.1	-2.3
AngloGold Ashanti	ZAR	ANGJ.J	Neutral	272.51	300	1.3	11	1.6	9.9	9.2	8.1	4.9	4.7	3.8	10.2	5.4
Anglo Platinum	ZAR	AMSJ.J	Sell	459.99	500	1.0	10	1.0	29.9	34.3	22.4	8.6	11.8	9.3	4.2	-0.5
RBPlat	ZAR	RBPJ.J	Neutral	52.5	57	0.0	9	1.1	27.8	25.9	18.2	9.9	10.0	8.8	-1.4	-8.5
Gold fields	ZAR	GFIJ.J	Sell	102.49	100	3.7	1	1.6	9.0	8.0	7.0	3.7	3.7	3.0	8.4	13.3
Assore	ZAR	ASRJ.J	Neutral	292.24	280	3.0	-1	1.2	8.8	10.0	11.0	6.1	6.9	7.3	5.4	7.8
Randgold	GBP	RRS.L	Neutral	58	55	1.4	-4	1.1	22.4	13.9	10.1	13.8	8.8	6.1	1.4	0.5
Harmony	ZAR	HARJ.J	Sell	75.84	70	0.9	-7	1.7	15.8	13.5	15.0	8.7	6.1	5.0	1.3	6.1
Kumba Iron Ore	ZAR	KIOJ.J	Sell	561.94	430	8.5	-15	1.2	9.4	10.4	9.8	4.9	5.5	5.4	12.2	10.6

Source: Powered by dataCentral

*Expected total return

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.

Input price assumptions

Figure 37. 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	1,682	1,725	1,775	1,750	1,750	1,500	1,722
Palladium price	246	525	734	800	925	900	850	750	600	689
Rhodium price	1,444	2,678	2,000	1,550	1,650	1,800	2,500	2,550	2,615	3,000
Gold price	960	1,226	1,585	1,720	1,835	1,725	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	7.82	8.40	8.96	9.34	9.73	10.00	10.00
R/oz										
Platinum price	9,812	11,808	12,450	13,153	14,490	15,904	16,345	17,028	15,000	17,220
Palladium price	2,054	3,851	5,307	6,256	7,770	8,064	7,939	7,298	6,000	6,890
Rhodium price	12,077	19,633	14,460	12,121	13,860	16,128	23,350	24,812	26,150	30,000
Gold price	8,028	8,993	11,460	13,450	15,414	15,456	14,384	13,136	10,500	12,050
3PGE+Au basket price	7,589	9,884	10,418	11,021	12,458	13,554	14,255	14,537	12,946	14,861

Source: I-net, Bloomberg, Citi Research estimates

Appendix A-1

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