

## Brady Bulletin - Issue 7, June 2006 - LBMA Precious Metals Conference, Montreux

### Hedging and the Gold Market: Update

Gold's dramatic retreat from the highs posted in early May of just over \$725 to below \$600 in June, mirrored the metal's equally sharp ascent starting in the latter part of March from the \$550 level. Given the speed and extent of gold's advance in the April/May period and its reliance mostly on speculative investor inflows, a major correction was always likely but the subsequent slide in price has perhaps been more severe than expected.

The key question now, of course, is where do we go from here? The answer is, probably, higher, even if over the remainder of 2006 it may be too much to expect prices to exceed the \$700/oz level. The collapse in the price has largely reduced the speculative bubble that had emerged and potentially set up gold for a more sustained rise in future. The yellow metal is regularly in the news and sentiment remains extremely positive after four consecutive years of price gains. The external economic and political environment is still generally very supportive of alternative investments, and commodities, including gold, in spite of recent wobbles are increasingly seen as a means to these ends. Against this positive backdrop, GFMS' view is that, at least for the next couple of years, investment demand has considerable potential eventually to drive prices to fresh highs.

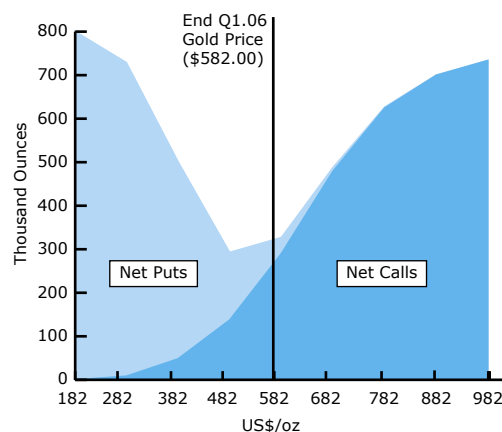
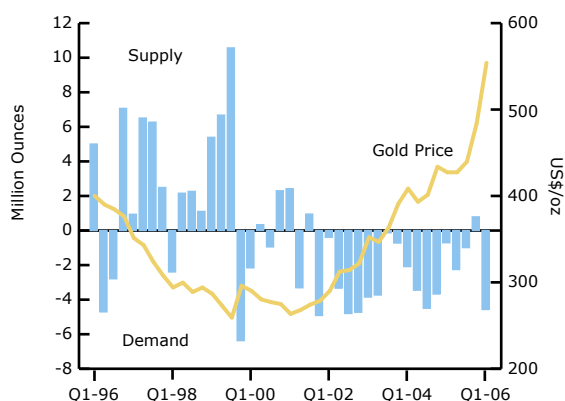
Producers broadly share this positive outlook for gold prices, a view that has been key in determining hedging strategies, and one that is reflected in the marked decline in the global hedge book. In the last six years, close to

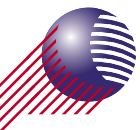
45 million ounces of gold has been removed from the delta-adjusted hedge book and although a number of factors have been responsible for the scale of the decline, including merger activity and corporate failures, the key driver behind the current cycle of producer de-hedging, as alluded to above, has been producers' price expectations. Fresh hedging related to project financing requirements, as higher spot prices have ignited the fuse of numerous development projects, has done little to offset the ongoing move by producers to reduce hedge cover. The net impact of producer hedging illustrated in the chart below and shows a clear negative correlation with the gold price.

In the first quarter of the current year, a provisional 4.6 million ounces was removed from the delta-adjusted hedge book, exceeding the (rather muted) full year reduction in 2005. A large part of the fall in the first quarter was explained by Barrick's closure of roughly two-thirds of the Placer Dome hedge book, which the major inherited as a consequence of its acquisition of the world's fifth largest producer. The transaction was officially completed on 15th March 2006 although Barrick had effectively gained control of Placer Dome in January 2006 when it acquired 81% of the outstanding common shares.

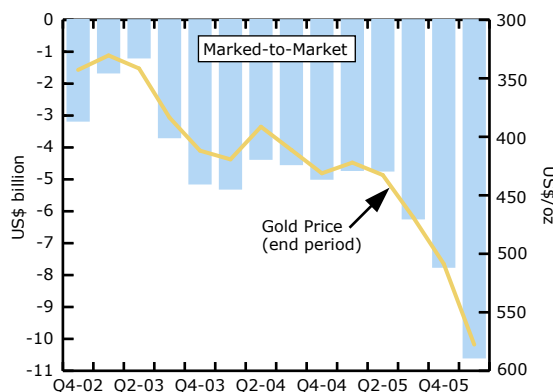
In the context of ongoing de-hedging, a further point worth making is the tendency by producers to simplify existing hedge cover. Recent examples include Barrick's

**Net Impact of Producer Hedging**      **Sensitivity of Fresh Options Hedging, Q1.06**





## Global Hedge Book Marked-to-Market



## Sensitivity of Q1 Options Book

Move in Volatility (%)	Move in Gold Price (\$/oz)				
	-200	-100	0	+100	+200
+4	-8.9	-10.9	-12.0	-12.4	-12.6
+2	-8.9	-11.0	-12.1	-12.5	-12.6
+1	-8.9	-11.0	-12.1	-12.5	-12.6
0	-8.9	-11.1	<b>-12.2</b>	-12.6	-12.6
-1	-8.9	-11.1	-12.2	-12.6	-12.6
-2	-9.0	-11.2	-12.3	-12.6	-12.7
-4	-9.1	-11.3	-12.3	-12.7	-12.7

**Note:** the delta-adjusted options book at end-Q1 was calculated at 12.2 Moz. The matrix above shows changes in the delta-adjusted volume under different gold prices and volatilities.

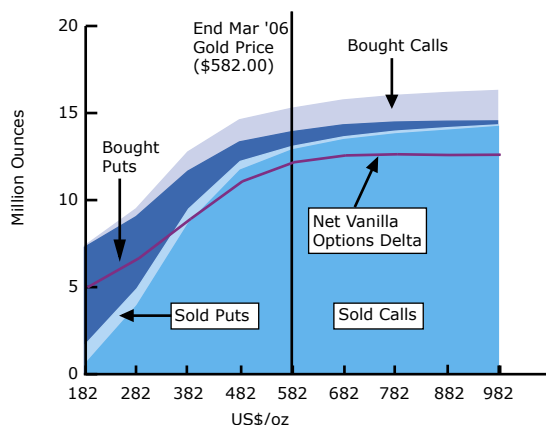
elimination of Placer Dome's barrier sold call options and Buenaventura's conversion of its derivatives into simple forward sales contracts. Over a longer time frame the trend is clearly illustrated by the change in the composition of the global book in nominal terms. The following figures represent the percentage of the total nominal hedge book by product at end-2002 with end-2005 figures in brackets: forwards 59% (69%), vanilla options 35% (28%) and non-vanilla options 6% (2.5%). Recently, and reflecting the above mentioned buy back and book restructure, the non-vanilla or so-called 'exotic options' were slashed from 2.5% of the total book at end-2005 to less than half a percent of the total at end-Q1 2006. The change takes the exotics close to extinction, a range of products not only widely used in the run up to the peak of hedging in the late 1990s but also blamed for triggering some of the industry's more dramatic corporate failures.

system. The use of Brady's Trinity is particularly relevant for the analysis of mining companies' options positions which allows for the accurate calculation of deltas for all trades, while also allowing for sophisticated sensitivity and scenario analysis. Some of the generated output is shown in the accompanying charts.

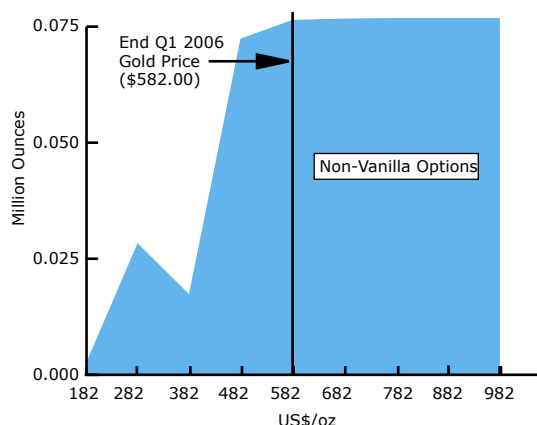
An important development in the GFMS analysis of the global hedge book has been the use of Brady's Trinity Risk Management and Trading system. Every quarter, GFMS enters each mining company's individual trades by instrument and by year of expiry into the Brady Trinity

The pair of graphs above and below illustrates the sensitivity of both the vanilla and non-vanilla options delta hedge position as at end-December 2005 and end-March 2006 against changes in the spot gold price. The former reacts in a smooth manner to changes in the gold price while the barrier delta hedge position, in contrast, does not respond in a linear manner to changes in the spot price; the irregular profile chiefly the result of volumes being 'knocked-out' or 'knocked-in' as price triggers are breached. As alluded to earlier, fresh hedging in recent months has largely been connected to conditions of loan facilities related to the development of new mines. To compare the structure of these contracts (put in place under much higher gold prices than the bulk of the existing positions) the sensitivity of fresh options hedging in the last three months to changes in the gold price is illustrated overleaf.

## Q1.06 Vanilla Options (Delta-Adjusted)

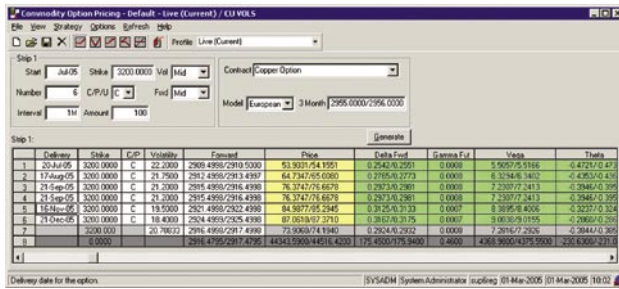


## Q1.06 Non-Vanilla Options (Delta-Adjusted)



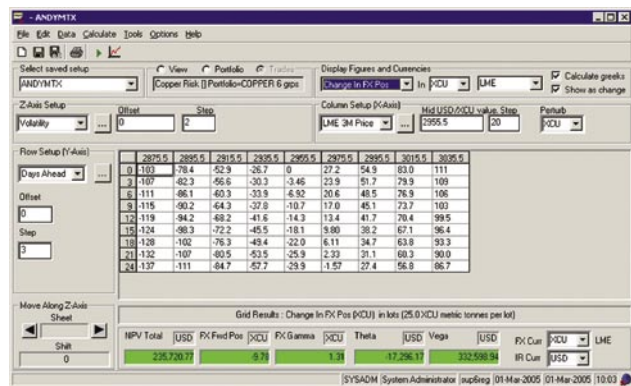
# The Trinity Solution

In a world where technology plays a central role in making life easier and helping to achieve our goals, Brady plc understands that you require technical solutions to help assess, analyse and respond accurately to information. Our solutions help you to achieve financial rewards in an increasingly competitive and dynamic trading environment.

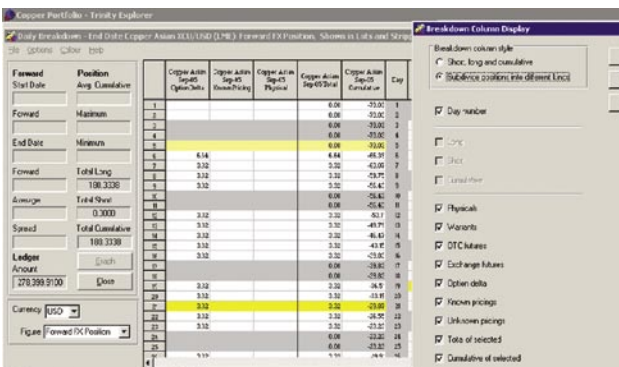


Option Strip Pricing

From a single trade to an entire portfolio, Matrix scenarios can be used to capture any 'what-if' analysis as the risk parameters are shocked;



3-D Matrix (price, time, vol)



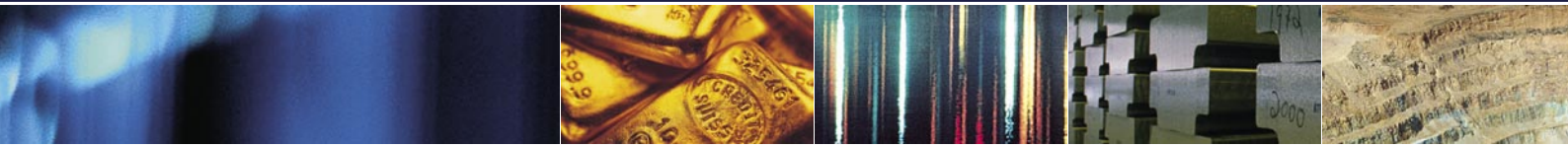
Commodity Card (and setup)

Being modular in design, our systems can be tailored to meet your individual trading requirements; from stand alone option pricing screens through to fully integrated multi-user network environments, encompassing all aspects required from an effective risk management tool, we will provide the solution for you.

The Trinity product is a solution for traders and risk managers providing an integrated environment for the dynamic analysis of market exposure and risk. The required information is presented in informative and easily accessible views and this is combined with the speed and accuracy required by the participants in today's markets.

The breakdown of any chosen exposure to daily resolution means risk and hedging decisions can be quantified;

Trinity enables all participants in the metals and mining sector to manage the purchase and sales of physical commodities, together with the complete coverage of financial market instruments and corporate treasury functions.



## About Brady plc

Founded in 1985, Brady is a Software Solution provider whose main product, Trinity, is targeted towards the Commercial and Corporate Treasury activities for Companies in the Metals and Mining Industry. Specialising in Physical Material Management, Financial Transaction Management, Treasury, Risk & Contract Management, Brady is acknowledged as a leading provider of Trading and Risk Management Software for the global marketplace, with products installed with producers, merchants, banks, brokers and end users around the globe.

we can't turn your **base metals** into **gold**  
but we can **stop** you turning your  
gold into base metals

software **solutions** for the metals  
industry; **understanding** operational **risk**  
and **managing** market exposure



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