

Fortis hedging and financial gold report

February 2008



The quarterly survey of global gold hedging and financial gold movements.

VM Group

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Fortis hedging and financial gold report is an exclusive precious metals research joint venture between Fortis Bank SA/NV, the VM Group (incorporating Virtual Metals Research and Consulting, and Haliburton Mineral Services).

Executive summary

Global gold hedging in Q4 07 falls 2.3 Moz to 26.8 Moz

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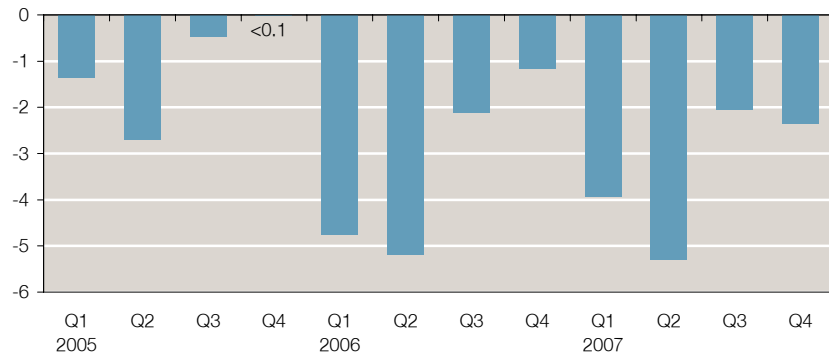
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Quarterly change in global hedging, Moz (delta-adjusted)



Source: VM Group, Halliburton Mineral Services

- Gold dehedging continued to fall in Q4 07.** The delta-adjusted global hedge book fell 2.3 Moz to 26.8 Moz. This was the 23rd quarterly reduction. On a committed ounces basis the decline was a slightly larger 2.7 Moz.
- The decline in hedging was broadly based.** Of the 113 gold mining companies included in this survey, 47 had hedging programmes at the beginning of the quarter, and 39 or 83%, reduced their commitments. Of the other eight, six made no change in their positions, whilst only two made tiny increases.
- Newcrest was the leading dehedger for the second consecutive quarter.** It cut its position by 735,355 oz, and announced at least another 299,275 oz in Q1 08. AngloGold Ashanti, Barrick Gold, Red Back Mining, Highlands Pacific, Austindo Resources and Lafayette Mining all reduced their positions by more than 0.1 Moz during the quarter.
- On an annual basis 2007 saw strong dehedging.** The annual reduction on a delta-adjusted basis was 13.5 Moz in 2007, the largest such reduction since 2004. Using the committed ounces measure the fall was 15.1 Moz, the largest since 2002. These declines are particularly impressive given the shrunken size of the book. On both measures more than a third of the remaining global hedge book disappeared in 2007.
- Looking ahead to 2008 we expect continued dehedging.** The global hedge book is now less than 27 Moz, so if 2007's rate continues, half of the global book would disappear. Although in the current anti-hedging climate this cannot be ruled out, we expect dehedging in 2008 to slow to between 6 Moz and 8 Moz.
- The mark-to-market valuation (MTM) continues to deteriorate.** Despite the reduction in hedging we estimate the MTM valuation of the global hedge book worsened from a negative \$10.7bn to a negative \$11.3bn, as the gold price soared \$93/oz to \$836/oz at year-end.
- Exchange-traded funds continue to gain in popularity.** The numerous gold ETFs added another 80 tonnes of gold in Q4 07, equivalent to 2.6 Moz. Our feature article looks at the explosive growth in trading seen at the start of 2008.
- Central Bank Gold Agreement signatories will struggle to fill the last two years of the Agreement unless there is a new seller.** Sales of 500 tonnes in this CBGA year are possible, but only at the expense of the final year.

Focus – ETFs

How do trading volumes in ETFs compare with each other and other gold investments? And what drives them?

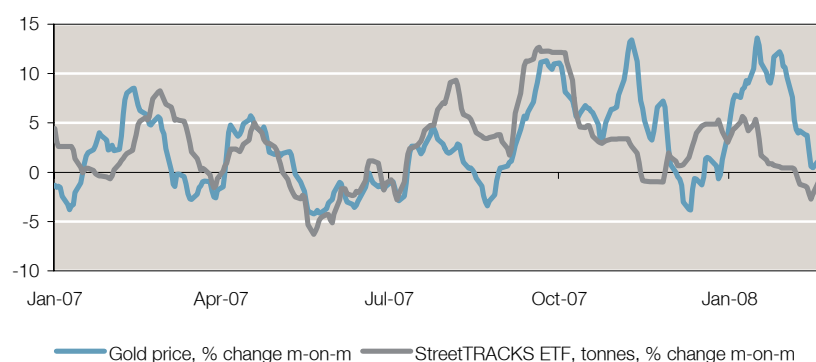
Exchange-traded funds have had a big impact on the gold market since the launch of the market-leading US StreetTRACKS fund in November 2004. The 13 funds we track now collectively now hold 891 tonnes of gold and annual offtake has been in the region of 250 tonnes in each of the last two years (see p.13 for more details).

Users of these funds, a mix of retail and institutional, are commonly described as “long-term” *investors* in gold, as compared with (say) *speculators* on COMEX whose interest in gold waxes and wanes with short-term market sentiment. Although it is difficult to test this theory given the ETFs have only existed during a bull market, comparing holdings of gold in the ETFs with the non-commercial net long position on COMEX provides some support to this view. Although there is a clear relationship between the gold price and ETF gold holdings, unlike COMEX they have tended to trend only upwards, with none of the large sell-offs from time to time that characterise the futures exchange positions.

Relationship between gold holdings and price change

Looking at monthly changes however shows a relationship between changes in gold holdings and gold price, at least for the US StreetTRACKS product and since the start of 2007. The chart shows the monthly % change in the gold price v the monthly % change in the holdings of that US gold ETF, and the two tend to track each other quite well. This does not in itself mean ETF demand causes price movements; it could as easily be the other way around. Some clues come, perhaps, from the fact that this relationship between StreetTRACKS’ gold holdings and the price broke down somewhat in gold’s November 2007 and February 2008 price rallies, with the ETF holdings not rising as much as might be expected given the price move. It might be the case, then, that although the ETF normally has a positive effect on the gold price this chart highlights periods when other factors than ETF demand were behind the gold price rise.

Figure 1 – StreetTRACKS ETF gold holdings and gold price, % month-on-month change



Source: VM Group

That, therefore, provides some evidence that ETF investors are not as passive as commonly imagined. More evidence comes from looking at the daily turnover of the ETF shares for, given the large existing stock of gold ETF shares available, it is likely that concentrating on the ETF’s gold offtake misses the dynamics of the market. Indeed most buying and selling occurs on the secondary market, with daily turnover in the US StreetTRACKS ETF (on its primary listing in New York – there are secondary listings) averaging 11.3m shares day so far in 2008 – equivalent to 35 tonnes of gold a day or about 5% of its total holdings (and far

higher than the inflows of metal). Cumulative trading volumes since its launch are equivalent to 12,312 tonnes, nearly 20 times its gold holdings.

This relatively high level of turnover is essentially a feature of the US StreetTRACKs ETF, rather than the gold ETFs in general. The US Barclays Global Investors' ETF or the UK Gold Bullion Securities, with holdings of 60 tonnes and 100 tonnes respectively, trade only around 1 tonne a day, 2% and 1% of their holdings. This ratio of 1-2% of underlying shares traded per day seems quite common for most of the other gold ETFs.

Comparing ETF volume with other gold investments

How does this compare to other gold assets? By comparison to COMEX, even the StreetTRACKs ETF trading volumes might seem slight. Figure 2 shows (in millions of US\$) daily trading volume for gold on COMEX and for all of the major ETFs combined (the two US ones, the two UK ones, the Swiss, South African and Australian ones). Daily trading volumes on COMEX are roughly 10 times higher than for the gold ETF, even though the underlying gold held by the ETFs compares reasonably well with COMEX open interest.

Admittedly such a comparison is a little unfair. COMEX – as with all futures markets – is designed for high trading volumes. Another comparison would be with leading gold equities; in Figure 3 we show Barrick and Newmont share trading volumes. Here we see that the StreetTRACKs ETF's daily trading volume has outpaced the mining companies, and in recent months has grown to be about as much as the two combined.

One noticeable feature of all the charts is that the trends in volume traded, whether the ETF(s), COMEX, or mining company shares, has been similar. All show a large increase in volumes since around the middle of last year. The correlation (where 100% is a perfect correlation and 0% no correlation) is 73% between the StreetTRACKs ETF and Barrick's shares, 68% with Newmont's share, and 72% with COMEX.

The most obvious explanation for this similarity is that all these forms of gold investment have responded to two similar factors – a growing interest in gold investment, which means a rising trend over time, and also all respond to volatility in the gold price. In the case of the StreetTRACKS ETF clearly trading volumes have increased as investor interest and assets under management have increased (Figure 4). To look at the relationship between trading volumes and price volatility we need to correct for this underlying trend, which we can do by looking at shares traded as a % of shares outstanding (Figure 5). Interestingly the peak came in May 2006, when the gold price had what at the time seemed an astonishing run up to \$725/oz. Recent weeks have seen a pickup in volume traded as a percentage of underlying shares, but it is more modest than in 2006.

Figure 2 - Daily trading volume in ETFs and COMEX (\$m)

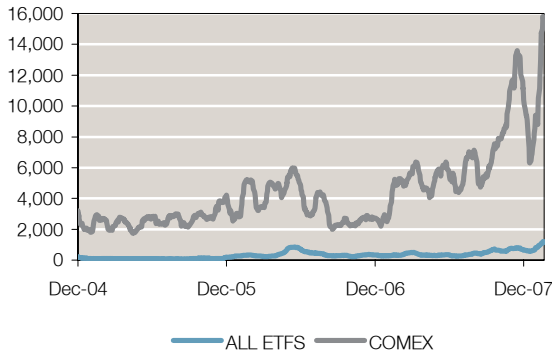
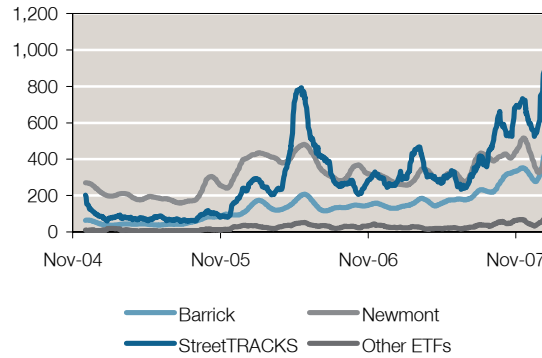
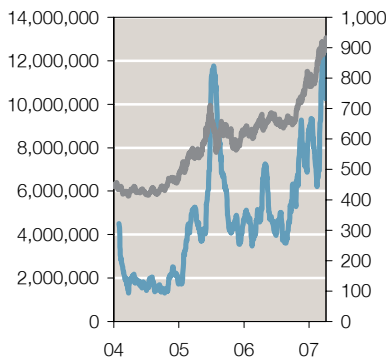


Figure 3 - Daily trading volume in ETFs and major gold-mining company shares (\$m)



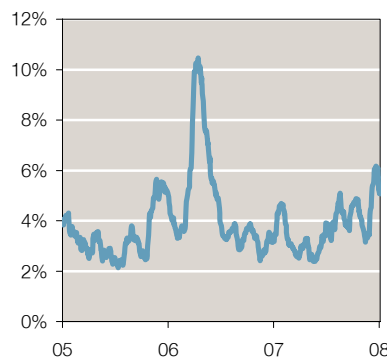
Source: VM group using Reuters data

Figure 4 - Volume traded of StreetTRACKS and gold price



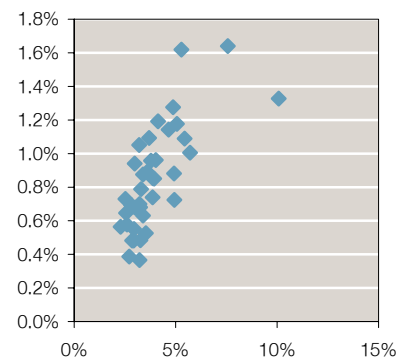
Source: VM group using Reuters data

Figure 5 - Volume StreetTRACKS units traded as % of underlying holdings



Source: VM group using Reuters data

Figure 6 - Daily average trading volume in ETFs (as % of underlying) and daily average change in price, (%), monthly



Source: VM group using Reuters data

The final chart, figure 6, shows the relationship between absolute daily price changes and volume traded (measured as a % of the underlying shares) in the StreetTRACKS ETF. The data is presented as monthly averages to make it clearer. There appears a clear positive relationship between volume traded and daily price changes – i.e. the more volatile the daily price changes the higher the trading volumes. So there is some evidence that the ETF is a trading tool for its users, and also that the volume traded provides some information about gold market sentiment.

Global hedging roundup Q4 07

The decline in gold hedging is relentless – Q4 07 saw another large fall in the delta-adjusted global hedge book of 2.3 Moz (70 tonnes), meaning it stands at just 26.8 Moz (835 tonnes). In terms of committed ounces the decline was a larger 2.7 Moz (83 tonnes), taking that measure to 27.7 Moz (861 tonnes).

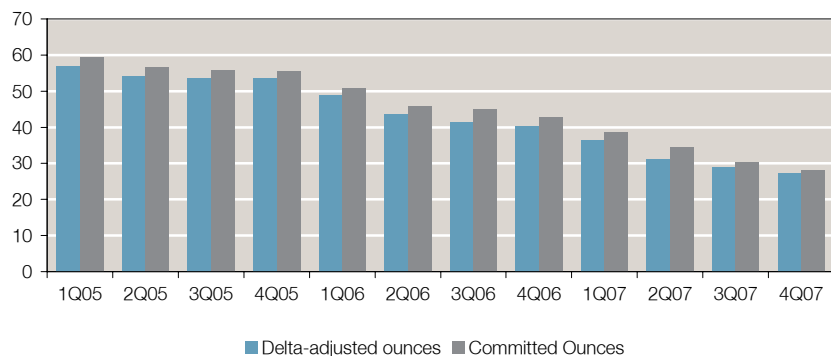
The decline on the delta-adjusted measure was the 23rd consecutive quarterly decline, and means that global hedging is now 74% below its peak in Q3 01, when it stood at 102.8 Moz.

Global hedging (Moz)

	2006				2007				Change Q4/Q3
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Net delta									
Net Forwards	38.3	33.6	31.3	29.7	26.9	22.7	20.0	18.0	(2.0)
Net Calls	9.1	8.7	9.2	9.4	8.5	7.9	8.4	8.2	(0.2)
Other Products	1.2	1.2	1.2	1.1	0.9	0.4	0.1	0.1	(0.0)
Net Puts	0.2	0.2	(0.1)	0.2	0.1	0.1	0.5	0.5	(0.1)
Total Delta	48.8	43.7	41.5	40.4	36.4	31.1	29.1	26.8	(2.3)
Quarterly change	(4.7)	(5.2)	(2.1)	(1.2)	(3.9)	(5.3)	(2.0)	(2.3)	
Committed Ounces									
Net Forwards	39.1	34.3	31.8	30.1	27.4	23.6	20.4	18.4	(2.1)
Net Calls Sold	10.6	10.2	12.1	11.6	10.4	10.4	9.8	9.2	(0.6)
Other Products	1.3	1.2	1.2	1.2	0.9	0.4	0.1	0.1	(0.0)
Total Committed	50.9	45.7	45.0	42.8	38.7	34.5	30.3	27.7	(2.7)
Quarterly change	(4.8)	(5.2)	(0.7)	(2.3)	(4.1)	(4.2)	(4.1)	(2.7)	
Months' prod. Committed	12.0	11.3	11.3	10.5	10.0	8.9	7.5	7.0	(0.5)
Puts Bought	6.6	6.5	6.8	6.3	5.0	4.8	7.2	6.5	(0.7)
Puts Sold	1.1	1.0	1.8	1.6	2.2	1.7	1.7	1.5	(0.2)
Gold price, PM Fix	581.9	614.0	599.2	635.8	663.4	648.6	743.3	836.5	(93.2)

Source: VM Group, Haliburton Mineral Services

Global gold hedging, committed and delta-adjusted, Moz



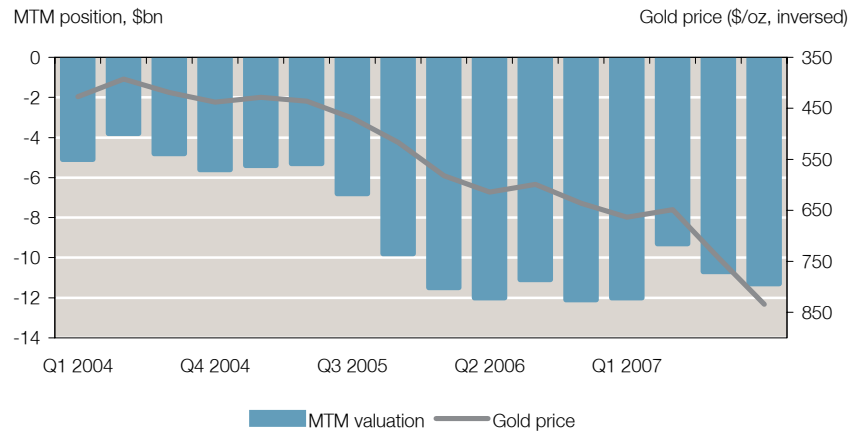
Source: VM Group, Haliburton Mineral Services

In terms of regions Australia led the way seeing a 1.3 Moz reduction, with Newcrest, the largest individual dehedger (see company and regional section for more details).

The reduction in hedging was not sufficient to reduce the negative mark-to-market valuation of the global hedge book. This represents the cost to mining companies of closing out their hedge books today (if they so choose), and we estimate it reached a negative \$11.3bn in Q4 07, \$0.6bn worse than a revised negative \$10.7bn in Q3 07. Although the size of the book is being reduced the

higher gold price during the quarter (up \$93/oz at \$836/oz) meant the loss per ounce rose. But the money spent on dehedging, particularly some of the oldest hedging at the worst prices, combined with a limited amount of new hedging at better prices, means the book would now break-even at a gold price of \$412/oz, considerably better than last quarter's \$375/oz, albeit more than \$500/oz lower than the current price.

MTM valuation



Source: VM Group

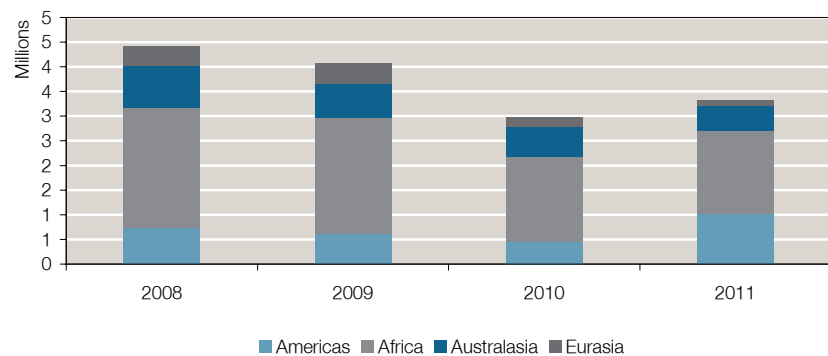
For 2007 as a whole global dehedging was 13.5 Moz (421 tonnes), the highest since 2004 (see box for more details of 2007's dehedging totals).

Will this pace be maintained in 2008? We doubt it, for the simple mathematical reason that there is much less hedging to be either closed-out or delivered into than there was a year or two years ago. Having said that given the current optimism in the gold market the inevitable opportunity cost of having sold gold forward when the price is rising means that a surprise to the upside in dehedging volumes is more likely.

Forecasting 2008 dehedging

Looking at the 2008 delivery schedule (using delta-adjusted numbers), which is the amount of hedged gold that mining companies have maturing in 2008, there is 4.4 Moz that are scheduled to be delivered into during 2008 (of which AngloGold Ashanti account for 2.3 Moz). To that needs to be added any further pro-active dehedging of contracts that mining companies wish to close out but which do not need to be delivered into during 2008. This is naturally difficult to predict, but already we know that in Q1 08 Buenaventura have closed out all of their remaining 0.9 Moz of hedging whilst Newcrest have got rid of 0.3 Moz of theirs and will have removed the remaining 0.62 Moz by September 2008. That makes nearly 2 Moz, and it is not unreasonable to expect another 2 Moz to 4 Moz of this type of dehedging. Counting against this needs to be added any new hedging, or hedging that is due for delivery in 2008 but which gets "rolled-over" into a later year. Neither of these is easy to estimate, but it is noteworthy that Q4 07 saw the lowest ever level of new hedging recorded by us, at just 15,090 oz.

Delivery schedule by region, 2008 - 2011 (Moz)

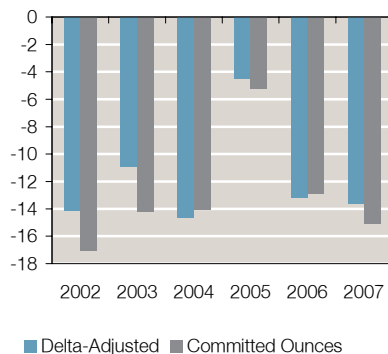


Source: VM Group

Largest remaining hedge books (oz)

Ounces committed	Q4 07
AngloGold Ashanti	11,277,711
Barrick Gold	7,800,000
Buenaventura	922,000
Newcrest Mining	921,577
Kinross Gold	912,900
Xstrata	448,000
European Minerals	443,000
Western Goldfields	429,000
OceanaGold	424,024

Annual change in hedging (Moz)



Source: VM Group/Haliburton Mineral Services

Collectively then, adding gold to be dehedged through expected deliveries to estimates of pro-active hedging and subtracting estimates of new hedging and rolling of existing contracts, we expect to see between 6 Moz and 8 Moz of dehedging in 2008 (187 tonnes to 249 tonnes), which would leave global hedging on or below 20 Moz, of which the vast majority would be held by AngloGold Ashanti and Barrick.

2007 – a roundup

For 2007 as a whole dehedging on a delta-adjusted measure came to 13.5 Moz (421 tonnes), higher than even in 2006 when Barrick were operating their major dehedging programme. When measured on a committed ounces basis the decline was even larger at 15.1 Moz (470 tonnes), the largest since 2002. These figures are all the more remarkable as they were achieved despite already much reduced hedging – in percentage terms the declines on both measures were over one-third of the entire global book.

The difference between the committed ounces and delta-adjusted measures of 1.5 Moz essentially reflects the impact of the rising gold price on option positions. The gold price ended the year at \$836/oz, \$93/oz higher than at the start of 2007. The delta measure adjusts for the likelihood of an option being exercised. When the gold price rises, call options – options to buy gold at a fixed price – become more likely to be exercised, and hence have a higher delta.

At the end of Q4 06 mining companies had collectively sold 11.6 Moz of calls. We estimated the calls had an 81% likelihood of being exercised and thus in delta-adjusted terms were worth 9.4 Moz. By the end of 2007 mining companies had reduced their net calls sold to 9.2 Moz, a decline of 2.4 Moz. However, the rising gold price meant the likelihood of those calls being exercised rose to 89%, hence in delta-adjusted terms the net calls sold are now worth 8.2 Moz, a decline over 2007 of a smaller 1.2 Moz. Thus this explains 1.2 Moz of the difference between the two measures.

Turning to the split of dehedging across the quarters, every quarter of 2007 saw a reduction, but there was a noticeable bias to the first half of the year, which on the delta-adjusted measure saw 9.2 Moz cut from the book, compared with 4.3 Moz in the second half. Again this partly reflects the impact on the delta of the rising price in the second half of the year – on a committed ounces basis the split was a more even 8.3 Moz in 1H07 and 6.8 Moz in 2H07.

Looking at 2007 dehedging by company (in terms of committed ounces), five companies made reductions over 1 Moz in 2007.

- Australian miner **Newcrest** was the largest dehedger, knocking 3.6 Moz off their hedge positions, with 3.3 Moz since the end of Q2 07 as part of their plans to remove the hedge entirely by September 2008.
- Canada's **Barrick**, whose massive dehedging programme meant they were the leading dehedgers in 2006 by far, continued to cut in 2007. Last year their dehedging was 3.0 Moz (with 1.3 Moz of this being the end of their planned reduction of their corporate hedges, and the other 1.7 Moz a conversion of fixed price contracts to floating price contracts – see regional and company section for more details).
- US giant, **Newmont**, closed out its remaining 1.8 Moz hedge in Q2 07.
- Australian **Lihir Gold** raised nearly A\$1bn in an institutional entitlement offer to close out the entirety of its 1.5 Moz hedge book in Q2 07.
- Peruvian miner **Buenaventura** reduced its book by 1 Moz, all in the first half of 2007. Subsequently it said in Q1 08 it had closed out the remaining 0.9 Moz.

One other company made a reduction of over 0.5 Moz, **Gold Fields** (after the acquisition of **Western Areas**). In all these companies made reductions of 11.5 Moz. Another 43 companies reduced their positions by a collective 4.6 Moz, meaning a gross reduction of 16.0 Moz.

Largest company changes in hedging in 2007 (Committed oz)

	End 2006	End 2007	Change
Newcrest Mining	4,558,158	921,577	(3,636,581)
Barrick Gold	10,800,000	7,800,000	(3,000,000)
Newmont Mining	1,846,111	0	(1,846,111)
Lihir Gold	1,481,000	0	(1,481,000)
Buenaventura	1,933,000	922,000	(1,011,000)
Etruscan Resources	0	235,740	235,740
Norton Goldfields	0	315,000	315,000
Western Goldfields	0	429,000	429,000

Source: VM Group, Halliburton Mineral Services

Despite the prevailing dehedging climate, there were 10 companies who added to their commitments over the year, collectively adding 1.3 Moz of new hedging. These were mainly for funding purposes, with the most substantial being American miner **Western Goldfields**, which added 0.43 Moz of flat forwards at \$801/oz as part of a \$105m loan facility in Q2 07, Australian **Norton Goldfields** added 0.32 Moz of forwards (and 145,000 oz of puts) in Q3 07 and Canadian **Etruscan Resources**, who put in place a 0.236 Moz 'costless collar' in Q1 07. Both of these companies have subsequently made small reductions to those positions.

Looking at regional trends, we have split hedging up into four regions – the main traditional gold producing areas of Americas, Africa and Australia, and Eurasia. This is partly because there are regional distinctions – Australian producers have typically hedged a much greater proportion of their production than those in other regions, reflecting a different corporate emphasis. That feature of the market has gradually been eroding as Australian companies have been taken over by non-hedging (or dehedging) non-Australian companies, or increasingly because they have themselves been dehedging. The latter was the most noteworthy trend of 2007, with the Australian book falling by 5.7 Moz, or 60% to 3.8 Moz, led by Newcrest and Lihir. In terms of ounces there was a larger decline in the Americas, 6.3 Moz, but that was 'only' 37% of the total book as of end-2006. The Africa region saw only a 0.8 Moz decline, or just 7%.

Regional and company focus

Largest change in hedging by company (000 oz)

Moz (Committed)	Q3 07	Q4 07	Change
Newcrest Mining	1,657	921	(735)
AngloGold Ashanti	11,661	11,278	(383)
Red Back Mining	246	0	(246)
Highlands Pacific	240	0	(240)
Barrick Gold	8,000	7,800	(200)
Austindo Resources	158	0	(158)
Lafayette Mining	146	0	(146)
Xstrata	527	448	(79)
Resolute	433	381	(51)
Beaconsfield Gold	45	0	(45)
Ok Tedi	119	88	(31)
Boliden	209	182	(28)
Penoles	188	162	(25)
IAMGOLD	145	122	(24)
CVRD	134	112	(22)
Inmet Mining	99	78	(21)
Randgold Resources	226	207	(19)
Northgate Minerals	18	0	(18)
OceanaGold	441	424	(17)
Sino Mining	320	303	(17)
Aurizon Mines	244	228	(16)
Norton Goldfields	330	315	(15)
Teck Cominco	102	87	(15)
Kinross Gold	928	913	(15)
EURO Ressources	51	38	(14)
Intrepid Mines	55	45	(11)
Pamodzi Gold	143	132	(11)
Zijin Mining	134	124	(11)
SEMAFO	92	83	(9)
Crescent Gold	110	102	(8)
Dominion Mining	41	33	(8)
Alamos Gold	8	0	(8)
Etruscan Resources	243	236	(7)
Jaguar Mining	56	50	(6)
Century Mining	30	24	(6)
Perseverance	164	162	(2)
Dragon Mining	11	10	(1)
Metorex	16	15	(1)
Sherwood Copper	55	54	(0)
Buenaventura	922	922	0
European Minerals	443	443	0
Western Goldfields	429	429	0
Avocet Mining	190	190	0
Allied Gold	102	102	0
Pan Australian Res.	70	70	0
Pacific Rim	0	1	1
Equigold	346	360	14

Source: VM Group, Haliburton Mineral Services

The Q4 07 decline in gold hedging, at 2.7 Moz on the committed ounces and 2.3 Moz on the delta-adjusted measure, was broad-based. Of the 113 gold mining companies including in this survey, 47 had hedging programmes at the beginning of the quarter, and 39, 83%, reduced their commitments. Of the other eight, six made no change in their positions, whilst two made tiny increases.

Seven companies made reductions of over 0.1 Moz. The largest was **Newcrest Mining**, who continued their hedge closure programme announced in Q3 07. Early in Q4 07 the 507,088 oz of Australian forward contracts were closed out, leaving the hedge position in terms of commitments at 1.15 Moz of US dollar denominated forward contracts. Newcrest announced on 19th February 2008 that these had been reduced by another 527,542 oz at a cost of \$927/oz between 23rd October 2007 and 18th February 2008, of which 228,267 oz (the 2010 forwards) were closed out before 31st December 2007. This means that Newcrest's dehedging in Q4 07 was 735,355 oz, with at least another 299,275 oz in Q1 08, which will appear in that quarter's *Fortis Hedging and Financial Gold Report*.

The second largest reduction was African miner, **AngloGold Ashanti**, whose commitments were reduced by 383,076 oz to 11.278 Moz. When measured on a delta-adjusted basis however AngloGold Ashanti's reduction was a far smaller 0.19 Moz, as the sharply higher gold price increased the delta of the company's large book of sold calls.

AngloGold Ashanti's hedge book is the key factor in gold hedging at the moment. With a committed total of 11.3 Moz, it accounts for 42% of global gold hedging, and except for **Barrick** (7.8 Moz, or 29% of the global book) dwarves any other company's position. As Barrick have come to the end of their major dehedging programme it is from AngloGold that any large dehedging could come. AngloGold Ashanti's CEO, Mark Cutifani, has said publicly that he is not a "fan" of hedging, however he is unlikely to do anything in a "big blow". But even if that Barrick-style dehedging does not materialise, AngloGold will continue to be the major dehedger each quarter if they simply deliver into maturing hedges, which Cutifani has said they will do and which will mean they deliver 2.2 Moz-2.4 Moz this year, over 0.5 Moz per quarter on average.

The power crisis in South Africa, which saw many mines shut down for a period in early February and for the time being are still operating on reduced power supply, has illuminated the costs of Anglo's hedge book to their revenues. In Q4 07 the company received \$687/oz, \$101/oz – 12.8% lower than the spot price for the quarter. In Q1 08, with the company estimating production due to the power supply crisis at 1.1 Moz, down from 1.37 Moz in Q4 07, and the gold price rising to \$900/oz, the impact will be even greater if AngloGold Ashanti delivers into hedges at the rate expected.

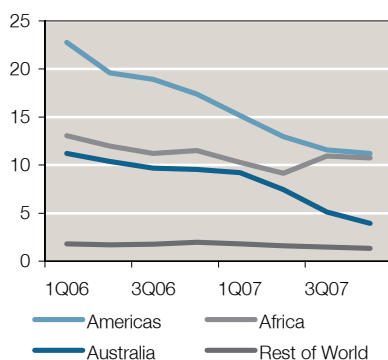
Barrick Gold converted another 200,000 oz of their fixed-price forward contracts into floating-price contracts, meaning they now have 7.8 Moz of fixed-price forward contracts and 1.7 Moz of floating-price forward contracts. In the scope of this report we do not consider these floating-price contracts to be hedges for two reasons. First, they do not provide any 'hedging' function. Instead Barrick receives \$456/oz less than the spot price on this 1.7 Moz. If the spot price rises by \$100/oz, the revenue per ounce Barrick receives also rises by \$100/oz. The second reason is because we understand that the counterparty to such a transaction does not need to use loaned (usually central bank) gold. As the use (and sale or purchase) of such gold in hedging transactions is the reason hedging movements are important to the gold market, the lack of it means these are not hedges as we consider them, and when they are converted from the fixed-price contracts we consider it dehedging.

The four other companies who cut their hedges by more than 0.1 Moz did so in the process of completely closing their books, and as such provide interesting examples of the wave of dehedging that has swept the gold industry. The largest dehedged of the four was **Red Back Mining**, a Canadian based company with operations in Ghana and Mauritania. On 31st October 2007 Red Back Mining completed a C\$110m share offering and used the proceeds to close out the hedge at its Chirano mine in Ghana which stood at 245,500 oz (and for some other corporate purposes). Next, with an only slightly smaller reduction of 240,000 oz, was **Highlands Pacific**, a Papua New Guinea based gold and base metal miner. It closed out its gold hedging programme in December at a cost of \$93.9m from funds that were raised by selling its 95% share of Kainantu mine to Barrick Gold. **Austindo Resources**, an Australian company with projects in Indonesia, closed out its book of flat forwards, a total of 157,998 oz. Finally **Lafayette Mining**, as part of its restructuring, spent \$123m to close out its base and precious metals hedge book, the gold part of which was 145,887 of US dollar forwards. Subsequent steps in the restructuring plans fell through, and the company was placed in Voluntary Administration on 18th December 2007. However we believe that these hedge contracts have been closed out.

Thirty two other companies have reduced their hedge positions, testament to the remarkable breadth of the dehedging phenomenon. Two of these are known to have closed out their hedge positions: **Beaconsfield Gold** (45,494 oz) and **Alamos Gold** (8,000 oz), and we expect that **Northgate Minerals** also closed out the remaining 18,000 ounces of its hedge position.

Hedging, despite or because of spot prices nearing (and then in January 2008 exceeding) the 1980 all-time high, was almost completely out of favour. Only two companies increased their positions, and then by only small amounts. **Equigold** added 14,090 oz, whilst **Pacific Rim** put in place a minimal 1,000 oz hedge.

Hedging by region, delta-adjusted (Moz)



Source: VM Group, Haliburton Mineral Services

Looking at regional trends, the most remarkable remains the ongoing decline of the Australian hedge book. This trend accelerated in Q4 07, with the delta-adjusted Australian hedge book falling by a large 1.3 Moz to 3.8 Moz, a reduction of 28%. This took the number of months' gold production committed by Australian miners to just 6.7, down from 11 months' in Q3 07 and 24.2 months' as recently as Q1 06. That is now comfortably lower than in Africa, where production shortfalls and only limited dehedging (0.2 Moz, or 2%) meant 11.3 months' production is now committed, higher (and substantially so) than Australia for the first time ever.

The Americas region, the largest at 11.1 Moz on a delta-adjusted basis, saw a reduction of 0.5 Moz, just 5%, which is rather subdued by its past standards. This reflects the fact that Barrick's major dehedging programme has now finished, whilst Newmont has been completely unhedged since Q2 07. Eurasia, our smallest region, saw a 0.17 Moz, or 9% decline.

Hedging by region, delta-adjusted (Moz)

	2006				2007				Change Q4 07	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q on Q	Y on Y
Americas	22.78	19.58	18.91	17.38	15.16	12.97	11.58	11.06	(0.52)	(6.32)
Africa	13.08	11.98	11.22	11.50	10.26	9.13	10.95	10.67	(0.28)	(0.83)
Australia	11.19	10.38	9.67	9.55	9.22	7.45	5.12	3.84	(1.28)	(5.72)
Eurasia	1.78	1.71	1.75	1.95	1.79	1.59	1.45	1.28	(0.17)	(0.67)
Total	48.83	43.66	41.54	40.38	36.44	31.14	29.10	26.85	(2.25)	(13.53)

Source: VM Group, Haliburton Mineral Services

Financial & investment gold

Exchange Traded Funds (ETFs)

Exchange Traded Fund holdings (tonnes) – part I

	US	UK		Swiss	Australia	S.Africa	
	Street TRACKS	BGI	Gold Bullion Securities	ETF Securities	ZKB		
2003	0.0	0.0		23.5		8.4	0.0
2004	94.9	0.0		51.1		7.5	3.0
2005	263.3	22.2		63.0		8.4	7.7
2006	453.2	44.5		85.4	13.1	10.5	10.2
2007	627.9	55.2		97.5	19.8	25.8	23.7
Jan-07	450.3	43.7		86.5	13.8	10.7	10.2
Feb-07	481.3	44.3		87.1	14.1	11.3	10.7
Mar-07	483.9	44.7		88.8	13.9	11.4	11.3
Apr-07	493.3	44.7		90.9	0.3	14.7	11.3
May-07	468.2	45.9		90.8	0.9	15.3	12.8
Jun-07	464.4	45.9		93.1	1.9	17.3	13.2
Jul-07	496.5	46.5		94.6	2.3	17.7	14.3
Aug-07	515.4	47.3		88.1	10.2	18.9	16.4
Sep-07	578.0	50.0		95.5	10.8	20.8	17.7
Oct-07	597.5	52.3		97.9	17.0	22.4	18.3
Nov-07	601.7	54.1		96.9	19.2	22.9	19.2
Dec-07	627.9	55.2		97.5	19.8	25.8	23.7
Jan-08	624.3	59.9		103.3	21.5	30.1	26.3

Source: Fortis

Exchange Traded Fund holdings (tonnes) – part II

	India	Turkey			Germany	Part I+II	Change	
	Benchmark	UTI	Kotak	Reliance Capital	Xetra-Gold	Total		
2003						32	32	
2004						156	125	
2005						365	208	
2006					1.3	618	254	
2007	1.3	1.3	0.4	1.4	1.3	0.3	872	254
Jan-07					1.3		616	-2
Feb-07					1.3		650	34
Mar-07	1.0				1.3		657	6
Apr-07	1.1	1.4			1.3		671	14
May-07	1.3	1.5			1.3		650	(21)
Jun-07	1.4	1.6			1.3		652	2
Jul-07	1.4	1.6	0.5		1.3		689	37
Aug-07	1.4	1.6	0.5		1.3		714	24
Sep-07	1.4	1.5	0.6		1.3		792	78
Oct-07	1.4	1.5	0.6		1.3		825	33
Nov-07	1.3	1.4	0.5	1.5	1.3		836	11
Dec-07	1.3	1.3	0.4	1.4	1.3	0.3	872	36
Jan-08	1.2	1.3	0.3	1.2	1.3	3.5	891	19

Source: VM Group

At the end of January 2008 these funds collectively held 891 tonnes, a rise of 19 tonnes on the end of 2007 (note there is another 27 tonnes in two Canadian funds, the Central Fund of Canada and the Central Gold Trust, which aren't ETFs). For the last three years the ETFs have seen inflows of more than 200 tonnes, with 208 tonnes in 2005, and 254 tonnes in both 2006 and 2007.

Inflows in Q4 07 were 80 tonnes, down from 139 tonnes in Q3 07. Only 39.9 tonnes of this was in the market-leading US StreetTRACKs product, much smaller than is normal.

Central Banks and other official gold holders

Central Banks (part I) (tonnes) - Old industrialised countries

	CBGA				
		Eurozone	Other CBGA	US& Canada	Other industrialised
2003		12,248	1,819	8,138	1,263
2004		12,138	1,540	8,140	1,226
2005		11,696	1,458	8,139	1,224
2006		11,364	1,449	8,137	1,224
2007		11,001	1,294	8,137	1,224
Jan-07		11,354	1,448	8,137	1,224
Feb-07		11,340	1,447	8,137	1,224
Mar-07		11,294	1,446	8,137	1,224
Apr-07		11,246	1,445	8,137	1,224
May-07		11,207	1,445	8,137	1,224
Jun-07		11,159	1,430	8,137	1,224
Jul-07		11,119	1,395	8,137	1,224
Aug-07		11,111	1,359	8,137	1,224
Sep-07		11,102	1,328	8,137	1,224
Oct-07		11,065	1,317	8,137	1,224
Nov-07		11,051	1,304	8,137	1,224
Dec-07		11,001	1,294	8,137	1,224
Jan-08		10,978	1,281	8,137	1,224

Source: VM Group from IMF, and individual central bank websites

Central Banks (part II) (tonnes) - Eurasia

	Asia	Eastern Europe	Middle East	Latin America	Africa	Institutions	World	Part I+II	
								Change	Change CBGA
2003	2,123	930	1,071	539	418	3,411	31,960	(527)	(454)
2004	2,092	933	949	590	412	3,426	31,444	(516)	(389)
2005	2,024	953	948	586	413	3,403	30,844	(600)	(523)
2006	1,998	979	948	580	413	3,389	30,481	(364)	(341)
2007	1,985	1,021	961	580	413	3,352	29,968	(512)	(518)
Jan-07	1,993	980	950	581	413	3,386	30,466	(15)	(11)
Feb-07	1,989	978	951	581	413	3,385	30,445	(21)	(14)
Mar-07	1,992	975	956	580	413	3,382	30,400	(45)	(48)
Apr-07	1,992	976	956	580	413	3,367	30,335	(64)	(49)
May-07	1,992	979	959	580	413	3,364	30,299	(36)	(39)
Jun-07	1,992	983	959	580	413	3,365	30,242	(58)	(63)
Jul-07	1,993	981	959	580	413	3,363	30,164	(77)	(75)
Aug-07	1,997	986	960	581	414	3,362	30,131	(34)	(44)
Sep-07	1,980	993	958	581	413	3,360	30,075	(56)	(41)
Oct-07	1,983	1,002	960	581	413	3,356	30,036	(39)	(48)
Nov-07	1,985	1,016	961	580	413	3,352	30,024	(13)	(26)
Dec-07	1,985	1,021	961	580	413	3,352	29,968	(55)	(60)
Jan-08	1,985	1,021	961	580	413	3,352	29,933	(36)	(36)

Source: VM Group from IMF, and individual central bank websites

ETF demand at around 250 tonnes a year has helped to soak up ongoing outflows from the official sector. These show little sign of slowing on a calendar year basis, with an estimated 518 tonnes sold on a net basis in calendar year 2007, sharply higher than the 341 tonnes in 2006 but similar to 2005's level.

That the European signatories of the central bank gold agreement (CBGA) have failed to reach their maximum 500 tonnes per CBGA year (a 12 month period starting 27th September) in the last two years, albeit last year by only 25 tonnes, has raised hopes that the era of huge European central bank sales is coming to an end.

So far, however, in the 2007/2008 CBGA year it looks as though gold sales could hit 500 tonnes. So far we estimate they have been about 170 tonnes up to the end of January. For sales to be 'on course' for 500 tonnes over 12 months, on average 166.7 tonnes would need to have been sold in four months. So the central banks are marginally ahead of 'target'. This also compares well to the

previous three years in this period. In 2006/2007 just 98 tonnes were sold, with 147 in 2005/2006 and 161 in 2004/2005. This is shown more clearly in the chart “CBGA II sales by month” below.

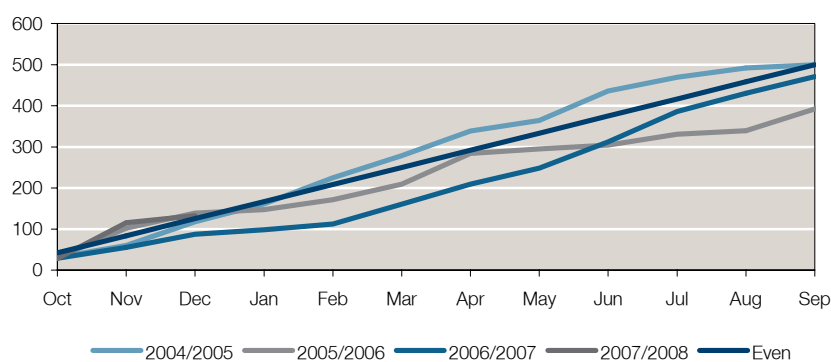
Central bank sales could hit 500t but what about 2008/2009?

Can gold sales continue at this pace? Yes, but they will have an impact on sales in the final CBGA year of 2008/2009.

Of the 170 tonnes of gold sold so far, 42 have come from the ECB itself, and a secondary – albeit smaller – sale later this year is quite likely if gold prices stay high (the ECB is thought to sell gold in order to keep its percentage share of reserves from rising too high). Swiss monthly sales have so far in this CBGA year been (in October, November, December and January) 10.8 tonnes, 11.3 tonnes, 9.8 tonnes and 11.5 tonnes. One does not have to be a statistician to note a pattern (allowing for Christmas holiday period-reduced December) and as the Swiss National Bank only needed to sell 137 tonnes in this CBGA year to conclude its sales programme, a rate of 11.4 tonnes a month, that is likely what it will do. The Netherlands, which still has not finished its sales programme announced in 1999, began this CBGA year with a flurry but sold only 0.5 tonnes of gold in November and nothing at all in December. It only has around 8 tonnes of its planned sales to go, so might have called a halt. Either way the amount of additional sales is tiny. Austria, another regular seller, has more than 50 tonnes of its sales programme (which was ‘up to 90 tonnes’) left, although we do not expect it will sell more than 10 tonnes. Similarly with Sweden, which so far has sold around 1 tonne of gold a month and Germany is likely to sell 5 tonnes for coins.

Collectively then, this amounts to 247 tonnes of gold sales, some way short of 500 tonnes. The obvious candidate to fit the gap is France. French sales began this CBGA year brightly, with 20 tonnes, but slowed to 12 tonnes in November and 8 tonnes in December. We think in January they might have picked up again to around 20 tonnes (Eurozone sales in January were about 22 tonnes, but we do not know the identity of the specific sellers at the moment). If so this is an average over the four months of just over 15 tonnes a month, which would translate to sales of 180 tonnes over the full CBGA year. This would be a higher rate than seen in previous years, but with 235 tonnes of their maximum allotted sales of 600 tonnes, it is possible. That would mean total CBGA sales of 427 tonnes, with perhaps Spain or Portugal, large sellers in the past, filling the rest of the quota.

Counting against this rapid pace being maintained is February’s sales so far, which have been just four tonnes in the first two weeks, and also because of what it would mean for the final year of the CBGA – 2008/2009. Switzerland and the Netherlands would have finished their sales programmes, and France would have just 55 tonnes left of its allocation. Unless Germany or Italy started major gold sales, both of which seem unlikely to do so at the moment, there would be a potential shortfall of up to 400 tonnes. The ECB might sell more, but not in large quantities. The most obvious candidate is the International Monetary Fund (IMF), which has expressed a desire to sell 400 tonnes of gold to help fund its operations, and which it said would be sold under “existing gold sales agreements” of which the CBGA is the only one we are aware of right now. This would then be a certainty given the IMF meeting in February which gained the G7 government’s agreement – but we need to bear in mind that the US vote has to go through Congress, which in the past has blocked similar sales due to hostility to both the idea of gold sales and the IMF. This time with conditional US Administration support it is likely to be different, but if sales do not happen – or the decision is not made in time - the final CBGA year will turn out to be very interesting.

CBGA II sales by month (tonnes)

Source: VM Group

CBGA II sales by year (tonnes)

	Year 1	Year 2	Year 3	Year 4 (to January)	Year 4 total?
France	(118)	(132)	(115)	(62)*	(180)
Netherlands	(55)	(67)	(14)	(19)	(25)
ECB	(47)	(57)	(60)	(42)	(70)
Spain	(30)	(62)	(149)		(30)
Portugal	(55)	(45)			(30)
Austria	(15)	(14)	(9)		(10)
Sweden	(15)	(10)	(10)	(3)	(10)
Germany	(5)	(5)	(5)		(5)
Switzerland	(130)		(113)	(43)	(137)
Belgium	(30)				
Total	(500)	(396)	(476)	(170)**	(497)

Source: VM Group

* Assuming France was responsible for almost all the 22+ tonnes of Eurozone sales in January 2008.

** In February up to the 15th 4 tonnes have been sold from the Eurozone countries. This does not include Swiss or Swedish sales.

Gold price, exchange rates & lease rates

End-quarter	2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gold price, \$/oz	581.9	614.0	599.2	635.8	663.4	648.6	743.3	836.5
Exchange Rates per \$								
Canadian Dollar	1.17	1.11	1.12	1.17	1.16	1.06	1.00	1.01
Euro	0.82	0.78	0.79	0.76	0.75	0.74	0.70	0.68
South African Rand	6.24	7.27	7.65	7.05	7.31	7.13	6.92	6.81
Australian Dollar	1.40	1.35	1.34	1.27	1.23	1.18	1.13	1.13
Lease Rates								
5-yr	0.55	0.55	0.44	0.48	0.51	0.45	0.40	0.34
10-yr	0.78	0.78	0.75	0.68	0.71	0.62	0.54	0.49

Source: Fortis, VM Group, Haliburton Mineral Services

Footnotes to appendices

Hedge positions shown are based on a calendar year basis unless otherwise noted. All hedge positions are presented in the currency in which they were disclosed or denominated. These tables constitute summaries of hedge positions reported by individual producers. Such reports often provide additional data and detail such as the duration of hedge positions, information on whether interest rates are fixed or floating, on floor prices on some contracts, on knock-ins and knock-outs etc. For companies where quarterly data is not available, or detail is not provided, the data have either been projected, interpolated, adjusted or repeated from adjacent quarters. In some cases aggregated positions have been allocated over a number of years. Thus we strongly refer the reader to the websites of the various companies for a more complete picture than is presented here. **For this report the reader should be particularly aware that in the interests of publishing in a timely fashion we have estimated the December 31, 2007 hedge positions for an unusually large number of companies who have not yet reported as we go to press (see notes below).**

Americas

- For Alamos Gold, Anaconda Mining, Aurizon Mines, Breakwater, Campbell Resources, Capital Gold, Central Sun Gold, Century Mining, Claude Resources, Coeur d'Alene, Crystallex, CVRD, Dundee Precious Metals, Gammon Lake, GBS Gold International, Gold-Ore, Golden Star, High River Gold, HudBay Minerals, IAMGOLD, Imperial Metals, Jaguar Mining, Jinshan Gold Mines, Kirkland Lake Gold, La Mancha Resources, Metallica Resources, Nevsun Resources, Northgate Minerals, Orvana, Pacific Rim, Peak Gold, Penoles, Red Back Mining, Royal Gold, SEMAFO, Sherwood Copper, Silver Wheaton, Uruguay Mineral Exploration, Wesdome Gold Mines, Western Goldfields, Yamana and Yukon-Nevada Gold: The December 31, 2007 position if any is adjusted from or repeated from September 30, 2007 or prior disclosure.
- Anaconda Gold and Uruguay Mineral Exploration: Companies have a 31st May year-end but positions shown, if any, are based on a calendar year.
- Capital Gold: Company has a 31st July year-end but positions shown, if any, are based on a calendar year.
- Etruscan Resources and Gold-Ore Resources: Companies have a 30th November year-end but positions shown, if any, are based on a calendar year.
- Kirkland Lake Gold and Pacific Rim: Companies have a 30th April 30 year-end but positions shown, if any, are based on a calendar year.
- Orvana: Company has a 30th September year-end but positions shown are based on a calendar year basis.
- Red Back Mining and Royal Gold: Companies have 30th June year-ends but positions shown, if any, are based on a calendar year.

Africa

- For Pamodzi Gold and Thistle Mining: The December 31, 2007 position if any is adjusted from or repeated from September 30, 2007 or prior disclosure.
- DRD, Gold Fields, Harmony and Metorex: Companies have June 30 year-ends.
- Simmer and Jack: Company has a March 31 year-end

Australia

- For Lafayette Mining, Lion Selection and OceanaGold: The 31st December 2007 position, if any, is adjusted from or repeated from 30th September 2007 or prior disclosure.
- For Allied Gold, Beaconsfield Gold, Crescent Gold, Dominion Mining, Dragon Mining, Emperor Mines, Equigold, Kingsgate Consolidated, Lafayette Mining, Newcrest Mining, Norseman Gold, Norton Gold Fields, Perseverance, Resolute, St. Barbara, Tanami Gold, Troy Resources and View Resources: Companies have 30th June year-ends.
- Dragon Mining: Company has a 30th June year-end but positions shown, if any, are based on a calendar year.
- Lion Selection Trust: Company has a 31st July year-end but positions shown, if any, are based on a 30th June year-end and are adjusted from or repeated from prior disclosure.
- Ok Tedi: Positions shown are calculated from Inmet's disclosed or estimated Ok Tedi hedge position and are based on a calendar year.

Eurasia

- For Avocet Mining, Celtic, Crew Gold, European Minerals, Hochschild, Kazakhmys, Oxus Gold, Peter Hambro Mining, Polymetal, Polyus, Rio Tinto, Serabi Mining, Xstrata and Zijin Mining: The 31st December, 2007 position, if any, is adjusted from or repeated from 30th September, 2007 or previous disclosure.
- Avocet Mining: Company has a 31st March year-end.
- Crew Gold and Oxus Gold: Companies have 30th June year-ends.

Appendix 1: Company hedge commitments

Hedging by company by quarter (ozs)

	Q4 06	Q1 07	Q2 07	Q3 07	Q4 07	Change over quarter	Change over year
Americas							
Agnico-Eagle	-	(420,000)	-	-	-	-	-
Alamos Gold	-	6,100	2,700	8,000	-	(8,000)	-
Anaconda Mining	-	-	-	-	-	-	-
Aurizon Mines	287,431	273,062	259,631	243,971	227,962	(16,009)	(59,469)
Barrick Gold	10,800,000	9,500,000	9,500,000	8,000,000	7,800,000	(200,000)	(3,000,000)
Breakwater	-	-	-	-	-	-	-
Buenaventura	1,933,000	1,410,000	922,000	922,000	922,000	0	(1,011,000)
Campbell Resources	-	-	-	-	-	-	-
Capital Gold	-	-	-	-	-	-	-
Centerra Gold	-	-	-	-	-	-	-
Central Sun Mining	-	-	-	-	-	-	-
Century Mining	7,665	5,870	0	30,000	24,000	(6,000)	16,335
Claude Resources	-	-	-	-	-	-	-
Coeur d'Alene	-	-	-	-	-	-	-
Crystallex Mining	-	-	-	-	-	-	-
CVRD (Vale)	234,240	177,490	155,740	133,990	112,240	(21,750)	(122,000)
Dundee Precious Metals	-	-	-	-	-	-	-
Eldorado	-	-	-	-	-	-	-
Etruscan Resources	-	246,296	246,296	242,778	235,740	(7,038)	235,740
EURO Ressources	68,400	62,700	57,000	51,300	37,600	(13,700)	(30,800)
Freeport Copper & Gold	-	-	-	-	-	-	-
Gammon Gold	-	-	-	-	-	-	-
GBS Gold International	-	-	-	-	-	-	-
Goldcorp	-	-	-	-	-	-	-
Golden Star Resources	6,000	-	-	-	-	-	(6,000)
Gold-Ore Resources	-	-	-	-	-	-	-
Hecla Mining	-	-	-	-	-	-	-
High River Gold	-	-	-	-	-	-	-
HudBay Minerals	-	-	-	-	-	-	-
IAMGOLD	255,440	219,580	182,863	145,450	121,664	(23,786)	(133,776)
Imperial Metals	-	-	-	-	-	-	-
Inmet Mining	136,650	122,150	116,750	98,900	77,600	(21,300)	(59,050)
Intrepid Mines	95,084	81,920	69,270	55,214	43,971	(11,243)	(51,113)
Jaguar Mining	77,000	70,313	64,500	55,654	49,500	(6,154)	(27,500)
Jinshan Gold Mines	-	-	-	-	-	-	-
Kinross Gold	-	800,400	963,900	927,650	912,900	(14,750)	912,900
Kirkland Lake Gold	-	-	-	-	-	-	-
La Mancha Resources	-	-	-	-	-	-	-
Metallica Resources	-	-	-	-	-	-	-
Nevsun Resources	-	-	-	-	-	-	-
Newmont Mining	1,846,111	1,846,111	-	-	-	-	(1,846,111)
Northgate Minerals	60,000	30,000	30,000	18,000	-	(18,000)	(60,000)
Orvana	-	-	-	-	-	-	-
Pacific Rim	-	1,500	-	-	1,000	1,000	1,000
Peak Gold	-	-	-	-	-	-	-
Penoles	264,000	238,575	213,150	187,725	162,300	(25,425)	(101,700)
Red Back Mining	306,801	289,000	267,500	245,500	-	(245,500)	(306,801)
Richmont	-	-	-	-	-	-	-
Royal Gold	-	-	-	-	-	-	-
SEMAFO	145,000	100,000	96,000	92,000	83,000	(9,000)	(62,000)
Sherwood Copper	42,202	42,202	55,600	54,590	54,095	(495)	11,893
Silver Wheaton	-	-	-	-	-	-	-
Teck Cominco	139,000	128,000	113,000	102,000	87,000	(15,000)	(52,000)
Uruguay Mineral Exploration	-	-	-	-	-	-	-
Wesdome	-	-	-	-	-	-	-
Western Goldfields	-	-	429,000	429,000	429,000	-	429,000
Yamana Gold	-	-	-	-	-	-	-
Yukon-Nevada Gold	-	-	-	-	-	-	-
Total	18,154,739	15,679,914	13,752,045	12,043,722	11,381,572	(662,150)	(6,773,167)

Continued overleaf

Hedging by company by quarter (ozs)

	Q4 06	Q1 07	Q2 07	Q3 07	Q4 07	Change over quarter	Change over year
Eurasia							
Avocet Mining	270,000	240,000	210,000	190,000	190,000	-	(80,000)
Boliden	310,636	283,027	256,056	209,077	181,500	(27,577)	(129,136)
Celtic	-	-	-	-	-	-	-
Crew Gold	-	-	-	-	-	-	-
European Minerals	443,000	443,000	443,000	443,000	443,000	-	-
Guinor Gold	-	-	-	-	-	-	-
Highland Gold	-	-	-	-	-	-	-
Hochschild	56,700	30,025	-	-	-	-	(56,700)
KazakhGold	-	-	-	-	-	-	-
Oxus Gold	-	-	-	-	-	-	-
Peter Hambro Mining	-	-	-	-	-	-	-
Polyus Gold	-	-	-	-	-	-	-
Rio Narcea	280,000	280,000	280,000	-	-	-	(280,000)
Rio Tinto	-	-	-	-	-	-	-
Seribi Mining	-	-	-	-	-	-	-
Xstrata	755,000	684,626	605,750	526,876	448,000	(78,876)	(307,000)
Zijin Mining	137,600	137,600	137,600	134,100	123,600	(10,500)	(14,000)
Total	2,252,936	2,098,278	1,932,406	1,503,053	1,386,100	(116,953)	(866,836)
Global Total	42,784,680	38,666,402	34,450,686	30,326,457	27,668,890	(2,657,566)	(15,115,789)

Source: Fortis, VM Group, Haliburton Mineral Services

Appendix 2: Detail of company hedge positions in Q4 07

Q4 07 breakdown by maturity, Americas (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Agnico-Eagle										
Commitments	-	-	-	-	-	-	-	-	-	-
Alamos Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Anaconda Mining										
Forward sales	10,000	684	-	-	-	-	-	-	-	-
Calls - bought	10,000	750	-	-	-	-	-	-	-	-
Total Committed	0									
Aurizon Mines										
Calls - sold	77,306	848	84,842	882	65,814	908	-	-	-	-
Total Committed	77,306	0	84,842	0	65,814	0	-	-	-	-
Puts - bought	77,306	500	84,842	500	65,814	500				
Barrick Gold										
Project Forward Sales	7,800,000	336								
Floating Spot Priced Contracts*	1,700,000	Spot-456								
Total Committed	7,800,000									
Breakwater										
Commitments	-	-	-	-	-	-	-	-	-	-
Buenaventura										
Forward sales	-	-	-	-	273,000	390	300,000	403	349,000	716
Total Committed					273,000		300,000		349,000	
Campbell Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Capital Gold										
Forward sales	33,673	500	33,200	500	25,033	500	-	-	-	-
Calls-bought	33,673	535	33,200	535	25,033	535	-	-	-	-
Total Committed	0		0		0					
Centerra Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Central Sun Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
Century Mining										
Calls - sold	24,000	720	-	-	-	-	-	-	-	-
Total Committed	24,000									
Claude Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Coeur d'Alene										
Commitments	-	-	-	-	-	-	-	-	-	-
Crystallex Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
CVRD (Vale)										
Calls - sold	112,240	382	-	-	-	-	-	-	-	-
Total Committed	112,240									
Puts - bought	92,200	324	-	-	-	-	-	-	-	-

Continued overleaf

* We do not consider these hedges hence they are not included in our totals

Q4 07 breakdown by maturity, Americas (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Dundee Precious Metals										
Commitments	-	-	-	-	-	-	-	-	-	-
Eldorado										
Commitments	-	-	-	-	-	-	-	-	-	-
Etruscan Resources										
Calls – sold	45,331	700	59,137	700	50,677	700	48,749	700	31,846	1,772
Total Committed	45,331		59,137		50,677		48,749		31,846	
Puts – bought	83,946	629	109,512	629	93,846	629	90,276	629	58,974	1,592
EURO Ressources										
Forward sales	14,800	459	22,800	459	-	-	-	-	-	-
Total Committed	14,800		22,800							
Freeport Copper & Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Gammon Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
GBS Gold International										
Commitments	-	-	-	-	-	-	-	-	-	-
Gold-Ore Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Goldcorp										
Commitments	-	-	-	-	-	-	-	-	-	-
Golden Star Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Hecla Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
High River Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
HudBay Minerals										
Commitments	-	-	-	-	-	-	-	-	-	-
IAMGOLD										
Flat Forward sales	77,776	402	38,888	402	-	-	-	-	-	-
Flat Forward sales	-	-	5,000	442	-	-	-	-	-	-
Calls - sold	-	-	-	-	-	-	-	-	-	-
Total Committed	77,776		43,888							
Imperial Metals										
Commitments	-	-	-	-	-	-	-	-	-	-
Inmet Mining										
Forward sales	58,200	352	-	-	-	-	-	-	-	-
Forward sales	6,800	372	-	-	3,600	748	3,600	775	5,400	-
Total Committed	65,000				3,600		3,600		5,400	
Intrepid Mines										
<i>AU Dollar Gold</i>										
Forward sales	43,971	626	-	-	-	-	-	-	-	-
Total Committed	43,971									
Jaguar Mining										
Flat forwards	30,500	527	19,000	527	-	-	-	-	-	-
Total Committed	30,500		19,000							

Continued overleaf

Q4 07 breakdown by maturity, Americas (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Jinshan Gold Mines										
Commitments	-	-	-	-	-	-	-	-	-	-
Kinross Gold										
Forward sales	45,000	511	218,600	641	-	-	612,800	635	-	-
Calls-sold	36,500	468	-	-	-	-	-	-	-	-
Total Committed	81,500	0	218,600				612,800			
Puts - bought	38,500	405	-	-	-	-	-	-	-	-
Kirkland Lake Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
La Mancha Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Metallica Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Nevsun Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Newmont Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
Northgate Minerals										
Commitments	-	-	-	-	-	-	-	-	-	-
Orvana										
Commitments	-	-	-	-	-	-	-	-	-	-
Pacific Rim										
Forward sales	1,000	777	-	-	-	-	-	-	-	-
Total Committed	1,000									
Peak Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Penoles										
Forward sales	9,900	652	-	-	-	-	-	-	-	-
Contingent forwards	54,000	355	54,000	355	-	-	-	-	-	-
Calls - sold	44,400	913	-	-	-	-	-	-	-	-
Total Committed	108,300		54,000							
Puts - bought	44,400	514	-	-	-	-	-	-	-	-
Red Back Mining										
Total Committed	-	-	-	-	-	-	-	-	-	-
Richmont										
Commitments	-	-	-	-	-	-	-	-	-	-
Royal Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
SEMAFO										
Fixed Forward	48,000	375	35,000	375	-	-	-	-	-	-
Total Committed	48,000		35,000							
Sherwood Copper										
Flat Forward	12,126	653	14,424	653	14,025	653	13,520	718	-	-
Total Committed	12,126	0	14,424		14,025		13,520			
Silver Wheaton										
Commitments	-	-	-	-	-	-	-	-	-	-

Continued overleaf

Q4 07 breakdown by maturity, Americas (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Teck Cominco										
Forward sales	44,000	350	43,000	350	-	-	-	-	-	-
Total Committed	44,000		43,000							
Uruguay Mineral Exploration										
Commitments	-	-	-	-	-	-	-	-	-	-
Wesdome Gold Mines										
Commitments	-	-	-	-	-	-	-	-	-	-
Western Goldfields										
Forward sales	33,000	801	66,000	801	66,000	801	66,000	801	198,000	1068
Total Committed	33,000		66,000		66,000		66,000		198,000	
Yamana Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Yukon-Nevada Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
COMMITTED BREAKDOWN										
Total Forwards	8,256,817		495,912		381,658		994,480		552,400	
Total Calls sold	349,777		143,979		116,491		48,749		31,846	
Total Calls bought	43,673		33,200		25,033		-		-	
Total Other Products	54,000		54,000		-		-		-	
Total Committed	8,616,921		660,691		473,116		1,043,229		584,246	
Total Puts bought	336,352		194,354		159,660		90,276		58,974	
Total Puts sold	-		-		-		-		-	

Source: Fortis, VM Group, Haliburton Mineral Services

Q4 07 breakdown by maturity, Africa (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
AngloGold Ashanti										
<i>US Dollar Gold</i>										
Forward sales	733,584	314	698,893	316	464,964	347	415,741	397	781,520	418
Forward sales (long)	(363,432)	647	-	-	-	-	-	-	-	-
Calls-sold	1,883,069	521	1,477,327	498	1,183,276	492	1,266,257	517	2,069,994	611
Calls-bought	315,495	427	-	-	-	-	-	-	-	-
Total	1,937,726	-	2,176,220	-	1,648,240	-	1,681,999	-	2,851,514	-
Puts-sold	834,698	682	120,501	530	60,508	410	60,508	420	181,523	440
<i>Rand Gold</i>										
Forward sales	-	-	29,997	3,618	-	-	-	-	-	-
Calls-sold	-	-	96,002	6,285	96,002	6,735	96,002	7,185	-	-
Total	-	-	125,999	-	96,002	-	96,002	-	-	-
<i>Australian Dollar Gold</i>										
Forward sales	514,991	848	108,991	644	99,989	685	-	-	-	-
Calls-sold	180,012	954	-	-	-	-	-	-	-	-
Calls-bought	99,989	680	39,996	694	99,989	712	-	-	-	-
Total	595,014	-	68,996	-	-	-	-	-	-	-
Puts-sold	240,005	882	-	-	-	-	-	-	-	-
Total Committed	2,532,740		2,371,214		1,744,242		1,778,001		2,851,514	
Central African Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
DRDGold										
Commitments	-	-	-	-	-	-	-	-	-	-
Gold Fields										
Commitments	-	-	-	-	-	-	-	-	-	-
Harmony										
Commitments	-	-	-	-	-	-	-	-	-	-
Metorex										
<i>Rand gold</i>										
Flat forwards	6,430	3,421	9,002	3,452	-	-	-	-	-	-
Total Committed	6,430		9,002							
Pamodzi Gold										
Contingent forwards	33,000	350	30,000	350	30,000	350	27,000	350	12,000	350
Total Committed	33,000		30,000		30,000		27,000		12,000	
Puts - bought	38,646	290	-	-	-	-	-	-	-	-
Randgold Resources										
<i>US Dollar Gold</i>										
Forward sales	80,496	429	84,996	435	41,748	500	-	-	-	-
Total Committed	80,496		84,996		41,748					
Simmer & Jack Mines										
Commitments	-	-	-	-	-	-	-	-	-	-
Thistle Mining										
<i>US Dollar Gold</i>										
Commitments	-	-	-	-	-	-	-	-	-	-
COMMITTED BREAKDOWN										
Total Forwards	1,005,068		961,879		636,701		442,741		793,520	
Total Calls sold	2,063,081		1,573,329		1,279,278		1,362,259		2,069,994	
Total Calls bought	415,484		39,996		99,989		-		-	
Total Other Products										
Total Committed	2,652,666		2,495,212		1,815,990		1,805,001		2,863,514	
Total Puts bought	38,646		-		-		-		-	
Total Puts sold	1,074,703		120,501		60,508		60,508		181,523	

Source: Fortis, VM Group, Haliburton Mineral Services

Q4 07 breakdown by maturity, Australia (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Allied Gold										
<i>AU Dollar Gold</i>										
Calls sold	8,880	700	26,640	700	26,640	700	26,640	700	13,200	700
Total Committed	8,880		26,640		26,640		26,640		13,200	
Puts - bought	14,800	700	44,400	700	44,400	700	44,400	700	22,000	700
Antam										
Commitments	-	-	-	-	-	-	-	-	-	-
Austindo Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
Beaconsfield Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Crescent Gold										
<i>AU Dollar Gold</i>										
Forward sales	22,191	860	40,788	860	13,596	860	-	-	-	-
Gold loans	25,478	785								
Total Committed	47,669	0	40,788	0	13,596					
Puts - bought	11,618	850	28,224	850	9,408	850	-	-	-	-
Dominion Mining										
<i>AU Dollar Gold</i>										
Forward sales	32,863	843	-	-	-	-	-	-	-	-
Total committed	32,863									
Dragon Mining										
Forward sales	9,950	414	-	-	-	-	-	-	-	-
Total committed	9,950									
Emperor Mines										
Commitments	-	-	-	-	-	-	-	-	-	-
Equigold										
<i>AU Dollar Gold</i>										
Flat Forward sales	46,464	600	61,356	600	56,596	600	13,184	600	-	-
Spot deferreds	30,396	907	-	-	-	-	-	-	-	-
Calls - sold	-	-	-	-	-	-	45,000	700	106,980	700
Total Committed	76,860		61,356		56,596		58,184		106,980	
Highlands Pacific										
Commitments	-	-	-	-	-	-	-	-	-	-
Kingsgate Consolidated										
Total Committed	-	-	-	-	-	-	-	-	-	-
Lafayette Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
Lihir Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Lion Selection Trust										
<i>AU Dollar Gold</i>										
Commitments	-	-	-	-	-	-	-	-	-	-
Puts - bought	26,400	664	26,700	684	-	-	-	-	-	-
Newcrest Mining										
Forward sales	-	-	-	-	-	-	-	-	921,577	386
Total Committed									921,577	
Puts - bought	250,000	800	500,000	800	500,000	800	500,000	800	500,000	800

Continued overleaf

Q4 07 breakdown by maturity, Australia (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Norseman Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Norton Goldfields										
<i>AU Dollar Gold</i>										
Forward sales	34,500	877	66,000	877	66,000	877	66,000	877	82,500	877
Total Committed	34,500		66,000		66,000		66,000		82,500	
Puts - bought	24,167	760	48,333	760	48,333	760	-	-	-	-
OceanaGold										
<i>NZ Dollar Gold</i>										
Forward sales	113,712	773	106,448	773	99,840	773	-	-	-	-
Calls - sold	-	-	-	-	104,024	1,062	-	-	-	-
Total Committed	113,712		106,448		203,864					
Puts - bought	81,042	1,000	85,416	1,000	82,080	1,000	-	-	-	-
Ok Tedi										
<i>US Dollar Gold</i>										
Forward sales	30,978	372	-	-	16,400	748	16,400	775	24,600	810
Total Committed	30,978				16,400		16,400		24,600	810
Oxiana Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Puts - bought	62,700	370	29,500	370	-	-	-	-	-	-
Pan Australian Resources										
<i>AU Dollar Gold</i>										
Forward sales	-	-	14,000	749	14,000	775	14,000	802	28,000	844
Total Committed			14,000		14,000		14,000		28,000	844
Puts - bought	20,566	700	20,566	700	20,566	700	20,566	700	41,134	700
Perseverance										
<i>AU Dollar Gold</i>										
Flat forwards	48,312	635	56,782	626	56,782	626	-	-	-	-
Total committed	48,312		56,782		56,782					
Resolute										
<i>AU Dollar Gold</i>										
Forward sales	64,667	696	84,333	697	88,334	699	-	-	-	-
Puts - bought	80,000	653	55,000	673	-	-	-	-	-	-
<i>US Dollar Gold</i>										
Forward sales	44,250	542	99,750	540	-	-	-	-	-	-
Puts - bought	60,000	439	30,000	446	-	-	-	-	-	-
Total Committed	108,917		184,083		88,334					
Sino Mining										
Fixed forwards	73,548	524	64,612	525	64,612	525	64,612	525	35,789	530
Total Committed	73,548		64,612		64,612		64,612		35,789	
Puts - bought	74,184	400	74,178	400	-	-	-	-	-	-
St. Barbara										
Commitments	-	-	-	-	-	-	-	-	-	-
Puts - bought	83,738	760	121,090	700	100,910	700	163,911	700	942,489	700
Tanami										
Commitments	-	-	-	-	-	-	-	-	-	-
Troy Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
View Resources										
Commitments	-	-	-	-	-	-	-	-	-	-
COMMITTED BREAKDOWN										
Total Forwards	577,309		594,069		476,160		402,463		1,092,466	
Total Calls sold	8,880		26,640		130,664		71,640		120,180	
Total Calls bought	-		-		-		-		-	
Total Other Products	-		-		-		-		-	
Total Committed	586,189		620,709		606,824		474,103		1,212,646	
Total Puts bought	789,215		1,063,407		805,697		728,877		1,505,623	
Total Puts sold	-		-		-		-		-	

Source: Fortis, VM Group, Haliburton Mineral Services

Q4 07 breakdown by maturity, Eurasia (oz)

	2008	\$/oz	2009	\$/oz	2010	\$/oz	2011	\$/oz	2012+	\$/oz
Avocet Mining										
Calls Sold	-	-	-	-	120,000	755	70,000	755	-	-
Total Committed					120,000		70,000			
Puts - bought	120,000	600	120,000	600	120,000	600	70,000	600	-	-
Boliden										
Forward sales	93,500	665	88,000	702	-	-	-	-	-	-
Total Committed	93,500		88,000							
Celtic										
Commitments	-	-	-	-	-	-	-	-	-	-
Crew Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
European Minerals										
Flat Forward	58,000	574	68,000	574	71,000	574	61,000	574	185,000	574
Total commitments	58,000		68,000		71,000		61,000		185,000	
Highland Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Hochschild										
Commitments	-	-	-	-	-	-	-	-	-	-
KazakhGold										
Commitments	-	-	-	-	-	-	-	-	-	-
Kazakhmys										
Commitments	-	-	-	-	-	-	-	-	-	-
Oxus Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Peter Hambro Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
Polymetal										
Commitments	-	-	-	-	-	-	-	-	-	-
Polyus Gold										
Commitments	-	-	-	-	-	-	-	-	-	-
Rio Tinto										
Commitments	-	-	-	-	-	-	-	-	-	-
Serabi Mining										
Commitments	-	-	-	-	-	-	-	-	-	-
Xstrata										
<i>US Dollar Gold</i>										
Calls sold	126,000	595	150,000	640	-	-	-	-	-	-
Total	126,000	-	150,000	-	-	-	-	-	-	-
Puts - bought	126,000	475	150,000	495	-	-	-	-	-	-
<i>AU Denominated stated in US\$</i>										
Forward sales	84,200	580	87,800	589	-	-	-	-	-	-
Total Committed	210,200		237,800							
Zijin Mining										
<i>Yuan Gold (\$)</i>										
Forward sales	42,400	4,317	42,400	4,317	38,800	4,317	-	-	-	-
Total committed	42,400		42,400		38,800					
COMMITTED BREAKDOWN										
Total Forwards	278,100		286,200		109,800		61,000		185,000	
Total Calls sold	126,000		150,000		120,000		70,000		-	
Total Calls bought	-		-		-		-		-	
Total Other Products	-		-		-		-		-	
Total Committed	404,100		436,200		229,800		131,000		185,000	
Total Puts bought	246,000		270,000		120,000		70,000		-	
Total Puts sold	-		-		-		-		-	

Source: Fortis, VM Group, Halburton Mineral Services

Notes

Notes

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About the report and methodology

About the report

Dehedging has been an important positive feature of the gold market over the last six years. Global gold mining companies, which had sold forward more than 100 Moz of their output by 2001, have steadily reduced that to less than 30 Moz today.

The VM Group and Haliburton Mineral Services, whose collective experience in hedging research goes back almost twenty years, have tracked these developments in detail since 2003. We aim to be both comprehensive – the report contains full details of the hedging programmes of 113 companies– and insightful into the trends in global gold hedging.

The gold bull market has reminded participants of gold's unique status among commodities as a financial asset, and the Fortis Hedging and Financial Gold report will also provide detailed analysis of other financial gold transactions, such as central bank activity, investment, speculation and lending.

The results and details of this quarterly research will be made available to all interested parties on a complimentary basis in the hope that our readers will not only enjoy the read but will benefit from our shared gathering of intelligence. We will also make the data available in Microsoft Excel format.

Methodology

There are two distinct measures of gold hedge books used in this document, committed ounces and delta-adjusted. Committed Ounces is a simple summation of all mining company hedge commitments, which include forwards and call options (but not put options, which are not a commitment). For example, if a mining company has sold 200,000 ounces of call options, bought 100,000 oz of put options, and sold 150,000 ounces of forward then their commitments total 350,000 ounces. This is a good guide to the extent and size of company and global hedging.

One of the important features of gold hedging, however, is its impact on the spot market. Bullion banks hedge their transactions with mining companies by using borrowed central bank gold which is sold into the spot market.

The market impact of a forward sale is straightforwardly the number of ounces involved, i.e. a 100,000 forward sale will see 100,000 oz gold sold into the spot market.

The market impact of options, however depend on their likelihood of being exercised, which in turn depends on the gold price (and other factors such as time to maturity, price volatility, and interest and lease rates). The delta-adjustment essentially adjusts for the probability an option will be exercised.

To understand the delta concept in a practical example consider the following: A mining company at December 31, 2007 sells 100,000 ounces of one year call option exercisable on December 31, 2008 at \$900. This gives the buyer the right (but not the obligation) to purchase 100,000 oz of gold from the mining company at \$900/oz at year end 2008. Given that the price of gold was only \$836/oz when the contract was sold the probability of its being exercised was certainly less than one. In fact based on volatility, time to expiry etc, the delta-adjustment suggests there is a 47% chance of exercise. Thus our delta-adjusted total would include 47,000 oz of calls. Now carry the example forward to say June 30, 2008 and hypothesize that gold is trading at \$750. The time to expiry is now only six months and the market price is well below the option exercise price. The calculated delta is 14%, and so our delta-adjusted total would include just 14,000 oz of calls.

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VM Group work excels in macro-economic analysis, the generation of supply and demand scenarios, costs analysis, derivative research and price forecasting. Confidentiality, experience and independence are key elements of such advisory roles. Our aim is to assist those in need of external expertise, as well as those who wish to supplement their own in-house resources. With our extensive international contacts, we are able to broaden our services through links with experienced associates in related fields worldwide.

To see further how we can meet your research and consulting requirements, please email info@vmgroup.co.uk or call or fax on the numbers above.

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