



LBMA

Alchemist

The London Bullion Market Association

ISSUE 41

January 2006

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Photo courtesy Stephen Brady/Fiat Lux

Notes from the Underground – "In the middle of the tour we felt the mountain tremble with a sharp bang and we all looked nervously at the shift manager, whose face was blank."

So writes Johan Moeschlin in his account of a 2km-deep tour – complete with a 2.4 earthquake – of AngloGold Ashanti's Tau-ona mine. He was not alone: over 80 delegates at the LBMA's annual conference in Johannesburg signed on for one of five tours organised by the South African Chamber of Mines.

In addition to AngloGold Ashanti's Tau-ona and Mponeng mines, there were tours of Goldfield's Dreifontein, Anglo Platinum's open-pit Potgietersrust Platinum and Harmony's Randfontein Estates Cook 3 mines (pictured above).

For more views from below, see *An Hour in the Life of a Gold Miner*, beginning on page 8.

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Bulls, Bankers and Hard Rock Miners

*The 2005 LBMA Precious Metals Conference
Johannesburg, South Africa 13 – 15 November*

As one journalist noted, bulls ruled the room at the sixth annual LBMA Conference.

Provided with remote control voting machines at the start of the opening session, delegates were asked a series of questions on the type of company they represented, what they considered to be the most influential market factors, whether prices were near their peak and what the general direction would be going forward.

Optimism ran highest in gold. When asked whether the price would be nearest to \$350, \$450 or \$550 by the time of the next LBMA Conference – to be held in Montreux, Switzerland, in June 2006 –



From left to right: Debbie Sirkett, John Fairley,
Peter Smith, Belinda Elliott



From left to right: John Fornelli, Andre Flotron,
Ann-Marie Finney

half of those present went for the highest option. The bulls didn't have to wait long for a reward: within a month of the conference, the price had rallied \$70.

Sentiment was more cautious in the white metals. In both silver and platinum, the majority expected the price to be lower than where it was trading going into the event. With silver having fixed at \$7.77 on Monday, 50% were looking for a price of \$7, and with a morning fixing in platinum of \$969, 56% called for a price of \$900. In palladium, the majority expected the market to basically tread water, with 50% seeing \$225 as the most likely price.



The seven sessions that followed included plenary speeches, panel discussions and a debate. The opening session included two keynote speeches – the first from Tito Mboweni, Governor of the South African Central Bank, and the second from Kenneth Rogoff, Professor of Economics at Harvard University. An edited summary of Professor Rogoff's remarks can be found starting on page 5.

The second session focussed exclusively on South African issues. Workshops on jewellery and industrial demand featured after lunch. The final session on Monday was a revision of the 1997 LBMA Hedging Debate, followed by dinner at Summer Place in Hyde Park.

Tuesday opened to a panel discussion on the official sector and a plenary session on investment, while the final session touched on the private sector's role in African Development and media perceptions of the industry, before wrapping up with a review.

The Nays Have It

By far the most popular session – as noted on the feedback forms – was the hedging debate. In favour of the motion, "Hedging has a role to play for the gold-producing industry," were Paul Merrick from the Royal Bank of Canada, who compared hedging to homeowners' insurance, and Andy Smith of Ridgfield Capital, who likened shareholders to aliens. Speaking against the motion were Graham Birch of Merrill Lynch Investment Managers – who noted that he was one of the aliens – and Bernard Swanepoel of Harmony Gold, who drew similarities between gold dealers and drug pushers.

Unlike the 1997 event, in which 60% of those present voted in favour of the motion, sentiment today was overwhelmingly against hedging, rising from 81% at the start of the session to 88% once the arguments had been heard.



From left to right: Gunter Pleines, Nicole Pleines, Simon Weeks



Mahesh Sawant, Naresh Babu

Mining for Gold

An experience unique to Johannesburg was the opportunity to tour a mine. The offer, which was co-ordinated through the Chamber of Mines, drew an enthusiastic response from delegates of all market sectors, some of whom had never visited a deep underground mine. Comments and photos can be found in an article beginning on page 8. ■

Global Economic Outlook

By Kenneth Rogoff, Professor of Economics and Thomas D Cabot Professor of Public Policy, Harvard University

The following text is an edited summary of remarks made by Professor Rogoff at the LBMA Conference.

Greetings. Today I will be discussing the strengths, risks and vulnerabilities in the global economy, drawing to some extent on my academic research focuses on exchange rates, interest rates and international economics.

Let me be clear that, fundamentally, I see the long-term global outlook as extremely positive, thanks mainly to technology and globalisation. While I also see the short-term central scenario as very positive, I nevertheless see some serious vulnerabilities that make me worry that, in a few years, we might see the first really severe global recession in quite some time. Of course, we had mild recessions in 1991 and 2001, but today's imbalances, including the gaping United States' trade deficit, lopsided investment-driven growth in China, and weaknesses in some other areas of the global economy are sharply raising this risk that, when the present expansion comes to an end, as it inevitably will, the ensuing slowdown will be a much more serious one.

Yes, the very short term is indeed good; the end-year data from the US has been relentlessly positive so far. After years of near-zero saving, a collapse in US consumption might have been expected. But it seems that as long as the world is ready to lend American consumers as much money as they want, they'll just keep spending.

For now, China remains the 'energiser bunny' of the global economy. One would think Chinese growth would at least slow down at some point but, so far, this just has not happened – despite numerous economic, social and political vulnerabilities. This time, Japan just might have a sustainable recovery, though recent growth still rests a little bit too much on exports to China and the United States. Latin America is doing passably well (though it ought to be doing better). The euro area is the one spot that is still lagging.

Favourable Long-Term Trends

Before turning to risks and vulnerabilities, let's look at factors underpinning the favourable long-term trends, factors (above and beyond strong short-term growth and low real interest rates) that are helping to drive today's commodity price boom.

The first thing to note amongst the generally favourable longer-term issues is that there is a rising trend in global GDP, which largely reflects the expansion in China, but also faster growth in the US over the past ten years.

Another very positive factor is the long-term productivity trends. The US, of course, has enjoyed particularly strong productivity growth, and is continuing to do so. But productivity has been starting to pick up elsewhere as well. Inflation – everywhere in the world – is stunningly low. Back in 1992, there were 44 countries in the world that had inflation over 40%. This has almost disappeared, with the exception of a few small pockets. As I wrote in a my 2003 paper presented to the well known "Jackson Hole" conference, which Alan Greenspan and other central bank heads regularly attend, this low inflation owes itself in part to better central bank policy.

But globalisation has also played a huge role in making central banks' lives easier. Globalisation has raised productivity growth, enhanced flexibility and, I'm afraid, also weakened the position of workers. All these factors have combined to make the political economy of maintaining low inflation much easier today – for now – than it was back in the 1970s and 1980s.

Yet another piece of good news is that volatility is down virtually across the board. (We see this most dramatically in reduced spreads for high-risk emerging market bond debt.) Most importantly, output volatility has been going down since the mid-1980s. With the notable exception of Japan, this is the case across both large and developing countries, as well as emerging markets, even with the 1990s crises. Why is volatility down so much? Better central bank policy is a leading factor, but that's perhaps only a quarter of the reason. Deeper financial markets have also played a huge role in spreading risk to sectors of the economy than can best handle it. At least, that is how things have worked so far.

Risks and Vulnerabilities

These are the reasons I am very optimistic about the long-term scenario over the coming decades. However, there are also some significant risks over the next few years, the first being the security situation. Whatever gains there were after the end of the cold war have been reversed since 2000, with terrorist threats and flash points all over the world. Of course, one of gold's features is precisely its

attractive risk correlation compared to other assets in the event of political turbulence, so heightened security risks are not altogether bad for precious metals in general.

Relatedly, energy prices are another obvious concern. Thanks to the greater flexibility of the global economy and better monetary policy, oil shocks probably have only half the impact than they used to. But the effect is certainly not zero, either, and the potential volatility remains enormous. Another ongoing risk is China: I have already spoken of the investment imbalance, but there are many other problems, not least the huge and growing social pressures due to the inevitable inequities that accompany such rapid expansion. The financial sector is also a huge vulnerability.

Another question mark concerns interest rates and central bank policy. Will central banks overshoot in fighting inflation? This does not seem a great concern in the US, where the new Federal Reserve chairman, Ben Bernanke, brings in a reputation for being somewhat dovish, though over time markets have started to recognise that his calls on long-term interest rate levels – that they are being kept low by global market forces, not by the Fed – have been very savvy ones. Nevertheless, the fact that long-term real interest rates are still low by historical standards, and that there are altogether too many theories about why this should be (global savings glut, more predictable monetary policy, etc.) mean that there is a significant risk they will return to normal (2.5% real rates) faster than expected. One factor that could cause this fast rise is if global investment, which remains depressed despite high corporate profits, were to make a relatively sudden turnaround.

Another risk is that even if the overall expansion continues, we might still have what one might call a "mid-term" financial crisis. In 1987, we had the US stock market crash. In 1998, we had the Russian meltdown and the collapse of Long-Term Capital Management. It is not hard to imagine a major bump in the road, even in 2006.

Finally, there is the risk that the ever-bloated US current account deficit will finally collapse. It has not happened so far, but it is not hard to imagine triggers. A collapse in US housing prices – perhaps due to an unexpectedly rapid rise in long term rates – would do it, since a housing price collapse will likely lead to sharp drop-off in US consumption. True, people have been calling for a housing bust for a long time, and so far

there isn't any sign of it yet. Quality-adjusted housing prices were up 2.5% in the US in the second quarter. They only rose 0.5% in the third quarter, but that's still up. But the big test will come in the spring of 2006, which is peak season for the resale market, and generally the period when prices rise or fall the most sharply.

Correction: Not If, but When

Regardless of the trigger, it is hard to see the US current account continuing to rise as a share of US GDP forever. Incredibly, the US is taking up three-quarters of the total of all the surpluses being run in the world. US debt is just soaring off the charts. Yes, it's hard to call exactly when there will be an end, but end it must. And when it does, there is almost certainly going to be a very large correction in the dollar, especially against the Asian currencies.

This year that has not happened, thanks to the large and rising short-term interest differential between the US and the rest of the world. The US has become the carry trade, but that's not going to persist. This year's gains must eventually be erased and there is still the huge current account deficit to be reckoned with. The real question is how much the dollar has to move.

According to a series of studies I have co-authored with Maurice Obstfeld of the

University of California at Berkeley, if the current account deficit were to just halve from, say, 6% to 3%, Asian currencies would need to rise by 18% and non-Asian currencies by 10%. And there could be substantial overshooting (larger short-run movements.) Certainly, in 2006, the possibility of a dollar crash clearly outweighs the possibility of a further sharp rise in the dollar, even accounting for the fact the US economy is still much stronger than that of Europe or Japan. Central banks have to be concerned about the risk of having their portfolios so sharply concentrated in dollars. The plan has long been to continue diversifying into euro and other currencies. However, as part of this diversification process, I would not be at all surprised to see a sharp slowdown, and eventually even a reversal, of net central bank gold sales.

In conclusion, my baseline is for continued strong growth in both the short and long run, but looking out to 2008 and 2009, the risks of a really big global recession are definitely rising, and the question is: when is that going to start playing into the markets? When are we going to start seeing larger spreads? Nevertheless, though commodity prices will always tend to have large pro-cyclical price swings, the continuing process of globalisation and technological advance in the world

economy today implies that the long run trajectory has to be considered very strong overall. ■



Kenneth Rogoff, *Thomas D Cabot Professor of Public Policy and Professor of Economics at Harvard University, is one of the world's leading experts on global economic issues. His treatise, Foundations of International*

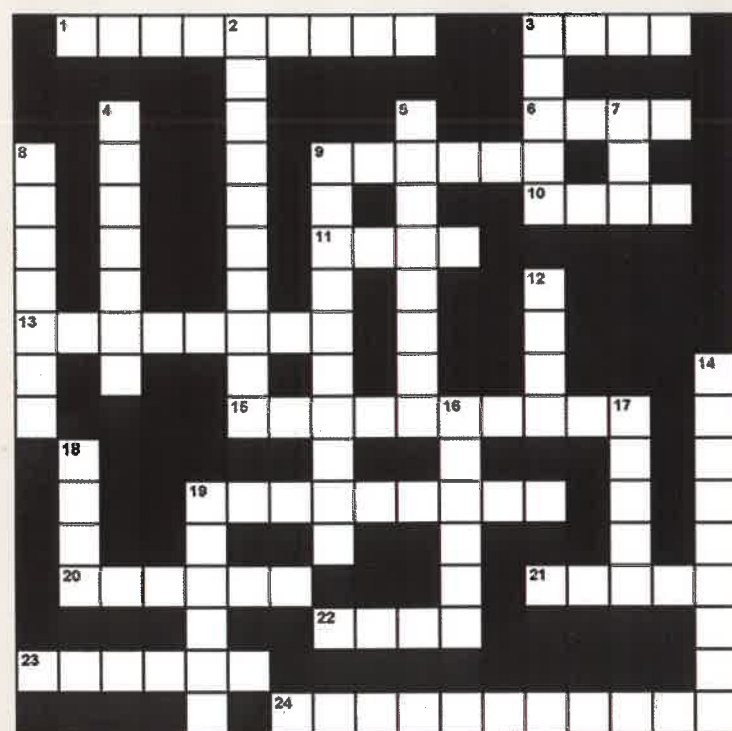
Macroeconomics, is the standard text used in graduate courses throughout the world. He has served as Chief Economist and Director of Research at the International Monetary Fund, and is a former Director of the Center for International Development at Harvard.

An elected member of the American Academy of Arts and Sciences, he is also a member of the Council on Foreign Relations and the Trilateral Commission. He holds the life title of international grandmaster of chess.

For more detailed biographical information, including full cv and editorial writings, visit <http://post.economics.harvard.edu/faculty/rogoff/rogoff.html>.

LBMA New Year Crossword

All questions or answers relate (often tenuously) to gold or silver. The solution will be posted on the LBMA website on 30 January. A bottle of champagne will be awarded to the first person to send a correct solution to the LBMA (by post, fax or carrier pigeon.)



Across

- 1 Author of the Deserted Village (9)
- 3 Alchemical symbol for silver (4)
- 6 See 12 down
- 9 Plata in Spain (5)
- 10 (with 18 down) A gold and silver exchange that does not trade silver (4,4)
- 11 (with 16 down) He fired silver bullets (4,6)
- 13 Gas used in the Miller process for refining gold (8)
- 15 Nymphs guarding the golden apples (10)
- 19 Small British bird with bright red face and yellow wing patch (9)
- 20 He wanted his "Precious" in the Lord of the Rings (6)
- 21 Maybe this is a black and white Chinese gold coin (5)
- 22 See 19 down
- 23 The modern country where the first gold coins were made (6)
- 24 Another name for the messenger of the gods (11)

Down

- 2 Wingless insect found in kitchens and libraries (10)
- 3 Original Christmas gift (5)
- 4 People of the Golden Horde (7)
- 5 They rushed here for gold in 1896 (8)
- 7 Alchemical symbol for gold (3)
- 8 This might be used for drinking Champagne in Cheltenham (4,3)
- 9 Cut of beef from the rump (10)
- 12 (with 6 across) Charlie Chaplin trying to get rich (4,4)
- 14 Republican nominee for the US presidency in 1964 (9)
- 16 See 11 across
- 17 Mark Spitz's gold medal tally at the 1972 Olympics (5)
- 18 See 10 across
- 19 (with 22 across) Nickname of a big golfer (6,4)

Compiled by Yarrum Trawets: inspired by Ross Norman.

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An Hour in the Life of a Gold Miner

LBMA Conference Delegates Tour South African Mines

Visit a South African mine and you will never look at a piece of jewellery the same way again.

In addition to the normal activities at an LBMA Conference, delegates at this year's event had an unusual option: a brief taste of life in an underground or open-pit mine. Donning the same clothing and equipment worn by the miners themselves, delegates travelled to the working face – by high-speed lift, narrow-gauge railway and finally on foot, picking their way over the rubble of mine ore, wading through standing water, or crawling one by one on all fours through narrow passageways. Some even had the unsettling experience of seismic activity whilst underground.

Interest in the tours, which were made possible by the Chamber of Mines, came from delegates in a wide variety of professions: marketing, trading, shipping, assaying, fabrication, journalism, education. Over 80 delegates signed up to visit one of five mines: AngloGold Ashanti's Tau-ona and Mponeng, Goldfields' Driefontein, Harmony's Randfontein Estates Cook 3 and Anglo Platinum's Potgietersrust Platinum. The perspectives of a few follow.



From left to right: Naresh Babu, Roland Muller, James Oliver

Johan Moeschlin Sveriges Riksbank Tau-ona Mine

The current depth of the mine is 3500m, but we were to go down only 2000m. The visit started off with a thorough introduction to gold mining and the associated risks. After the presentation we had to sign a paper giving up all rights to hold the company liable in case of injury, exposure to radiation or death. We had no problem with this, since we expected a tourists' mine tour. After all, we were VIPs – central bankers, investment bankers, etc.

Then we were asked to take off all our clothes, including underwear, and put on the same clothes worn by the miners. Dressed up with a hard hat, lamp, mask and gloves,

Drilling at Mponeng Mine. Photo courtesy AngloGold Ashanti

we went down into the mineshaft in a small open elevator. You might think going down 2km into the ground would take a while, but travelling at 62km/h, it was quite a quick ride. With the wind blowing hard we could feel the temperature increasing quickly on the way down. They told us that for every 100m the temperature increases one degree Celsius. That's why they need cooling in order to keep the recommended 28.5 C. With humidity close to 100%, this feels a lot hotter.

The tour was anything but touristy. We had to crawl in tight and steep caves where standing was impossible. It was dark, dusty and humid. Most people were sweating profusely, and some looked very pale and nervous. We were shown to the stope face where the workers were exploring the ore with drills. Some were sawing tree trunks to be used for support: a few of the old trunks supporting the cave had collapsed, which looked dangerous indeed.

In the middle of the tour we felt the mountain tremble with a sharp bang and we all looked nervously at the shift manager, whose face was blank. Personally, I thought the cave was going to collapse. When we returned above ground, there were two ambulances at the entrance. We were told that they had had an earthquake (seismic activity) of 2.4 on the

Richter scale just 700m below our position. This is common in a mine and is actually a good sign of the mountain releasing some tension. Four miners were injured in the quake, but the guide just shrugged his shoulders – this happens all the time, he said.

We were all soaked in sweat after the tour, but glad to have survived. Imagine working here full time day after day. I guess you get used to it. I promised myself to think back on this visit when I'm having a bad day in the office. After a shower we had a good lunch. While eating, some read the commemorative plaques for the miners killed on duty. They lose a few every year.

Ross Norman TheBullionDesk.com Tau-ona Mine

Before entering the mine, we were given a very comprehensive safety lecture. I confess to having an appallingly short attention span: I rarely listen all the way through pre-flight safety drills. Suited and booted the twelve of us – central bankers, traders, shippers, an assayer and a gold dot com-er – then headed for the mineshaft. It struck me as funny how a uniform and a common purpose suddenly drew our group together, and the atmosphere became hale and hearty.

One hour's yomping and we drew near the mine face, where we had a further safety chat – hmmm. We descended deeper into the mine, down increasingly smaller, narrower, hotter tunnels. Mine etiquette suggests you do not shine your helmet lamp into other people's faces; therefore we crouched before crawling the final few metres to where the drilling was taking place.

A short, sharp seismic shock directly underneath us and 12 lamps shone into the superintendent's face, each anxiously examining him to determine whether that was normal. His initial response is unprintable, but left us with the impression that whilst such things occur, that one was particularly close to our position. After an hour or two we emerged into the sunlight. Heading for the showers we observed a small collection of ambulances and were told that four miners had been hospitalised by that same seismic shock.

In the wrapping up session we were given the opportunity for further questions. I was tempted to ask one about safety procedures but prudently

Miners shoring the roof at Mponeng Mine
Photo courtesy John Robinson/South Photographs



Peter Neumann, JP Morgan Chase, outside the entrance to Harmony Gold's Randfontein Estates Cook 3

decided against it, lest my colleagues think that I had not been paying full attention at the outset. Perish that thought.

Colin Griffith – Dubai Metals & Commodities Centre Mponeng Mine

For those of us who spend our working lives in "paper" gold, a visit underground occasionally is essential to remind us of the "real" world. I have visited a few mines during my time in the industry, but not for over 10 years. The change that is immediately apparent during that time is the vast improvement in safety precautions, which is highlighted by the

substantial reduction in the number of workers injured or killed whilst working in this precarious environment. Despite the improved working conditions, I am sure everyone on the visit considered it a special experience – but will not be applying for a full-time role working underground.

You are also reminded of the vast amount of people, work and resources required to produce the small amounts of gold that eventually make their way through the paper market and end up ultimately being sold as jewellery or stored in a vault as an asset or collateral against a transaction.

Congratulations to the LBMA for taking us back to the real world.

Edel Tully Trinity College, Dublin Driefontein Mine

I had no idea what to expect from the visit to the mine, but suffice to say that I didn't expect to find myself 2.5 km below ground drilling a blast hole on a Wednesday morning.

After a briefing in the HQ, we were transported to our destination and everyone was supplied with the required safety equipment. Initially we were deposited over 2k underground by a huge lift transport. Amazingly, the descent took just over four minutes. After a short hike – in our very fetching white jumpsuits – we had a 30-minute train journey to our drop-off point, where the temperature was noticeably higher.

After another hike that encompassed a 100m drop with ever-increasing temperatures, we finally arrived at the mine face. Crouching on our hunkers, we were allowed to scramble in groups of five to have a look at the gold reef and watch the miners in action.



As an unexpected bonus we were allowed to actually use one of the drills for a few moments. As a souvenir I was given a few small pieces of rock, containing very minute pieces of gold. After all that, we then had to turn around and come back the same route – not any easy task for this tired bunch.

When we finally resurfaced, our weary group was treated to a tour of the refinery and, lastly, on to a well deserved shower! From start to finish it was a very educational experience, and many thanks to the LBMA for organising it.

Nick Speyer
Uno A Erre
Mponeng Mine

One doesn't generally think about how difficult it really is to mine gold – all the work, capital, investment. Here is an interesting perspective: my company employs about 450 people and we use about 15 to 18 tonnes of gold a year in our jewellery manufacturing. At the mine I visited, they employ 6,000 people and they extract about 15 tonnes of gold a year. So you could say that it takes 6,000 people to supply my company for one year. To make one ring, they had to shift perhaps one or two tonnes of rock.

David Holmes
Royal Bank of Canada
Driefontein Mine

Having visited the face, I came away with the overwhelming feeling that gold is still too cheap! I take my hat and lamp off to these guys. I will never complain about my working conditions again.

Gillian Moncur
CRU International
Potgietersrust Mine

The visit made for a long day, as it's a four-hour drive to Mokopane (formerly called Potgietersrust). Production comes from two open pits, Sandsloot (the older pit, where mining is almost finished) and Zwartfontein South. The mine opened in 1992 and has had one fatality in its life. Reserves for opencast mining will last around 50 years, but they are looking at going underground, which would extend the life of the mine to hundreds of years.

This was my first visit to an opencast mine and I could not believe how neat and tidy the whole operation was. The pit operates 24 hours a day, seven days a week and 365 days a year. Roughly 1,700 people work on the mine, which is a lot lower than other underground SA mines. Teams have targets and wages can be quite high if these are met.

Trucks and machinery are expensive and are well maintained. The trucks are massive, carrying 120-tonne and 180-tonne loads. The most impressive part of the tour was the truck

driver-training simulator, where new drivers are trained. Drivers have to be prepared for all eventualities, including rock falls, since the mine operates in all weather conditions.

An important part of the mine plan is biodiversity and sustainability – increasingly important issues for mines, as banks have signed up to agreements that make strict requirements for lending and finance. PPRust recycles everything that it can and sells off the collected cans, plastic etc. The only items they cannot find a market for are the old tires, which are stockpiled around the mine as walls and breaks. They will not sell them to the local market, as buying back one of their own as a retread has caught them. In fact, the lack of new tires in mining is a big problem internationally. The mining boom has come after years of slowdown, and tire manufacturers had diverted production to smaller vehicles.

A new pit is planned, which will require the relocation of a village. The mine has purchased ancestral land from the government for this, and the villagers will be given better houses as well as electricity and water.

PPRust is working with the local communities in other ways. They have bought other land on a like-for-like basis near the Waterberg Mountains, which is being developed into a game park that will eventually be handed over to and run by the local community.

Prof. Age F.P. Bakker
De Nederlandsche Bank
Driefontein Mine

The visit to the mine was a once-in-a-lifetime experience. It was delightfully irresponsible to send a bunch of market makers, producers and central bankers down a mine that had just been hit by an earthquake. But then, the miners have to go down each shift as well, and it was a thrill to crawl next to them, drills at hand, and see the raw stuff we had been talking about in our conference. I was impressed by the professionalism of the Goldfields staff and felt safe throughout. ■

Below: Delegates being transported in a giraffe - a narrow-gauge railway - to the working face of Harmony's Cook 3 shaft

Bottom: The tour group at the entrance to Driefontein



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Of Bandwagons and Lobster Pots

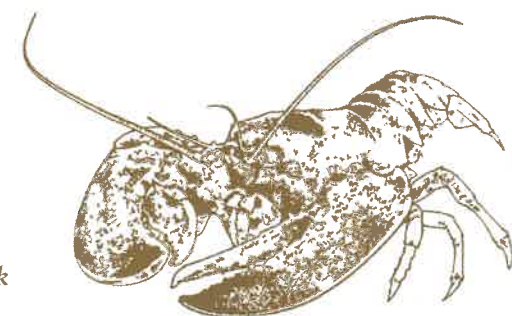
Central Banks and Gold

By Jonathan Spall, Director, Commodities, Barclays Capital

It is not a particularly enviable task to write an article about central bank activity in gold that will only be seen a mere six weeks after I have typed the final full stop. Indeed, it is fraught with the chance to slip up badly by asserting strongly that a particular event will never happen – only to see such an announcement appear in the press in the intervening period. Notwithstanding the risks, I am delighted to have the opportunity to, I hope, put the record straight.

Sitting at my desk at the end of November, the gold market is making yet another 18-year high, and it seems as though journalists will need to keep cutting and pasting the story for some time to come – at least until we hit 23-year highs before moving ever upward. Indeed, Pierre Lassonde of Newmont was quoted quite recently as saying to Australian television that gold will be trading USD1,000 within five to seven years. While Reuters did not carry the rationale behind this forecast, the market seems to be talking about little else other than central bank buying, and this is likely to have been one of the factors that drove Mr Lassonde's prediction.

While this story does pop up every now and then, it has assumed much wider credence this year – probably dating back to when the



French and then the Dutch rejected the European Constitution at the end of May. This was the signal for a variety of commentators to determine that the euro was entering its death throes, and consequently a search was launched for a substitute reserve currency. Added to this were rumours that European central banks had reacted to the referenda by pulling their gold sales and, in some instances, were repurchasing metal that had previously been sold. Just to add fuel to the flames, a number of large investors were confidently asserting that both the ECB and the Fed had been talking to their counterparts at the People's Bank of China to urge them not to buy any more euro- and USD-denominated debt, as both institutions were keen to see longer term rates rise. Instead, so the story went, the Chinese were being told to buy gold.

Clearly these talks had an effect, with gold currently trading at USD498 and EUR425 – as against sub-USD420 and a bargain EUR336 per ounce when these stories first surfaced at the start of June. Certainly the influential Gartman newsletter was in no doubt. Dennis Gartman pointed out the disparity between the gold holdings of Asian central banks (under 2%) against “the large nations of Europe...” holding “on average, 51.6% of their reserves in gold...” This led him to conclude that, “If we were the Governor of the People's Bank of China or the Reserve Bank of India or the Bank of Japan, we would know what we would be doing: we would be quietly, but consistently, putting EUR and USD reserves on the offer and we would be, quietly and consistently, on the bid for gold.”

Clearly the governors heard his call. Or at least the supposition of a large part of the market is that they did/will. However, while Mr Gartman makes no comment as to the proportion that gold should constitute of these countries' reserves, one would have to assume that it is in excess of 10% – anything less and

gold fails any sort of test at replacing the euro and, indeed, at small percentages it has no claim to be a diversifier either. So, on the assumption that these three nations add a further 10% of gold to their reserves, we are left with the following calculation:

International Reserves

	SDRs mm	USD mm
China	491,507	697,733
India	92,250	130,956
Japan	571,731	811,617

In a nutshell, these countries have USD1.64 trillion in reserves among them. An allocation of 10% of this to gold would mean an investment of some USD164 billion, or 328 million ounces of gold at a modest USD500 per ounce – certainly enough to get the price considerably higher, since this is in excess of 10,000 tonnes of gold. Alternatively, this number equates to roughly four years of global production, or over 20 years of buying if these three nations chose to accumulate at the same speed that the European central banks are choosing to sell.

The Jo-Burg Bandwagon Grows Crowded

Central banks are renowned for their long-term horizons, but even they would balk at a position that took some 20 years to put on – let alone how long it would take to sell it again. In all fairness to Dennis Gartman, he did reprint my argument, but has subsequently decided that the “second tier” central banks might decide to buy gold – an argument that was considerably advanced by press reports of the LBMA Conference in Johannesburg.

The bandwagon started to roll with the keynote speaker, Harvard Professor Kenneth Rogoff, making somewhat similar remarks to those discussed earlier with his assertion that central banks might have reasons to buy gold. But there was no discussion of either the amounts or the market's limitations in dealing with such large quantities.

Tito Mboweni, governor of South African Reserve Bank, made what seemed to me a fairly innocuous remark about the desirability of gold reserves before pointing out that South Africa has plenty of the metal below ground – if I remember correctly, a rationale similar to that advanced by the Reserve Bank of Australia when they sold gold in 1997. Inevitably,

though, the press reports stated that South Africa was in favour of adding to its holdings.

However, the real petrol was added by Maria Gueguina, Head of Foreign Exchange Reserve Management for the Central Bank of Russia. In her speech to the Conference, Ms Gueguina looked at the composition of the bank's reserves from a theoretical point of view as to the optimal portfolio.

She said: “Calculations of the Central Bank of Russia... showed that about 10% of gold in reserves would be appropriate with regard for special requirements... Today the proportion of gold in our reserves is about 5% in market valuation...”

Buying the Arguments vs Buying the Metal

Certainly this appears to be close to confirmation that the Central Bank of Russia needs to buy some 500 tonnes of gold – an impression reinforced by Central Bank Chairman Sergei Ignatyev, who said that the “question is being discussed” (Reuters). Clearly, though, the idea is receiving serious consideration since “Russian President Vladimir Putin threw his weight on Tuesday (22 November) behind the idea of boosting the share of gold in the central bank's fast-growing reserves,” as Reuters reported it. The news agency also pointed out that the comments were made during a visit to the Far Eastern gold mining hub of Magadan, and theorised that the remarks “appeared aimed at Russia's ailing mining industry”.

In my opinion it is this that is the crucial remark – and one that seems to have got lost in the general chatter. On a more base level it would seem strange for a potential buyer of gold to announce their plans to the market in advance of any actual buying – one would assume that any country considering adding to its reserves would turn to domestic production in the first instance anyway. Indeed, on 24 November First Deputy Chairman Alexei Ulyukayev of the Central Bank of Russia was reported by Reuters as saying that they have no short-term plans to increase the weighting of gold in its reserves and, “Doubling the share of gold has not been discussed, either by the expert community or by the agencies responsible for such decisions.”

So if the Chinese and Russians are apparently unlikely to be buying imminently, then it must be the governments of the Middle East that will be stocking up on gold. Certainly they will be looking for a home for the windfall petrodollars, and clearly the region's largest exporter will be at the front of the queue. Except that Mr Muhammad Al-Jasser, Vice Governor of the Saudi Arabian Monetary Agency, was quoted by Reuters in May 2004 as saying “Central banks from industrial countries are afraid of a collapse in the value of the mountain of gold that they have. They would otherwise sell gold faster

because it doesn't give them returns.” So unless there has been a major about face, it does not look as though Saudi Arabia has much interest either.

Welcome to the Lobster Pot

Then which central banks are buying gold? While there is plenty of noise from the markets, there seem to be few obvious candidates. Essentially the problem that gold has is that the factor that used to be an attribute – its relative scarcity – is now a hindrance. There is not enough metal, and certainly not enough liquidity, for gold to assume a major role in central bank reserve management. Moreover, the emotion that gold engenders works against it as well, since any sale is subject to scrutiny in the way that no other asset class is – a lobster pot approach where you can get in, albeit in limited size, but it is nearly impossible to get out again.

While I would not rule out small-scale purchases by central banks, I cannot see this becoming a trend, and certainly those countries that find themselves overweight in gold are under no illusions that they are witnessing an attractive level to sell rather than a sea change in the metal's role. So that on a week where the press continued to speculate as to which central bank might be buying, the ECB announced, to little attention, that the “decrease of EUR226 million in gold and gold receivables reflected sales of gold by three Eurosystem central banks...” So while the market continues to agonise on who the buyers might be, the sellers are continuing to offload metal.

Perhaps by the time this article is published, there might have been a major policy announcement or the news of a completed buying programme. However, until I see this I continue to believe that the market is long of metal and looking for a reason to keep believing that the price will continue to move up. This post-rationalisation has the ability to keep the price up in the short term, but for there to be a true bull market, the price needs long-term holders – not simply opportunistic buying in advance of supposed investment by central banks. ■



Jonathan Spall is responsible for the Barclays Capital's commodity relationships with central banks and governments on a global basis. He has over 20 years experience in related markets including working for nine years in Asia/Pacific. He joined Barclays Capital in September 2004.

Prior to his current position, he worked for ten years at Deutsche Bank, most recently as a London-based Director with responsibility for Official Sector Marketing (Commodities) and Head of Metals Marketing (Europe/Africa). He earlier worked for Deutsche Bank in Hong Kong as Head of Metals for Asia Pacific and in Sydney as a Senior Associate Director.

The views and recommendations in this communication are typically the short term trading views of the desk and are not necessarily the official views of the Research Department

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\$1,000 for 31 Grams of Platinum: No Panic, but Raised Eyebrows

Heraeus's First PGM Forum for Industrial End Users

By Wolfgang Wrzesniok-Rossbach, Head of Sales & Marketing, Heraeus Metallhandelsgesellschaft m.b.H.

It is no secret that platinum group metals are scarce goods these days. Only 205 tonnes of newly mined platinum, 235 tons of palladium and 23 tons of rhodium reach the international markets each year. Their limitations in supply contrast sharply with their growing popularity in industrial uses. The precious white metals play a vital role in most modern industries – automotive, glass and chemical – either because they form part of the end product or are bound into the production process. Their attraction is not limited to industry: during the last decade, pgms have found increasing popularity with jewellery buyers and investors as well.

It is therefore no surprise that the combination of global economic growth, increasing investor interest and restrictions on supply led to a massive surge in price for pgms and other metals in recent months. Platinum is a leading example, reaching 25-year highs above \$1,000 an ounce at the beginning of December. The rhodium price doubled within the last 12 months to more than \$3,000, and palladium

gained nearly 40 percent to over \$270 in just eight weeks.

This development is unprecedented over the last two decades. The fact that it has not caused sheer panic amongst industrial end-users is the result of the timely introduction of corporate hedging policies during 2003 and 2004. During those years, many major companies secured prices as far out as 2006; hence they are still relatively comfortable – for the time being. But with the hedges now gradually reaching maturity, interest in future developments in the platinum price is certainly growing amongst industrial end-users.

To address their need for first-hand information, Heraeus, the German-based precious metals refiner and fabricator, invited industrial clients to its first PGM Forum, which took place in Hanau, Germany on Thanksgiving Day, 24 November.

About 80 participants from nearly 50 companies accepted the invitation to discuss the latest developments in the pgm markets. The six presentations held covered a wide variety of topics, ranging from production and new uses of pgms to the development of the global economy and the potential impact on prices. Summaries of the main points of the presentations follow.



Peter von Zahn: Developments in the South African Mining Industry

Opening remarks from Dr Roland Gerner, Managing Director of W.C. Heraeus, were followed by a presentation from Peter von Zahn, Branch Manager of Anglo Platinum's

subsidiary RPM in Zug, who outlined the latest developments in the South African mining industry.

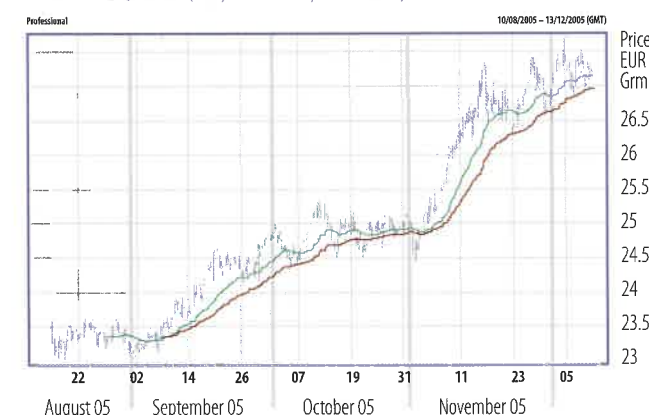
South Africa continues to be a major supplier of pgms, currently producing about 77 percent of the annual global platinum output. The country holds about 63 percent of reported worldwide platinum reserves and resources; together with neighbouring Zimbabwe that number increases even more to 80 percent. Of the South African reserves and resources, 73% are owned by Anglo Platinum, 13% by Impala, 9% by Lonmin, and 2% by Aquarius and 1 % each by Southern Platinum and Northam.

After announcing expansion plans in May 2000, the South African industry faced a number of challenges, which included the dollar price of pgms – particularly the initially low palladium and rhodium prices – the highly volatile nature of the rand exchange rate and a producer price inflation of 33.7 percent in just four years. Operating margins declined between 2000 and 2004, from 60.3 to 27.8 percent, leading to severe restrictions on cash flows.

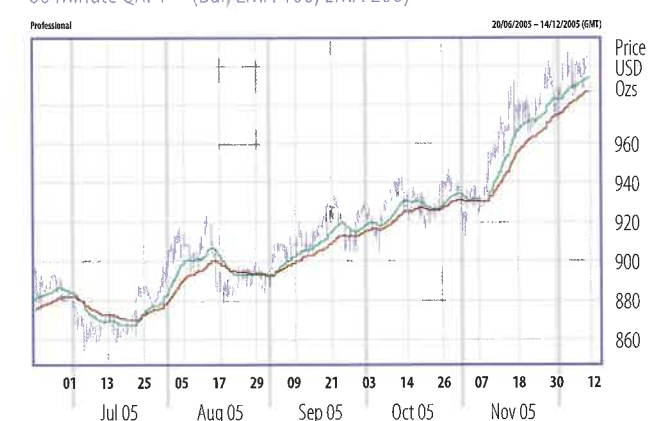
These constraints necessitated the revision of the previously published expansion schedule. For Anglo Platinum alone that meant a reduction in the planned output for 2006 from the initial target of 3.5 Moz to 2.7 – 2.8 Moz, which was announced in February 2005. The guideline for Anglo Platinum remains the expansion of production in line with increasing global demand while maintaining the flexibility to be able to react to new trends on the consumption side.

When describing the political challenges for the mining industry, von Zahn emphasised that Anglo Platinum is firmly committed to a sustainable BEE. There are ongoing discussions about the Precious Metals Bill, which is intended to provide greater downstream beneficiation opportunities and assist the government's implementation of its broad-based socioeconomic empowerment charter. However, a number of amendments proposed by the mining industry have been accepted and the Bill is now likely to be enacted early in 2006.

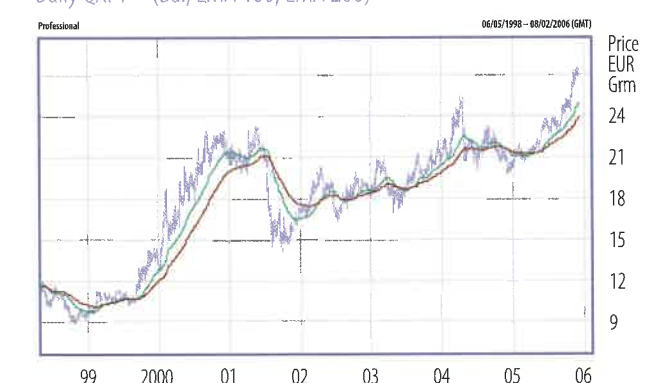
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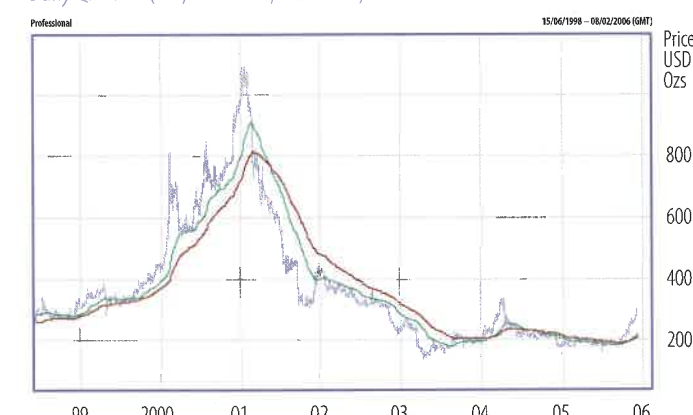
60 Minute QXPT= (Bar, EMA 100, EMA 200)



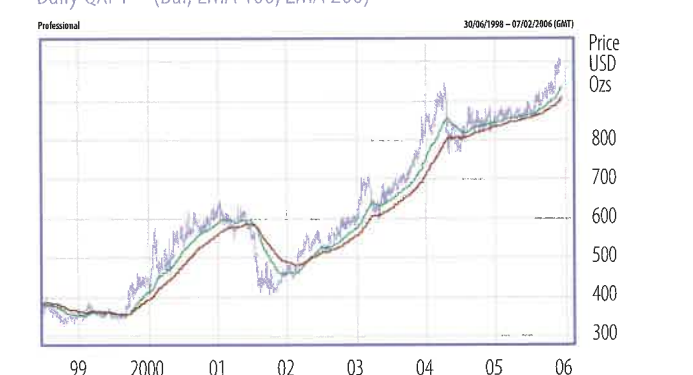
Daily QXPT= (Bar, EMA 100, EMA 200)



Daily QXPD= (Bar, EMA 100, EMA 200)



Daily QXPT= (Bar, EMA 100, EMA 200)



Data courtesy: Reuters

Dr Martin Weigert: Platinum Usage in Magnetic Data Storage

The second speaker, Dr Martin Weigert of Heraeus's Thin Film Materials Division, covered an area in which platinum usage has seen tremendous growth in recent years, in particular in terms of the amount of metal used in the production process.

Magnetic rigid discs have been the workhorses in computer data storage for the last 20 years. Due to their high-speed access and low cost per bit, rigid discs have defended their leading position in spite of the challenges from a wide range of competing technologies.

These discs are coated with thin film layer packages of thicknesses in the range of less than 100 nanometres (the width of a virus; a nanometre is one billionth of a metre). The core of this layer package is a cobalt-alloy thin film of just 10 nm in thickness. The use of cobalt is very important here, because its magnetic anisotropy (the transmission speed, which varies depending on the direction of measurement) enables the safe storage of written data over a long period of time.

The permanent goal of the data storage industry remains miniaturisation combined with increased storage density, which is why



platinum was introduced as an element into the cobalt alloys in the early 90s. The white metal dramatically improves the magnetic behaviour, so that much smaller and more stable bits can be written. In the late 90s ruthenium was also introduced into the storage layer systems.

All layers inside the rigid discs are produced by using a sputtering process, which is a plasma-assisted vacuum deposition

technique for extremely thin films. Heraeus's part in this field is the development and production of the raw materials – the sputter targets – for these coating processes. Although the actual consumption of platinum is not very high, the sputter target technology requires quite remarkable amounts of platinum, which are permanently bound in the loop of target and rigid disc production.

The permanent cost decrease and storage density improvements in the rigid disc industry have recently opened additional markets for this technology. Magnetic discs are nowadays found in consumer products such as DVD recorders, MP3 players, camcorders and mobile phones. According to Weigert, further growth of the demand for platinum in this field is therefore to be expected.

3,000 euros. Research is under way to reduce that amount of platinum to just 12 grams, but compared to the cost for pgms currently contained in catalytic converters, even the reduced amount would still be considerably higher.

It is more likely that fuel cells will initially only be introduced into portable solutions, such as laptops and digital video cameras or in form of APUs (auxiliary power units). Due to the smaller size of these items, the platinum loadings would be much smaller.

One of the conclusions that could therefore be drawn from this presentation was that fuel cells could probably be ignored in the coming years in terms of their effect on global platinum consumption: an outcome the beleaguered industrial consumers of platinum could certainly live with.

Dr Thorsten Polleit: Commodity Prices Will Remain High

The high hopes of industrial end-users for a potential fall in commodity prices (and platinum in particular) were immediately dampened when the next speaker, Dr Thorsten Polleit, chief economist of Barclays Capital in Germany, presented his outlook for the global economic situation. He described the move of the global economy towards a "new world order", characterised by new emerging economic and political powers, growing competition of economic systems, ageing populations and a potential "Clash of Civilisations".

According to Polleit, the resulting environment of higher inflation, high government debt and a continuing huge US trade deficit would plant the seeds of an ongoing march towards a higher gold price, potentially taking other precious metals, including the pgms, with it.

Hans-Günter Ritter and Wolfgang Wrzesniok-Rossbach: The Price Outlook for PGMs in 2006 and Ways of Hedging Price and Interest Rate Risk in the Current Environment

Hans-Günter Ritter, managing director of Heraeus Metallhandelsgesellschaft, then presented his company's forecast for the platinum metals prices for 2006. He agreed with Polleit that a positive environment for commodities would persist, although in Heraeus's opinion, the outlook for individual precious metals varies.

The platinum price could well continue its rise in early 2006, and there is a good chance that it will test and even exceed the 1980 high of \$1,047.50 an ounce. Looking further out, Heraeus is much less optimistic – on the back of a reduction in demand from the automotive sector, largely due to the partial substitution of platinum with palladium in the catalytic

converters of diesel-powered cars.

This process will have a slow start, but once fully implemented it could result in a reduction of demand by the European car industry by several hundred thousand ounces per annum. Other potentially negative factors include the ongoing and perhaps even accelerating expansion of South African production and the already high speculative long positions in the market.

While initially a potential setback towards the area between \$920 and \$950 per ounce might already prove to be attractive to lock in prices on a forward basis, Heraeus would not rule out that the low later in 2006 could lie somewhere around \$850 an ounce.

The situation seems brighter for palladium. The increase in jewellery demand in China, which was reported by Johnson Matthey in November, the expected surge in demand from the automotive and electronic sectors and the rediscovery of the metal by investors could ultimately lead to prices ranging as high as \$350 an ounce next year.

Sceptics refer to the fact that there is still metal waiting to be sold from undisclosed Russian official reserves, but since the numbers mentioned by analysts in that context range between nearly nil and a maximum of one year's production, the threat to the price increase seems somewhat limited. After all, the gold price has doubled in a few years' time and central banks are sitting on 15 years of mine production.

Given the overwhelming interest of the audience in lower prices, the meeting therefore ended with mixed feelings. But

everybody taking part agreed on one thing for 2006: that this event should be held again. ■



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He was previously a Director for Dresdner Bank AG and its investment banking arm, Dresdner Kleinwort Wasserstein. He spent 21 years with Dresdner in Frankfurt and Singapore as precious metals and derivatives trader and, later, as head of the precious metals and commodities desk in Frankfurt.



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Dr Hartmut Wendt: Will Fuel Cell Usage in Cars Ever Come?

Another field that has been repeatedly mentioned in the context of future growth in the industrial usage of platinum is fuel cells. Prof. Dr. Hartmut Wendt, one of the leading experts on fuel cells in Germany, gave an update on the current status of the development of the usage of fuel cells in cars. His remarks were probably good news for the industrial platinum users in the audience, as he pointed out that, in his opinion, the current likelihood of the introduction of fuel cells in cars is actually decreasing. According to Wendt, some car producers have already scaled back their original plans, although there had been some progress in the past years in terms of solving existing technical problems.

The biggest challenge facing the introduction of fuel cells by the automotive industry is their cost, which is currently about 5,000 euro/kw. If methanol rather than hydrogen is used as the fuel, the cost of the necessary reformer is even higher – and is in addition to the cost of the cell. By comparison, a conventional engine currently costs between 150 and 200 euro/Kw. Platinum is not actually in itself responsible for the extremely high cost, even though a 40 Kw fuel cell currently still contains nearly four ounces of the metal, generating a bill of up to

Good as Gold. And Silver.

An Update on Proactive Monitoring

By Douglas Beadle, Consultant, LBMA

The ongoing Proactive Monitoring programme commenced in the summer of 2004. Round four has now been completed, with the assay results of the refiner dip samples relating to round five due very shortly.

In the first four rounds, seventeen gold-and-silver, twelve silver-only and two gold-only refiners on the Good Delivery List have been subject to the Proactive Monitoring programme. Of these, one gold-and-silver refiner and three silver-only refiners elected not to be tested, and were transferred to the Former Melters and Assayers List.

One silver-only refiner failed the dip assaying test and, following discussions with the LBMA, has installed some new equipment and modified its procedures, and will in due course undergo a full assaying test on ten reference samples once the new equipment / procedures have been operational for a reasonable period.

Two gold-and-silver refiners, who elected to adopt the four-nines approach in respect of their gold production, failed the reference sample assaying tests, particularly on the lower grade samples. This was due to the fact that their analysts

were no longer fully familiar with fire assaying techniques, as these are not required for their normal four nines production. The analysts concerned are undergoing intensive training on fire assaying techniques with the assistance of two of the LBMA referees, after which the refiners will be subject to a full assaying test on twenty-four reference samples. Both refiners have been allowed to remain on the Good Delivery List pending the full assaying test being undertaken because the quality of their day-to-day four-nines production is not in any doubt.

Round five of the proactive monitoring programme involving four gold-and-silver and three silver-only refiners is almost complete – in that the dip samples are now with the LBMA Referee for cross checking.

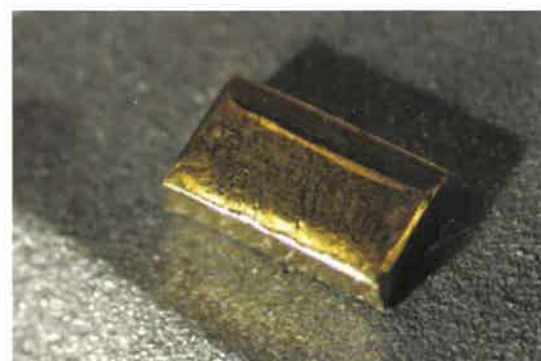
In addition to checking a refiner's assaying capabilities, the LBMA, as part of the

Proactive Monitoring programme, also requires confirmation of the refiner's latest available audited net tangible worth (NTW) figure, the last three years gold and silver production (as appropriate) and confirmation that the bar photographs and line drawings held on file, and supplied to the LBMA-recognised vaults in London, are still current. The latter point is particularly important, as some changes to bar marks that had not previously been notified to the LBMA have come to light and the LBMA has been able to procure up-to-date specimens and circulate them to the London vaults.

During Proactive Monitoring, two instances have come to light where the relevant refiner's NTW was significantly below the LBMA's normal minimum NTW requirement of £10 million equivalent. Currently the LBMA is in discussions with one of the refiners to see if a suitable group company that meets the NTW requirement would be willing to provide the LBMA with a support letter in respect of the refiner. In the other case such a support letter has been supplied.

The Association is very pleased with the results of the Proactive Monitoring programme to date. In a significant majority of cases, the results confirm the very high refining and assaying requirements of the Good Delivery List accreditation. In those few instances where problems have been identified, the Association works closely with the refiners concerned and the LBMA Referees so that appropriate remedial action can be taken, thereby ensuring that the worldwide reputation and integrity of the Good Delivery List remain undoubted. ■

For those who are not familiar with the concept of Proactive Monitoring, the topic was covered in detail in an article in Alchemist 38, published in April 2005. If you would like a copy, please contact the editor: Susanne.capano@lbma.org.uk.



On Supply and Demand

By GFMS Limited

GFMS have prepared their Gold Supply and Demand table for 37 years, including it in their annual Gold Survey as well as updating it for the two interim Gold Survey Updates. In this column, which will appear on an occasional basis, GFMS have prepared a brief commentary highlighting the critical supply and demand elements at play in the third quarter of 2005. On this occasion, the consultancy has added an analysis of the possible implications for the combined Barrick/Placer hedge book, should the acquisition take place.

The Supply Side

Mine production in Q3 was estimated at 667.7 tonnes, a 3% or 20 tonne increase compared to the corresponding period in 2004. Most of the growth was delivered by new mines, with additional support from China, where provisional data suggests an increase of around 9% year-on-year. Production in Russia, in contrast, was essentially flat year-on-year, and South African mine production continued to contract.

New mines contributing to the better Q3 results included Barrick's Lagunas Norte, which generated 6.6 tonnes of gold in the three months to September, Newcrest's Telfer

(4.2 tonnes) and Glamis Gold's El Sauzal mine (1.3 tonnes). In recent developments, it is worth highlighting the start-up of Barrick's Veladero mine in Argentina, which made its first pour on 15 September, and Glamis Gold's Marlin mine in Guatemala, where commercial production got under way on 1 November.

De-hedging waned in Q3, with a provisional 30.8-tonne decrease in the outstanding delta-adjusted global hedge book. The cut was much reduced from the (revised) 70.1-tonne drop measured in Q2 and only a fraction higher than the 22.1-tonne decline in Q1. The cumulative reduction in the hedge book for the nine months to September stood at 123.0 tonnes – compared to the 312.3-tonne decline in the corresponding period in 2004.

Following the unsolicited offer by Barrick to acquire all outstanding shares of Placer Dome, on 23 November Placer recommended that shareholders reject the offer. Key statistics for the two majors and their combined position, as well as the proposed new company that could emerge from this deal, are shown in the table.

Should the consolidation of the two companies occur, not only will the new company be the largest gold producer (in 2004 Barrick was ranked as the world's third largest, while Placer came in fifth), but will also own the largest hedge, with close to 40% of the nominal global book.

Net sales by the **official sector** slumped to only 70 tonnes in Q3, less than half the 147 tonnes sold in Q2 and almost a quarter of Q1's 272 tonnes. This marked decline was reasonably predictable, as its principal cause was lower sales by Central Bank Gold Agreement (CBGA) signatories who were

World Gold Supply and Demand Tonnes

	Q205	Q305	Q3 ch. y-o-y	Q304
Supply				
Mine production	603	668	3.1%	648
Official sector sales	147	70	5.1%	67
Old gold scrap	191	213	16.2%	183
Net producer hedging	-	-	na	-
Implied net disinvestment	125	-	na	90
Total Supply	1,066	951	-3.8%	988
Demand				
Fabrication				
Jewellery	764	660	0.5%	656
Other	151	141	5.7%	134
Total Fabrication	915	801	1.4%	790
Bar hoarding	81	53	-9.2%	58
Net producer hedging	70	31	-78.0%	140
Implied net investment	-	66	na	-
Total Demand	1,066	951	-3.8%	988
Gold Price (London PM, US\$/oz)	427.39	439.72	9.6%	401.30
Implied figure	-125	66		

Mine Production, Reserves and Outstanding Hedge Position Moz

	MP ¹	Reserves ^{1,3}	Maximum committed ounces ²	Years of production hedged	Reserves Hedged (%)	Cash Costs ¹ (\$/oz)	Realised Price ¹ (\$/oz)
Barrick	4.96	89.06	14.00	2.8	15.7	212	391
Placer Dome	3.65	59.92	8.03	2.2	13.4	240	391
Combined Position	8.61	148.97	22.03	2.6	14.8	224	391
Proposed Company ⁴	7.94	143.94	22.03	2.8	15.3	-	-

¹ Full-year, 2004

² End-2004

³ Based on CIM 43-101 standards

⁴ Mine production and reserves data excludes contributions from Campbell, Musselwhite (68%), Porcupine (51%) and La Coipa (50%)

known to have largely filled the closing agreement year's quota before Q3 had begun. Official sector activity outside of the CBGA was slight this quarter.

Scrap is estimated to have increased by 16% year-on-year in Q3. Whilst significant, the size of the gain was perhaps more muted than expected, given the scale of the price rally. This limited response stems chiefly from growing price acceptance in price-sensitive markets like the Middle East and India.

The Demand Side

The third quarter saw a dramatic change in **investment**, as the implied figure swung from comfortably over 100 tonnes of disinvestment in Q2 to almost 70 tonnes of investment in Q3. Much of the buying took place in September as investors sought a safe haven as protection against surging inflation concerns in the wake of hurricane damage to

US oil facilities along its Gulf coast. It is of note that gold did not mirror day-to-day moves in the energy market (which peaked in late August/early September), nor the US dollar (which strengthened considerably in September).

Fabrication demand staged growth of 1.4% year-on-year in Q3. Whilst a far cry from the double-digit gains witnessed in Q1 and Q2, that an increase occurred at all illustrates how the physical markets have proved surprisingly robust and accepting of higher prices. Nonetheless, there was a sharp fall in offtake of well over 100 tonnes in comparison to Q2. Much of this weakness was concentrated in India (whose net bullion imports fell between 70 and 100 tonnes), Saudi Arabia and Dubai. Western jewellery consumption was also hit by the dent to consumer confidence following increases in energy prices. ■

GFMS is a precious metals consultancy specialising in research into the global gold, silver, platinum and palladium markets. The company is based in London and has representation in Australia, India, China, Germany and Russia. The research team comprises eleven full-time analysts and two consultants.

Members & Associates of The London Bullion Market Association

Market Making Members

The Bank of Nova Scotia – Scotia-Mocatta	+44 20 7638 5644	JP Morgan Chase Bank	+44 20 7726 4681
Barclays Bank Plc	+44 20 7773 8630	Royal Bank of Canada Ltd	+44 20 7029 7490
Deutsche Bank AG	+44 20 7545 8000	Société Générale	+44 20 7676 8414
Goldman Sachs International	+44 20 7774 2010	UBS AG	+44 20 7567 8000
HSBC Bank USA, NA, London Branch	+44 20 7991 8888		

Ordinary Members

ABN-AMRO Bank NV, Australian Branch	+61 2 8259 5000	Derek Pobjoy International Limited	+44 1737 818 181
Amalgamated Metal Trading Limited	+44 20 7626 4521	Dresdner Bank AG, London Branch	+44 20 7623 8000
Australia & New Zealand Banking Group Limited	+44 20 7378 2547	EBS Dealing Resources International Limited	+44 20 7029 9000
Bache Financial Limited	+44 20 7283 9166	Engelhard Metals Limited	+44 20 7456 7300
Baird & Co Limited	+44 20 8555 5217	Fortis Bank S.A. /NV	+44 20 7444 8000
Bank of America, NA	+1 401 278 5789	GFI Brokers Limited	+44 20 7422 1000
Bank of China	+44 20 7282 8888	ICAP Energy Limited	+44 20 7000 5000
Banque AIG International Limited	+44 20 7659 7060	Investec Bank (UK) Limited	+44 20 7597 4300
Bayerische Hypo-und-Vereinsbank AG	+44 20 7634 3701	Johnson Matthey PLC	+44 1763 253 000
Bayerische Landesbank	+49 89 2171 25479	Koch Metals Trading Limited	+44 20 7648 6300
BNP Paribas	+1 212 841 3553	Lehman Brothers International (Europe)	+44 20 7102 1000
Brink's Limited	+44 20 7247 9481	Macquarie Bank Limited	+44 20 7065 2260
Calyon London Branch	+44 20 7374 6100	Man Financial Limited	+44 20 7285 3000
Canadian Imperial Bank of Commerce	+44 20 7234 6000	Marubeni Europe Plc	+44 20 7826 8600
Citibank N A	+44 20 7986 3866	Merrill Lynch International	+44 20 7995 3785
Commerzbank International SA Luxembourg	+352 47 79 11 2540	Mitsubishi Corporation (UK) Plc	+44 20 7025 3200
Commonwealth Bank of Australia	+61 2 9378 2000	Mitsui & Co Precious Metals Inc, London Branch	+44 20 7489 6761
Cookson Precious Metals Limited	+44 121 200 2120	Morgan Stanley & Co International Limited	+44 20 7513 8000
Credit Suisse	+41 1 333 53 91	Natexis Commodity Markets Ltd	+44 20 7648 4950

Phibro Bullion, Division of Phibro Futures and Metals Limited	+44 20 7484 8774
Rabobank International	+44 20 7664 9650
Royal Bank of Scotland Plc	+44 20 7375 4000
Royal Mint	+44 1443 222 111
Securicor International Valuables Transport Limited	+44 20 7776 1300
Semptra Metals Limited	+44 20 7847 7618
Standard Bank Plc	+44 20 7815 4130
Sucden (UK) Limited	+44 20 7940 9400

Sumitomo Corporation (Europe) PLC	+44 20 7246 3600
Triland Metals Limited	+44 20 7061 5510
VIA MAT International Limited	+44 1932 230 130
WestLB AG, London	+44 20 7020 3116
Westpac Banking Corporation	+61 2 9284 8607

Associates

AUSTRALIA		SWITZERLAND	
AGR Matthey	+61 8 9479 9999	Argor-Heraeus SA	+41 91 640 53 53
Zinifex Metals Limited	+61 3 9288 0281	Cendres & Métaux SA	+41 32 344 22 11
		Finorafa SA	+41 91 695 5200
CANADA		Metalor Technologies SA	+41 32 720 61 11
Royal Canadian Mint	+1 613 993 7540	MKS Finance SA	+41 22 818 52 00
		PAMP SA	+41 91 695 04 50
CHINA		Valcambi SA	+41 91 695 53 11
Great Wall Gold & Silver Refinery of China	+86 28 2725461		
GERMANY		TURKEY	
Baden-Württembergische Bank AG	+49 711 180 1257	Goldas AS	+90 212 637 4006
Umicore AG & Co KG	+49 6181 59 6292		
W C Heraeus GmbH & Co KG	+49 6181 35 257	UNITED ARAB EMIRATES	
		Bin Sabt Jewellery (LLC)	+9714 228 5500/224 6948
INDIA		Kaloti Jewellery Group	+9714 225 4092
M.D. Overseas Limited	+91 11 2335 3617		
JAPAN		Lakhoo Jewellery Trading Co (LLC)	+9714 226 4885
Mitsubishi Materials Corporation	+81 3 5252 5370	Peekay Intermark Limited	+9714 224 6948/228 5500
Sumitomo Metal Mining Co Limited	+81 3 3436 7839	Transguard	+9714 282 2255
Tanaka Kikinokogyo K. K.	+81 3 6311 5511		
KAZAKHSTAN		UNITED KINGDOM	
OJSC Kazzinc	+7 3232 473 794	Alex Stewart (Assayers) Limited	+44 151 548 7777
		Alfred H Knight International Limited	+44 1744 733 757
KOREA		BSI Inspectorate Limited	+44 1376 515 081
Korea Zinc Co. Limited	+822 519 3447	GFMS Limited	+44 20 7478 1777
		JBR Recovery Limited	+44 121 525 1691
MEXICO		TheBullionDesk.com	+44 1799 516 956
Met-Mex Peñoles S.A. de C.V.	+52 871 729 5704		
NETHERLANDS		UNITED STATES OF AMERICA	
Schöne Edelmetaal B.V.	+31 20 627 0026	Gerald Metals Inc	+1 203 609 8421
		Sovereign Bank	+1 401 752 1400
POLAND		UZBEKISTAN	
KGHM Polska Miedz S.A.	+48 76 846 4646	Almalyk Mining - Metallurgical Complex	+998 71 120 20 60
		Navoi Mining & Metallurgical Combinat	+998 79 223 11 03
SOUTH AFRICA			
AngloGold Ashanti Limited	+27 11 637 6287		
Harmony Gold Mining Co Limited	+27 11 684 0140		
Rand Refinery Limited	+27 11 418 9000		

Rhyme, Reason and Rationale

An Introduction to the Elliott Wave: Part 2

By Jordan Kotick, Global Head of Technical Strategy, Barclays Capital

Technical strategy is extensively employed in freely traded markets. In Alchemist 40, one of these strategic approaches, Elliott Wave, was examined – in part. This article picks up where the first left off, drilling down towards a deeper understanding of the Elliott Wave Principal and, specifically, shows how it is a valuable tool when committing capital and managing risk.

Markets trend. Why this is the case provides a fascinating study in behavioural finance and collective psychology, the scope of which is beyond the limits of this article. But though the reality of market trends has been known for hundreds of years, they continue to baffle many academics, shoot holes in the Random Walk arguments and throw many of the assumptions of the Efficient Market Hypothesis into question.

So how does one recognise a trend? While you could do some basic quantificational analysis (collect a data set, run a regression), by the time you collect enough data, the trend is likely near an end. Further, this is impractical in any real-time application of market movement since, as has been said:

markets rhyme; they do not repeat. The stark reality remains, however, that sticking with the trend is almost always the most profitable way to trade or invest. While this strategy sounds very simple, the real-time and successful implementation of this approach is extremely difficult. Trends exist in all time frames, from those that last decades to those that last minutes. The key is that all of these trends have similar characteristics. That is to say that a trend in five-minute data will display the same signals and patterns as the trend over many decades. The recurrence of trends and their robust interrelationships speaks to the fractal nature of market movement and investor psychology. Elliott Wave is one methodology specifically geared towards understanding and profiting from this fractality.

Right vs. Wrong

The key is not to know when your position is right; the key is to know when it is wrong. Whether that involves choosing a price point or identifying specifically what has to happen (data, news, events) to prove a view incorrect is crucial.

Outlining risks is helpful, but if money is on the line, a strategist needs to do better. We are obligated, no matter what our methodology, to be specific. Of course, no one is right all the time, but to paraphrase Alan Shaw, one of the great technicians over the last half century, given all the things that can happen in a trade/position, the key is to avoid the big loss. If you do that, everything else takes care of itself.

Where technical strategy excels – arguably its greatest advantage over fundamental strategy – is its ability to isolate very specifically where something is wrong with the analysis or the position. Being able to quantify the loss right at the beginning of the position/trade is of huge value, and not something readily available with other modes of analysis. Because one



Figure Two: Wave Three is the most explosive wave and – clearly – not the shortest wave.

can determine the risk of any position right at the onset, successful money management techniques and the proper trading/investment vehicle can be determined.

A common criticism of Elliott Wave – and of technical strategy in general – is that it is subjective. That is correct: it is subjective. Five technicians can look at the same chart and come up with five different conclusions – or five

The key is not to know when your position is right. The key is to know when it is wrong.

different Elliott Wave counts – just as five different analysts can look at the same earnings report and come to five different conclusions. And just as everyone looks at the same data, listens to the same speeches and looks at the same history, but comes up an entire spectrum of conclusions about the Federal Reserve, or the implications of the US current account deficit. All market predictions, based on any methodological approaches, are subjective by nature.

However, one of the values of Elliott is that some of it is not subjective. In fact, among all the things to understand about Elliott, one key element is that there are three rules that can never be broken. This separates Elliott from most technical and fundamental methodologies, allows for proper money management techniques and answers the key question: where, specifically, is the view wrong?



Figure Three: For those buying this Wave-Four pullback, the stop – or place where you are wrong – is just below the high of Wave One.

Rule 1: Wave 2 Cannot Go Below the Low of Wave 1

First waves are the ideal time to get involved in a market. Since they represent the onset of a new trend, they are the most profitable, given the greater five-wave move that has to unfold before the trend completes. However, getting involved in the first wave is also the most difficult, since, for example, in a new bull market, you are picking the bottom of the previous bearish trend – a notoriously difficult thing to do. Further complicating matters, first waves are often the messiest and most challenging waves to track in real time, given the scepticism that exists at the onset of any new trend.

It is common, however, either by being intentionally cautious or simply missing the first wave higher (in a bull trend), to use Wave-Two pullbacks to position to the upside. How one determines where to enter in a Wave-Two pullback is another issue (there are various methodologies that can be used), but the key is that this pullback, if it is a second wave, cannot go below where wave one began. This is where stops are to be put.

If the market goes below this area, the view, the position and the wave count are simply wrong. No subjectivity, no interpretations, just the simple dichotomy of right and wrong.

Whether this tells you where to put a knock out on an option, stop on a spot trade or is simply an indicator of where a buildup of stops may be located, the real-time application of this rule can add great value.

What separates Elliott from most technical and fundamental methodologies is that there are three rules that can never be broken

Rule 2: The Third Wave is Never the Shortest

The third wave in a five-wave sequence is almost always the most explosive move in the trend. It is the point of recognition where faders and/or sceptics throw in the proverbial towel and join the trend (the exception is the commodity markets, which have a strong tendency for the fifth and final wave to be the longest). Given this propensity, the third wave in the five-wave sequence in any market (including commodities), can never be the shortest – using price, not time, as the basis of quantification.

An example: suppose that, in real time, you are tracking or committing capital based on a wave count. You believe you have seen a completed five-wave move and are about to take action based on the

implications of this completed sequence. If the third wave in the count is the shortest, you are wrong. Your internal analysis is wrong. Your outlook is wrong. Again: there is no wiggle room.

A common mistake is that, because Wave Three cannot be the shortest, many assume it has to be the longest. But while this is often the case, it does necessarily have to be so.

Rule 3: Wave 4 Can't End in the Area of Wave 1

Assume you have missed the first three waves in a trend and would like to enter the market on the belief/wave count that there is still a fifth and final leg to come before the trend completes. Similar to Rule One – where you missed Wave One and buy into Wave Two in anticipation of Wave Three – this time, you missed Wave Three and are buying into Wave Four in anticipation of Wave Five.

However, based on Rule Two, we know that third waves tend to be the most explosive and strongest waves (“wonders to behold” as Frost and Prechter called them). So putting your stop below the low of Wave Three (as you would do below Wave One if utilising only the Rule One) is impractical and much too expensive. A strong move (third

wave) does not tend to retrace (in the fourth wave) deep enough to make it a favourable risk/reward if you want to put your stop just below where the third wave began. Fortunately, Elliott can and does do better.

If you are buying into a Wave Four pullback, the stop goes below the previous Wave-One high in a bull trend, or just above the Wave-One low in a bear trend. If the market closes through this area, your

wave count is wrong. Again, there is no subjectivity here.

In real time, this is a very strong trade. The difficulty of catching a trend change is eliminated (trying to buy a first wave) and the trend is well established (three waves have already unfolded). This rule is thus very good at minimising risk (the trend is established and the stop is objectively determined without equivocation).

What this does not do is maximise reward, since you are attempting to position for the last wave in the pattern. But depending on the risk appetite, funding and exposure of the investor, Rule Three, more often than not, is very useful in real time.

Wave Goodbye

This and the previous *Alchemist* article have merely skimmed the surface of financial market fractals, collective psychology, trend and the Elliott Wave Principal – and it bears repeating that a little knowledge is a dangerous thing. This is true about any market approach – technical or fundamental – but particularly true about Elliott.

The purpose here has been limited to introducing the concepts of Elliott Waves and discussing the objectivity of its rules. With the proper study of both the quantificational measures and relationships as well as the internal dynamics and characteristics of all the Elliott waves (1,2,3,4,5, a,b,c,d,e,w,x,y,z), a great – and profitable – tool can be readily utilised. Not only to maximise reward but, more importantly, manage risk. ■



Jordan Kotick,
a Chartered Market Technician, is the Global Head of Technical Strategy for Barclays and is the President of the

Market Technicians Association in New York. Previous positions include vice president, technical market strategist at JPMorgan Chase in New York and senior technical strategist at Elliott Wave International.

He is a featured author in the recently released book, *Market Analysis for the New Millennium*, and is currently co-authoring a textbook on technical strategy.



Figure One: For those buying this Wave-Two pullback, the stop or place where you are wrong is just below the low of Wave One.

LBMA News

By Stewart Murray, Chief Executive, LBMA

MEMBERSHIP

A full list of LBMA Members and Associates is given on page 20.

Members

The membership held by CSFB in London was transferred to Credit Suisse, Zurich, with effect from 30 September 2005.

With effect from December 2005, GFI Brokers Limited have the following contact details: Broadgate West, 1 Snowden Street, London, EC2A 2DQ Tel: +44 20 7422 1000 Fax: +44 20 7422 1190.

As of January 2006, Tanaka Kikinzoku Kogyo K. K. have the following contact details: 22nd Floor, Tokyo Building 2-7-3 Marunouchi, Chiyoda-ku, Japan. Tel: +81 3 6311 5511 Fax: +81 3 3669 1460.

The Johnson Matthey Plc Group Headquarters have relocated as follows: Orchard Road, Royston, Hertfordshire, SG8 5HE. Tel: +44 0 1763 253 000 Fax: +44 0 1763 256 336.

Associates

Mahesh and Co of Singapore resigned as an Associate with effect from 31 December 2005.

VALUE DATES

The schedule of value dates for 2007 has been included in the trading section of the LBMA website.

COMMITTEES

Management

The Management Committee met twice in the fourth quarter of 2005. As part of the budgetary review for the coming year, the Committee has agreed to continue the funding of a number of honours students in the earth sciences departments of Wits University, Johannesburg, for a second year.

Physical Committee

The Committee held meetings in October, November and December. The Committee has a very full programme of work currently. Six applications for Good Delivery Listing are underway at the moment. The regular series of proactive monitoring operations (see article on page 18) also now forms a regular part of the Committee's work. The Committee has been reviewing a new edition of the Good Delivery Rules which will be issued in the first quarter of 2006. The changes in the Rules mainly reflect a new method of processing applications for listing, whereby the LBMA Executive, rather than the facilitating vaults, is responsible for arranging the physical movement of bars and samples for testing.

On the basis of the past two years' work on proactive monitoring, the Committee held a meeting with the five Good Delivery Referees in Geneva in early December. The meeting discussed a number of questions concerning the testing of Good Delivery applicants and the

proactive monitoring system. It also considered the question of how the LBMA might assist in the setting of standards for 'Four Nines' gold.

The Physical Committee has also discussed a number of other aspects of the physical market, including weighing, VAT on metal accounts and insurance arrangements for gold.

Finally, please note that there is a **vacancy** on the Physical Committee. Suitably qualified representatives in any Member companies who would like to put their names forward are asked to submit a short CV to the Chief Executive.

Public Affairs Committee

Following a change in his responsibilities at Barclays, Kamal Naqvi has relinquished the Chairmanship of the Committee, though he will continue to be a member of it. Tim Wilson of JP Morgan Chase has agreed to take over the role of Chairman. The LBMA would like to thank Kamal for his inspiring and effective leadership of the PAC during the past four years.

The PAC has met once since the Johannesburg Conference with the main subject for discussion being the format and programme for the next Conference, which will be held in Montreux in June 2006. The Committee also considered proposals for the LBMA Annual Party and the Biennial Dinner (see below).

Following the meeting, a reception was held for contributors to the *Alchemist* and the 2004 winners of the annual *Forecast*. During the reception, the winners were presented with their prizes (photos left). They were Matthew Turner (top) of Virtual Metals London (gold and palladium), Jeffrey Rhodes (centre) of Standard Bank London, Dubai (silver) and David Holmes (bottom) of Royal Bank of Canada (platinum).

The LBMA would like to acknowledge the generous donation of the prizes for the 2004 competition. The gold prize was a one-ounce Kruggerand donated by the Rand Refinery and the prizes for the silver, platinum and palladium forecasts were one-ounce gold bars donated by PAMP SA.

The winners for 2005 were: gold – David Holmes, Royal Bank of Canada; silver – Jeffrey Christian, CPM Group; platinum – Rene Hochreiter, Nedbank Investment Bank; palladium – Bob Takai, Sumitomo Corporation.

The 2006 survey will be published later in the month.

Finance Committee

The Finance Committee held its normal autumn meeting in November to prepare a draft budget for 2006.

SOME DATES FOR YOUR DIARY

Annual Party



Plans are being made to hold the Annual Party for Members and Associates, with a Turkish theme, to be held on the evening of 16 February 2006. Details have been circulated to all Members and Associates.

AGM

The Annual General Meeting will take place at the Armourers Hall, Coleman Street, at 4pm on 14 June 2006. Representatives of all Members and Associates are welcome to attend.

The 7th LBMA Annual Precious Metals Conference

The next annual conference will be held in Montreux, Switzerland, during the period

25 – 27 June 2006. Two keynote speeches have already been confirmed. The first will be given by Philipp Hildebrand, the Governor of the Swiss National Bank responsible for markets. The second will be by the well-known economic historian, Professor Niall Ferguson of Harvard University. The conference dinner will take place on the evening of Monday, 26 June in the famous 12th century Château de Chillon.

Biennial Dinner

The biennial dinner will take place at Goldsmiths' Hall on the evening of 2 November 2006.

Seminar on Assaying and Refining

Following the success of the Assaying Seminar held in London in June 2005, plans are now being made to hold a further seminar which, as well as focusing on a number of aspects of precious

metal assaying, will also look at other operating issues of interest to refining companies. The seminar will take place in London during November 2006. ■

DIARY OF EVENTS

January 2006

15 – 22
Vicenzero I
Vicenza, Italy
T: +39 0444 969 111
F: +39 0444 969 000
info@vicenzafiera.it
www.vicenzafiera.it

17
29th Minesite Mining Forum
London
T: +44 (0)20 7395 1935
F: +44 (0)20 7395 1931
www.minesite.com

February

7 – 9
Investing in African Mining –
Indaba 2006
Cape Town, South Africa
T: +1 305 669 1963
F: +1 305 669 7350
iiconf@iiconf.com
www.iiconf.com

13 – 14
CIS Precious Metals and Stones Summit
Moscow
T: +44 (0)20 7490 3774
F: +44 (0)20 7505 0079
www.cismining.com

21
30th Minesite Mining Forum
London
Details as above

March

5 – 8
PDAC Mining Investment Conference
Toronto, Canada
T: +1 416 362 1969
F: +1 416 362 0101
www.pdac.ca

21 – 22
Portfolio Diversification: Commodities
London
T: +44 (0)20 7368 9400
www.iqpc.co.uk

27 – 31
Asia Mining Congress 2006
Singapore
T: +65 6322 2770
F: +65 6223 3554
www.terrapinn.com

28 – 30
MiningWorld Uzbekistan 2006
Tashkent
T: +44 (0)20 7596 5213
F: +44 (0)20 7596 5096
www.miningworld-uzbekistan.com

28
31st Minesite Mining Forum
London
Details as above

April

12
Gold Survey 2006
London, Johannesburg, Toronto
T: +44 (0)20 7478 1750
www.gfms.co.uk

24
32nd Minesite Mining Forum
London
Details as above

May

6
31st Minesite Mining Forum
London
Details as above

14 – 15
IICONF – New York Gold Conference
New York
T: +1 305 669 1963
F: +1 305 669 7350
iiconf@iiconf.com
www.iiconf.com

June

10 – 13
IPMI 30th Annual Conference
Las Vegas, Nevada
T: +1 850 476 1156
F: +1 850 476 1548
mail@ipmi.org
www.ipmi.org

20
33rd Minesite Mining Forum
London
Details as above

25 – 27
The Seventh Annual LBMA Precious Metals Conference
Montreux, Switzerland
T: +44 (0)20 7796 3067
F: +44 (0)20 7796 2112
conference@lbma.org.uk
www.lbma.org.uk

August

7 – 9
Diggers & Dealers Mining Forum
Kalgoorlie, Australia
T: +61 8 9481 6440
F: +61 8 9481 6446
admin@diggersnddealers.com.au
diggersnddealers.com.au

September

3 – 6
Gold 2006:
New Industrial Applications for Gold
Limerick, Ireland
F: +353 61 202 602
vicky.kelly@staffmail.ul.ie
www.gold2006.org

The Forecast's Favourable, but the Boat's Crowded

Editorial Comment by Martin Stokes, Vice President, J P Morgan Chase Bank

There's an old trading adage:

"When they're crying, you gotta

be buying, but when

they're yelling, you'd

better be selling."

Thinking back to the dark days of February and March 2001, when the gold price was trading in the \$250s, market participants – particularly the producers – were certainly crying. Indeed, the LBMA felt that the market psyche was still so negative in June 2002 that they engaged a clinical psychologist to offer some therapy for Mr. Gold at their San Francisco conference.

How times have changed! When spot gold prices ran through \$500/oz in December, stories were run on the BBC. Interviews with the LBMA Executive have been requested by Deutschwelle and even London's *Guardian* newspaper, among others. Articles have appeared in almost all of the world's newspapers. Everyone has an opinion. The Aden sisters are making comments about gold again – and was that a bullish statement from Andy Smith recently?

The *Economist*, which wrote a particularly negative editorial about gold when prices were close to the lows, made what could classed as a bullish call in its issue of 13 September 2005: "Alan Greenspan has achieved the remarkable feat of suspending disbelief in America's gerrymandered finances for the past few years. On his departure, watch the gold price soar."

Before December 2005, the last time that there was a London Gold Fixing over \$530 was on 6th April 1981. Subsequently, in 1983 and 1987, prices fleetingly achieved \$500 again – but the level could not be sustained and, broadly speaking, the bear market ran for 20 years.

So what's new this time?

There's certainly a large number of US dollars slopping around in the world's monetary system. Commodities in general have gained the position of being a better recognised and more accessible asset class. Estimates of broad commodities indexes and other linked investments run as high as US\$100 billion, and our markets have clearly benefited in this environment. The excellent performance shown by more dynamic commodity investors, including pension and mutual funds, may well oblige their slower moving peers to follow suit in 2006, creating a secondary wave of

fresh buying which may further extend the "super cycle". Perhaps more importantly for gold, physical demand, particularly in India, is showing

surprising resilience in the face of higher prices. Interestingly, India's GDP seems likely to have grown at 8% in 2005 – perhaps spurring even greater gold demand next year.

Intriguingly, in recent months gold has lost its close negative correlation

with the US dollar and has shown gains in all currencies, demonstrating a truly international appeal. The dramatic arrival of a wave of buying in December from the Japanese public just shows the effect of a broader interest in what is basically a small market in international terms.

Has the Bullish Boat Sailed?

For 2006, the crystal ball suggests several other possible positive factors for gold: the US dollar may resume a weaker trajectory as the benefits of the Homeland Investment Act fall away, investors may continue to focus on inflation concerns and provide an immediate test of Bernanke's mettle, the major gold producers are likely to continue to reduce their hedge books, the recent interest in gold ETFs may be maintained, arguably further revaluation of the yuan will encourage greater domestic gold buying in China, the Japanese public may return to the market, central banks may buy, South African production looks likely to fall....

And yet there are many speculative longs in the market, and that counsels caution. The COMEX open interest in gold stands at over 320,000 contracts (up from a low of around 100,000 contracts in 2001) and, at current US dollar interest rates, the long positions will need gold prices to go up by at least \$25 per annum just to break even vs the yield on a US dollar deposit account.

The gold market is likely to be very volatile in January as hedge funds and other speculators reload for the New Year. Long may these high bullion prices last so that we can enjoy our time in the sun – though I have yet to see a single analyst offer a seriously bearish opinion for gold for 2006.

Maybe they're not yelling loudly enough yet, but there is a nagging worry that the bullish boat may be getting overloaded. ■



North American Gold Developments

North American gold production has been in decline for some years, but North American gold companies continue to have a strong hold over much of the world's gold production.

Merger and acquisition activity tabled over the past weeks, although not immediately affecting the balance of global power, looks set to have a material impact on the corporate landscape in North America and could help revitalise the production scene.

Of course, the **Barrick Gold** bid for **Placer Dome** is the most significant action, as the two largest Canadians come head-to-head, but slightly lower down the gold food chain there are some interesting corporate manoeuvres that will influence North American production. Although the specifics of the proposed

deals will engage the interest of analysts and shareholders, it is equally fascinating for others to observe the activities of certain prominent personalities involved.

The Barrick-Placer situation may now be resolved by mid-January. If the hostile bid is successful, it will make Barrick the undisputed king of Canada, despite **Goldcorp's** seemingly unrelenting march forward under Ian Telfer.

At the beginning of December, Placer, as part of its defence after the board advised shareholders to reject the Barrick offer, was seemingly intent on boosting its perceived worth by announcing increased resources at some of its properties.

Clearly the intention of announcing these enhancements was to persuade Barrick to sweeten its offer. The original offer was US\$20.50 in cash, or 0.7518 of a Barrick common share plus US\$0.05 in cash, subject to certain maximums. At the time of the offer, this represented a 24% premium over the Placer share price immediately prior to the bid being announced.

As at Dec 9, both alternatives were out-of-the-money, with the cash and shares option now worth US\$20.83 against Placer's market price on the TSX – the equivalent of US\$23.10.

Placer and Barrick have now agreed a compromise on Placer's shareholder protection plan and have announced an extension of the offer until January 16.

The aforementioned **Goldcorp**, of course, stands to receive a significant portion of Placer's operations in the Americas if Barrick is successful. Goldcorp will get full ownership of the Campbell mine, next door to its Red Lake mine in Ontario, a majority interest in two Ontario mines, the Porcupine JV (51%, Kinross 49%) and the Musselwhite JV (68%, Kinross 32%), as well as the La Coipa gold/silver mine (50%, Kinross 50%), in Chile. Goldcorp will also acquire a 40% interest in the Pueblo Viejo development project in the Dominican Republic.

Yes, Virginia, There is a Gold Mine

Goldcorp has now made a bold move to further boost its North American production base by offering to acquire Canadian junior **Virginia Gold Mines**, which discovered and owns the Éléonore gold project, in James Bay, Québec.

The proposal is bold principally because the Éléonore project does not yet have a resource. Goldcorp, however, is willing to use its valuable shares to pay a staggering US\$420 million for the potential at Éléonore.

Éléonore has been the subject of a comprehensive drilling programme comprising 212 drill holes, with over 70% reporting assays of greater than 10 g/t gold. The principal Roberto deposit remains open in both strike and depth and in November the latest round of drilling confirmed the continuity of the Roberto system to a vertical depth of 900 m – and threw up the best intersection ever in the zone of 22.56 g/t gold over 15 m.

The move by Goldcorp to pay a high price for a promising but unquantified deposit (analysts predict a resource of over 3 Moz) confirms how scarce good opportunities are in Canada. In the mid-1990s, many Canadian explorers, discouraged by the increasingly strict environmental policies in their homeland, followed the brighter promise held by countries to the south, in South America. Exploration spending in countries such as Peru, Chile and Argentina soared at the expense of Canada.

Then when the Bre-X scandal and the lure of Internet stocks led to investors leaving the sector in droves, exploration spending at home and abroad plunged. But in recent years, Canada has once again become a favourite destination for exploration, with companies revisiting the proven pedigree of Red Lake, in Ontario, the new lands in Nunavut and the recognised gold belts of Québec.

Éléonore, discovered in 2004, could represent the first of a new wave of major finds in the country as money starts to flow back into the sector.

Canadian consultants Metal Economics Group (MEG) reported recently that US and Canadian gold exploration budgets have increased by 25% this year, to a record US\$653 million (58% in Canada). "Almost 43% of the budgets are directed to late-stage exploration, 40% to grassroots and the rest to minesite", the report observes.

Although a three-year uptrend in exploration spending has yet to produce significant results, MEG has catalogued forty-three active late-stage projects in the US and Canada that each have contained gold reserves and resources in excess of 1 Moz. Importantly, a significant proportion of these are large, with 16 deposits containing more than 2 Moz, including five larger than 5 Moz.

This is good news for the region, because MEG's report also highlighted a decline in US and Canadian production from a peak of 17.2 Moz in 1997 to around 12 Moz this year. The report attributes this decline to increasing costs, partly due to the fact that "aging mines in Nevada and elsewhere are getting into deeper and lower-grade ore" and the stronger currency in Canada.

Production in the state of Nevada is dominated by the giant operations of Newmont Mining, Barrick Gold and Placer Dome, all of which have development projects underway. One of the largest is the Cortez Joint Venture's (Placer Dome 60%, Kennecott 40%) Cortez Hills development, which has reserves of almost 10 Moz.

Even before the Cortez Hills discovery, exploration in Nevada has been intensifying over the past couple of years, as explorers recognise the potential that still exists in North America's greatest producing region. A multitude of companies are now active in the state.

One of Canada's most successful mining entrepreneurs, Rob McEwen, formerly chairman of Goldcorp until its merger with Wheaton River Minerals, is among those attracted. Earlier this year, Mr McEwen took a major stake in **US Gold Corp**, subsequently becoming its chairman and chief executive officer. US Gold owns the Tonkin

Springs property and former mine, just to the south of the Cortez joint venture, on a part of the Battle Mountain Trend that is now known as the Cortez Trend.

Mr McEwen has now subscribed for a 20% interest in **Coral Gold Resources** and a minimum 18% (rising to 31% on exercise of options) in **Nevada Pacific Gold**. Both companies are active around Tonkin Springs and the Cortez jr. Mr McEwen will become executive chairman of Coral Gold and join the board of Nevada Pacific.

So while his successor at Goldcorp, Ian Telfer, is acting out an aggressive expansion strategy in Canada, Rob McEwen is collecting a parcel of properties around some of North America's most prized real estate, with the aim of replicating the phenomenal success he had with Goldcorp in Ontario.

With the increase in exploration spending in both US and Canada, and proven entrepreneurs like Ian Telfer and Rob McEwen chasing opportunities, the future looks rosy for these major producing countries. ■



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