LBMA

Alchemist

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Artist Rachel Coopey's winning design in the LBMA Golden Jubilee Design Competition was inspired by the Queen's passion for horse racing. ***Story on page 5***

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The Rocky Road to Liberalisation

By Paul Walker, Director, Gold Fields Mineral Services

REJECT APEC!!!

Free Capital Flow, Market Liberalisation Have Caused Damage To Women

A recent headline – recreated above – from the Pesticide Action Network is a useful reminder that not everyone sees market liberalisation as the panacea for all economic and social woes. However, it is not only the end itself that can create local difficulties. The path to liberalisation can be equally fraught, as the Chinese experience in the gold market has shown.

This article will briefly touch on some of the problems faced by the Chinese authorities on the long, complicated – and as yet uncompleted – road to a free and open gold market.

GFMS have been actively researching the Chinese market for close to 20 years now, and we have been able to chronicle developments over this time in part because of extensive contacts with representatives from across the industry. It has been particularly interesting to see how official attitudes have changed in light of the evidence showing the scale of unofficial gold activity taking place within the country.

Looking back it is somewhat ironic that one of the main challenges faced by GFMS in the early years was to convince Chinese officialdom that the market was in fact much bigger than they themselves believed.

It's worth beginning by pointing out that the People's Bank of China (PBOC) still has absolute authority over the gold market. They remain the only official buyer of mine production and scrap and are the only official supplier of metal to the market. In addition, they are the only official agency setting prices (although this may change soon: see below).

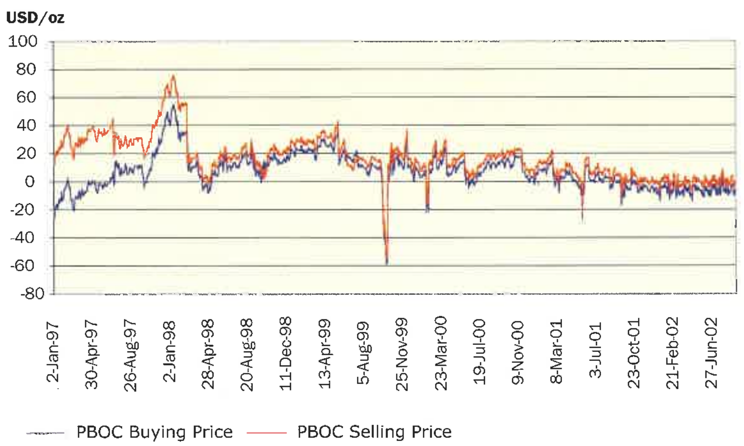
To understand part of the impetus behind the liberalisation move, one has to look at the prices set by the PBOC. Throughout the 1980s and 1990s, these were usually at levels that were massively at variance with the international market. For example, during 1995 (a typical year), official buying prices were on average all of $28 below those seen internationally, whilst selling prices stood at a $10 plus premium. In fact, during the early 1990s, these premiums and discounts were substantially larger, and at times ran to hundreds of dollars.

This resulted in massive flows of bullion and jewellery between Hong Kong and China. Throughout the 1990s Hong Kong acted as the pressure release valve, taking in mine production from China when the official price was too low, and shipping in metal and finished articles when the jewellery price was too high. Although research done by GFMS and others had highlighted this market dynamic, there was reluctance within official circles to accept that this was indeed the reality (consider that GFMS estimated total consumption at over 300 tonnes in the early 1990s against official mine production of less than 100 tonnes). The authorities were able to maintain their detachment during the early 1990s, but by 1997 the pressure had really begun to build.

Not surprisingly, the reason for this was price related, and linked to moves in the international market which saw PBOC buying prices rise to a massive premium during the second half of 1997 and the first half of 1998 (Fig. 1 shows the buying and selling discounts and premiums from 1997 up to September 2002). Arbitrage is a powerful economic force, and huge volumes of gold were shipped into China unofficially from Hong Kong to be sold to the PBOC as "mine production" as well as to feed jewellery and investment demand – it's no coincidence that Hong Kong imported over 400 tonnes of gold in 1997. This was one of the key reasons GFMS believe official statistics showed such a large increase in output in the year 1997 (officially announced production rose a not insubstantial 38%, or 46 tonnes year-on-year in 1997, from 120 tonnes in 1996).

The difficulty for those controlling gold policy was that this coincided with the Asian economic crisis, which saw the mainland authorities particularly concerned about pressure on the renminbi. A combination of an unchanged purchasing price (the premium over the international price rose to $55/oz in early 1998) coupled to new generous export incentives created a curious dynamic. Gold was sucked into the mainland from Hong Kong to be sold to the PBOC whilst on the other hand metal was being supplied in ever-increasing volumes to local fabricators who were shipping "fabricated" products (two-to three-kilogram gold ashtrays were all the rage at the time!) back to the newly created SAR to take advantage of the export incentives, estimates of which varied from around 5% to almost 20%. In addition to this, pressure on the renminbi saw a substantial divergence between the official and unofficial rates, which created an additional incentive to ship gold to Hong Kong, where the gold could be sold for dollars and the cash exchanged on the unofficial market in China at rates up to 8% higher than official ones. In this instance, officials from the PBOC acted on the issue quickly and the loophole was rapidly plugged.

PBOC Price Differentials vs. London



This precipitated what many have identified as China's first real tentative step towards liberalising the local market. On 20 February 1998, the PBOC announced that the official purchasing price paid to producers would be dramatically reduced by over 8% to 80.5 yuan a gram – decreasing the premium over international prices from $36 to $8. At the same time, they announced that the price at which they would sell gold to jewellery manufacturers would also be reduced to 82.1 yuan a gram.

This was a significant step, although it still took a long time for the PBOC to fully grasp the nettle of what really needed to be done to "normalise" the market. Having said this, officials were busy liaising with the gold trade to map out a course of action to expedite further liberialisation. These discussions resulted in two China Gold Economic Forums in 2000 and 2001, co-organised by the World Gold Council and the Industrial Economic Research Department of the Development & Research Centre of the State Council (a local think tank). Two reports were released and these formed the blueprints for subsequent reform measures, which were released in stages and included the establishment of the Shanghai Gold Exchange (SGE). However, it still took until 6 June 2001 for the PBOC to introduce a weekly price quotation system (which still creates arbitrage opportunities, though these are smaller and less frequent). Domestic gold jewellery retail price control was only abolished in August of that year.

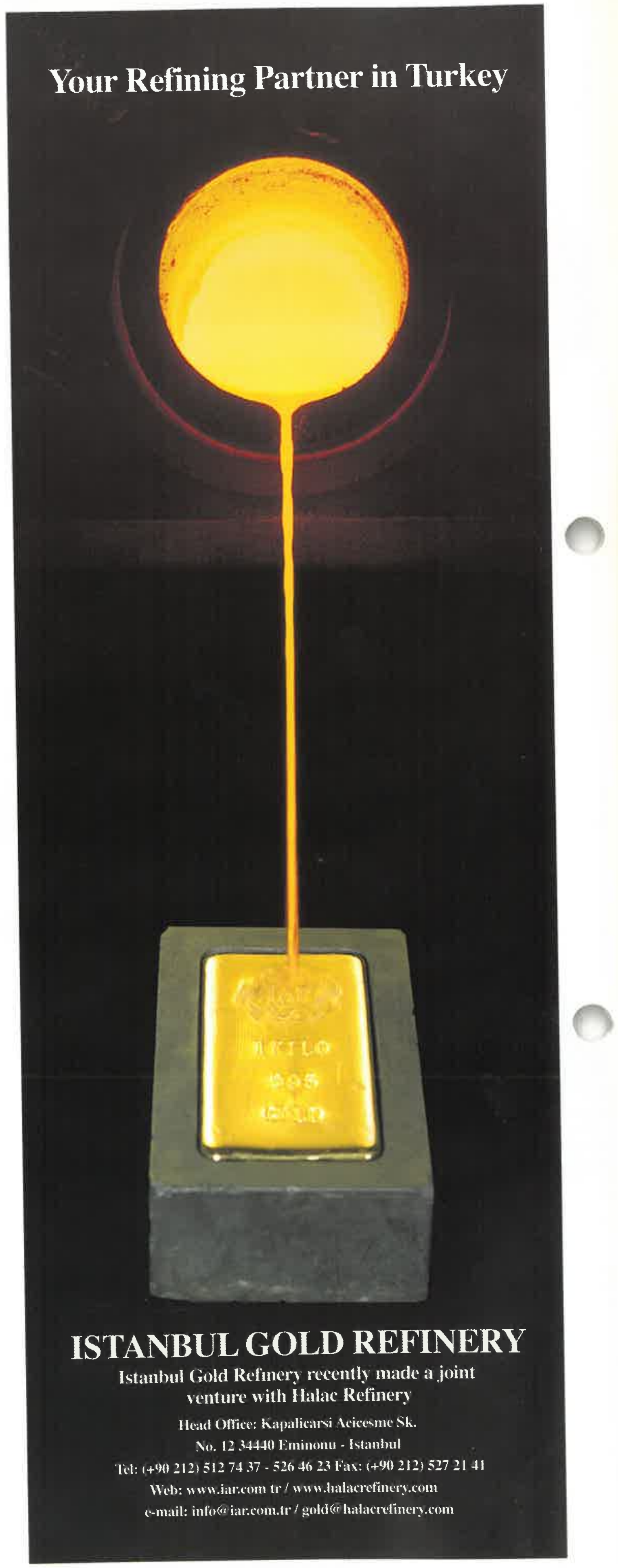
The announcement of the establishment of the SGE in September 2001 was a major watershed in the Chinese gold market. However, in practice its impact has been muted to date, somewhat predictably for the same reason that activity on the Huatong Nonferrous Metal Wholesale Market, which was set up in 2000 to trade silver, has been held back. As with the silver exchange, the full launch of the SGE has been delayed by wrangling over taxation – in particular the application of a 17% Value Added Tax (VAT) to transactions on the exchange.

On 13 September 2002, the Ministry of Finance and the State Tax Bureau announced a compromise that will see trading on the SGE exempt from VAT – a similar measure to the so-called "black box" treatment used by the London market. At the time of writing it is not certain exactly when and how this will be implemented. This, coupled to the fact that the PBOC is now buying less mine production should see China's domestic prices more closely aligned with those in the international market, eliminating some of the arbitrage opportunities that have existed in the past and moving the market significantly further down the road to liberalisation. Having said this, until the renminbi is fully convertible, gold will remain a useful tool for avoiding the vagaries of a society in transition. ■

The author would like to thank Roland Wang and Albert Cheng of the World Gold Council for their assistance. However, the views expressed are entirely the author's.

***Paul Walker** is the Finance Director for GFMS, in addition to being responsible for researching demand in the Far East. He joined the company in 1995.*

After graduating with degrees in commerce and economics from the University of Cape Town, Paul worked as a researcher in the UK House of Commons before joining the International Lead and Zinc Study Group, where he was involved in a wide range of economic studies and forecasts. He has a PhD in economics from the University of Nottingham.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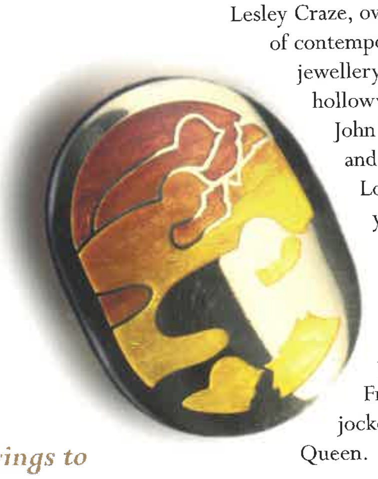
The 50 Golden Sovereign Stakes

UK Design Students Go for Gold

By Susanne M. Capano, Editor

In celebration of the Golden Jubilee of Her Majesty The Queen, the LMBA held its first jewellery design competition. The contest was opened to full-time UK-based design students at the end of 2001. They were invited to design a brooch on the theme of horse racing, the sport of Kings – and Queens – using only 18k gold, without gemstones. Their designs were to be submitted in drawings to the LBMA, with one winning piece made up for presentation to the Queen. An appropriate first prize was set – 50 gold sovereigns, equivalent to approximately £2,500 in cash – and two runner-up prizes of ten sovereigns each.



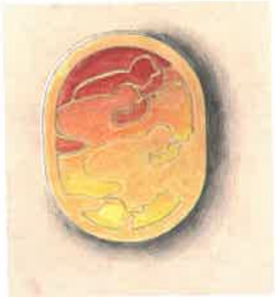
The panel of judges included representatives from the local jewellery industry and sports personalities. They were:

Lesley Craze, owner of contemporary jewellery hollowware and textile galleries;
John Donald, whose retail store and workshop in the City of London was established thirty years ago;
Theo Fennell, whose company designs and manufactures collections entirely in house
Clare Balding, a BBC sports presenter;
Frankie Dettori, a flat race jockey who regularly rides for the Queen.

By the close of the competition, a wide range of designs had been received – from modern to traditional, realistic to abstract – inspired by everything from the flowing mane of a horse to colourful hats worn by spectators in the stands. Rachel Coopey, a student at the Birmingham School of Design, provided the winning design, an oval enamelled piece. Second prize was awarded to Nicola Smith and third went to Rachel Ayerst, both also of the Birmingham School of Design.

The prizes were awarded at a reception held at Goldsmith's Hall in London, set to coincide with a special exhibition showcasing British design and craftsmanship in precious metals during the Queen's 50-year reign. The three prizewinners gathered together with LBMA members and guests on the evening of 25 June, when the Lord Mayor of London, Michael Oliver, accepted the brooch on behalf of the Queen. ■

Above, Rachel Coopey accepting the prize from the Lord Mayor and Rachel wearing the finished brooch



From left to right, Alderman & Sheriff Michael Savory, Martin Stokes, Rt. Hon. Lord Mayor Michael Oliver & Mrs Sally Oliver, Richard Came, Prime Warden, Goldsmiths' Company, Clive Turner

Conference 2002: A Review

By Susanne M Capano, Editor

'If I might suggest a theme for this year's Conference, I would select sustainability. I know that this was a topic at the recent mining conference in Lima, but I would like to extend the focus from sustainable mining to the sustainability of the very infrastructure of the bullion market as we know it – as well as to the sustainability of a gold price above $300.'

Then-LBMA Chairman Martin Stokes

In his opening speech, Martin noted that LBMA Conferences seemed to coincide with positive market conditions. Accelerated demand for gold resulting from producer buybacks and a background of economic concerns and political tensions had created a favourable environment for gold – but how long would it last?

The interior of the dome of San Francisco City Hall, the Conference Dinner venue

Topics and viewpoints ranged broadly over the course of the following day and a half, during six sessions of presentations that covered everything from theories on marketing jewellery to how real the prospects were of an imminent slump in mine production to prospects for the use of PGMs in the automotive industry.

Three economists from outside the industry – Robert Mundell, Avinash Persaud and Bernard Connelly – provided their potential scenarios for the global economy. While the three had different approaches, they were in agreement that prospects for the US dollar seemed likely to worsen, while the future for gold was looking brighter.

Then this question was addressed: Had gold's less-than-shining past perhaps given the metal an inferiority complex? The answer (or two) came from two psychologists who put the bullion market on the couch. Their diagnosis was that gold was in at least partial remission of its depressive disorder.

One session was devoted to the key issue of liquidity in the gold market, seen from the differing viewpoints of providers, users and intermediaries. Speaking as the provider, Jan Lamers of the Dutch central bank found that while the gold market was perhaps not as liquid as that of foreign exchange – a conclusion that did not surprise him – it had nonetheless provided lenders with some good opportunities. An article based on his presentation follows on page eight.

Upper left, Mark Fellows (Brook Hunt & Assoc), Daniel McConvey (Goldman Sachs) and Avinash Persaud (State Street Bank)

Lower left, in the foreground, Philip Klapwijk (GFMS), Wayne Murdy (Newmont Mining Corp) and Daniel McConvey

Above, Jan Lamers (De Nederlandsche Bank) and Peter Smith (JP Morgan Chase)

Originally opened in 1915, San Francisco City Hall is a designated national landmark

From left to right, Henry Yap (Johnson Matthey H K), Sunny Ogawa (Mitsui Global PM), Martin Stokes (JP Morgan Chase), John Burdsall (Heraeus PM Mgmt Inc)

From left to right, Shelley Eby, John Eby (Scotia Capital), Bong Hansen, Lori Dinneny, Tim Dinneny (ScotiaMocatta)

Above, the Conference Dinner

Right, the Grand Staircase in the Rotunda of City Hall

Above, from left to right, Vladimir Grigoriev and Vladimir Tarankov (Savings Bank of the Russian Federation), Sergey Zaychenko (Vneshtorbank), Inna Zaychenko, Vitaly Kropov (Bank for Foreign Trade)

Below, from left to right, Anton Down and Steve Scacalossi (Mitusi & Co PM Inc), Mark Greenleaf (JP Morgan Chase), Andy Smith (Mitsui)

Another well-received presentation came from Andy Smith of Mitsui & Co, whose somewhat unorthodox recommendations for marketing gold managed to incorporate Marge Simpson and McDonald's. His thoughts can be found in the article on page ten.

Outstanding weather provided the backdrop for the social events at the conference, which began with the Gold and Silver Institutes' Golf Tournament on Sunday morning and continued with the Conference dinner under the rotunda at City Hall on Monday evening.

Our thanks to all those who handed in a feedback form – their responses have given us valuable input for future conferences, and work has already begun on Shanghai in 2003. ■

Market Liquidity *A Central Bank View*

By Jan Lamers, De Nederlandsche Bank

When I was first asked to address the LBMA conference at the end of last December, there still was a decent gold lease market, though rates were quite low compared to where they had been ten months earlier. The three-month rate was hovering around 55 basis points and the 12-month around 120 points. What a change from today.

At the end of May, we had a seminar in our Bank entitled Financial markets – evaluating the past and discounting the future. Here I will mostly evaluate the past of the gold lease market. I will shed some light on our involvement in the gold lending market during the past 21 years and how, based on this experience, we assess the liquidity and transparency in the market.

DNB's Involvement in the Gold Lending Market

De Nederlandsche Bank has managed a portion of its gold reserves since 1981. We started with a maximum of ten tons and raised the lending limit over the years to around 140 tonnes currently. This increase was in reaction to growing demand for gold liquidity and occurred during a period when central banks were becoming increasingly proactive in managing reserves. Initially we limited ourselves to time deposits with a maximum tenor of three months, which was consistent with our policy in the currency portfolios. After we got more comfortable with the market and credit risk, the maximum maturity was extended to 12 months.

By using only time deposits, the maximum possible duration of our invested gold portfolio amounted to roughly 0.35 of a year. Given the shape of the yield curve and the low return at the short end of the curve, last year we decided to increase the maximum duration to one year, which we realised by introducing interest rate swaps (IRS) with a maximum tenor of five years. We do not consider IRS to be totally credit-risk free. Outstanding swaps are marked to market weekly, and is a positive market value of the swap is considered a credit risk and is charged to the credit line. After the implementation of IRS we gradually extended the duration of the portfolio to around 0.95 year by April 2002.

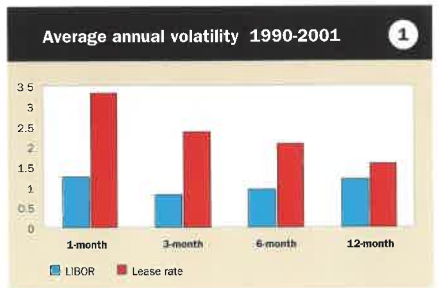
I will not elaborate here on the volume of gold available for lending. There is plenty of gold around now and over the past three years many before me have touched upon this topic. However, I will make one remark: given the decline in demand for gold liquidity and the consequent low rates, we have recently started withdrawing gold from the market, and I am almost sure that we are not the only central bank doing so. This means that if the demand for gold liquidity began to rise and rates with it, there would be a relatively large stock immediately available for lending, because lending limits remain unchanged. This may keep a cap on lease rates for some time.

Trading Liquidity in the Market

Because the concept of liquidity has many faces, it is difficult to define precisely. It is also hard to apply the different liquidity concepts to a market in which the lenders mainly offer gold through time deposits and swaps. The gold-lending market has traditionally been very one-sided: producers and the consignment industry are (or were) the main borrowers, while the official sector has been and is still the main lender. Furthermore, the majority of demand for gold liquidity tends to borrow long while – till recently – the supply tended to lend only short. This is in contrast to the more natural two-way market in the currency interest markets.

The first consideration in liquidity is tightness, which in my view is difficult to judge. A frequently used measure of tightness is the bid/ask spread, but I would distinguish between the quoted or indicative and the realised spread. As a natural lender, I operate mainly on the bid side of the market. In the daily emails I receive in which bids and offers are quoted, the spread is 20 basis points. In my experience, it is often possible to obtain a better bid than the rate indicated. But even then the spread is much wider than the six basis points one observes, e.g. in the dollar- or euro-deposit markets. With today's short-term lease rates in gold so low, these spreads look relatively large, certainly percentage-wise.

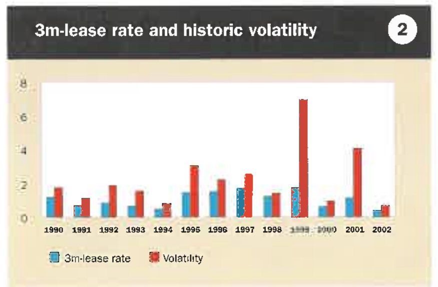
Although it is not my remit to defend the size of the spreads, here are some possible explanations. Notably when compared to the deposit markets of major currencies, the gold-lending market is very small, with its own characteristics. Therefore it might be expected to take longer to lay off a position, which may require a larger spread. Furthermore, wider spreads may also reflect in part the much greater volatility in gold interest rates compared to interest rates in currencies. I made some simple calculations on the volatility of gold lease rates and dollar LIBOR rates over the past 12 years, shown below.



Volatility is here defined as the standard deviation of daily changes in interest rates x square root 360
Source $-LIBOR and lease rates: LBMA

The average volatility for gold lease rates over the 12-year period 1990 – 2001 has been higher than the average volatility of the comparable $-LIBOR rates. Note that volatilities converge as the tenors get longer – without any apparent impact on spreads. The higher volatility may not only partly explain the wider spreads, it also tells us that the trading liquidity in this market is poorer than in the dollar deposit market (not a surprising conclusion).

In the following chart, I compare the average annual 3-month bid rate with the historic volatility. As you can see, higher lease rates tend to coincide with a higher volatility, lower rates with a lower volatility. This could indicate that spreads should vary somewhat with the absolute level of interest rates. Perhaps they do, but they haven't gone down aggressively lately. Some of my friends in the market would probably argue that spreads were not raised when levels were higher.



Lease rates are the simple averages of LIBOR-GOFO minus a spread of 20 basis points. Volatility is defined in Chart 1. The 2002 rates are from January up to and including April.
Source lease rates: LBMA

Instead of looking at the bid/offer spread, one can also consider the spreads between the bid rates of different counterparts. I receive eight daily emails with bid indications. During late February and early March 2002, I monitored the differences in the indicated rates over a two-week period, a relatively short time. On average the difference between the highest and the lowest bid rate for the 1, 2, 3, 6 and 12 months varied between 10 and 13 basis points, which is quite a large margin. While there was not a single counterpart systematically the lowest or the highest, it is not surprising that the banks with the highest credit rating were mostly in the lower part of the range. By the way, the average of these rates coincided quite well with the GOFO means.

My conclusion from this assessment is that the gold lease market is certainly not at the top of the liquidity league. However, given the nature of the market, one cannot expect too much. To be honest, it has offered some nice opportunities for lenders from time-to-time, so perhaps one should not complain.

Depth

Another way to assess liquidity is to consider market depth – whether transactions can be rapidly executed with only a small impact on prices. To what extent is it possible to lend deposits of a particular size without moving rates? We have never really encountered problems, but I have to admit we have never really tested the market by attempting to lend a large amount of fresh gold (e.g. 25 tons) in one shot. After we increased our lending limit, we only expanded the amount lent gradually. New gold was distributed over different maturities and counterparts. DNB uses 15 to 20 counterparts for gold lending and we try to avoid having large amounts mature on a single day.

Talking to colleagues, I get the impression that they act similarly. I am of the opinion that lending by individual central banks has hardly ever had a short-term impact on lease rates, which may not be the case with large hedging or de-hedging operations by producers. In the present circumstances, with declining demand, it is certainly not possible to lend a large amount of fresh gold without moving the rates still lower, unless you lend on the 1-month, where the rate is already zero.

In conclusion, considering the size and characteristics of this market, a gradual approach is always necessary – otherwise accidents will happen. After all, one cannot race through the streets of San Francisco during rush hour at 100 miles an hour.

Transparency

In currency markets, a monetary authority sets the interest rate deemed necessary for an economy. All other interest rates take this rate, together with expectations about future monetary policy, as a starting point. Things are different in Goldland. The neutral interest rate (or base rate) on gold is zero or even slightly negative, when you take into account storage fees. Gold lease rates are subsequently fully determined by supply and demand.

However, rumours do occasionally reign in this market. I often observe that many bullion banks do not know exactly what is going on, or don't want to say if they do. Producers have become more transparent on their hedging policies, but larger operations are only disclosed afterwards, for obvious reasons.

On the lending side transparency has also improved. In the September 1999 CBGA the signatories declared that they would not lend additional gold to the market (a transparency not well understood at that time). Two years later Giacomo Panizzutti released the amount being lent by the signatories.

Several central banks do disclose their lending volume, including the Bank of England, which publishes the quantity of gold lent. In its latest Annual Report, the Swiss National Bank not only disclosed the quantity lent, but also the instruments used, remaining maturity and the yield on its gold investments. I have dealt with many of these aspects as far as the Nederlandsche Bank is concerned, except the yield on our gold investments. Our earnings on the invested gold portfolio in 2001 amounted to EUR 16 million, a yield of approximately 1.1%. However, the contribution of gold leasing to the total earnings of the Bank is quite limited – approximately 1%. On the other hand, the contribution to the investments of the revenues from our gold sales has been a multiple of this amount and this makes our shareholders (Dutch taxpayers) happy.

Conclusion

Our increase in the supply of gold liquidity over the past 20 years has always been in reaction to increased demand. In other words, we seized opportunities the market offered to earn some income on an asset that was piled up in the vaults. It is not surprising that during 1995-1997, when lease rates were persistently high, we experienced the largest expansion of our gold lending limit. Despite the fact that the revenues from gold leasing are only a small part of our total earnings, it has certainly not been negligible.

Given the size and characteristics of the market, gold lease rates have been more volatile than currency interest rates. Therefore the gold lease market is not at the top of the liquidity league, but I do not consider this a real problem. Now that demand for gold liquidity is shrinking and rates are declining, we will lend less gold to the market and will as a result lose some income, but that is a market reality one has to accept.

Looking back, I am glad that I was asked to address this Conference, because in the years ahead the gold lease market may shrink further and, consequently, our involvement in it. And then there might not be anyone left with enough experience to deliver a central bank view on market liquidity. ■

Jan Lamers joined the Nederlandsche Bank's Foreign Department in 1979.

Since 1992, he has been a staff member of the financial markets department, responsible for the preparation and execution of the Dutch foreign exchange and money market policy. He was also closely associated with the policy actions during the ERM crisis in 1992 and 1993.

More recently he has been actively involved in the review of the Dutch monetary policy instruments in the runup to EMU- and in ESCB-related policy matters and in the management of the bank's gold investments and sales.

A New Error(s) in Gold

By Andy Smith, Mitusi & Co. Precious Metals Inc., London Branch

Evidently San Francisco and a gold bull market have much in common. This conference is a kind of collective coming-out party, an occasion for dancing with bulls. And there is a certain logic that the Left Coast (fairies and elves are some of the saner people you'll meet) should be the place to entertain 'left field' ideas.

Keen eyes will have spotted the typo in the title – yes, I meant 'errorS', plural. The twin fallacies that:

- Physical demand is a perpetual motion machine, and
- Official gold policy is a perpetual inertia machine.

> *"There is no logic to San Francisco generally, a city built with putty and pipe cleaners, rubber cement and coloured construction paper. It's the work of fairies, elves, happy children with new crayons."*
> Dave Eggers, 'A Heartbreaking Work of Staggering Genius', 2000

A spanner will be thrown in these works. Then major repair work suggested.

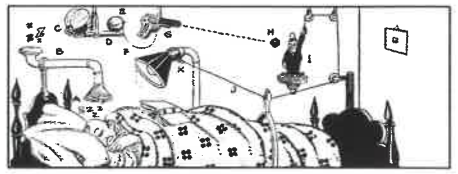
Of all the local fairies and elves to choose from, two San Franciscans received most votes as inspirations for this errata essay. First, the 'Sisters of Perpetual Indulgence'. This band of brothers/sisters – numbering among their brood Sister Lilly White Superior Posterior and Sister Dana Van Equity – believes in transparency almost as passionately as some in the gold market.

The other candidate was Rube Goldberg (the Heath Robinson of America), whose cartoon inventions illustrated difficult ways to achieve easy results. As he put it, his machines were "symbols of man's capacity for exerting maximum effort to accomplish minimum results", that 'the unnecessary can be the mother of invention.'

Welcome to the Rube Goldberg gold market. Start up to three miles underground (and in the sky). Dig an average 12 tonnes of rock per ounce of gold. Add perhaps an equal amount of waste and that amounts to a mountain of two billion tonnes of rubble per annum required to extract a year's supply of gold from mines. Then push the ore through a refining industry carrying perhaps over 50% spare capacity to painstakingly produce the purest good delivery bars and coins. Proceed to corrupt these in the West (above board) by adding up to 50% of baser material, and in the East (underground) by infiltrating sometimes over 25% of less-than-investment grade material into so-called 'investment jewellery'. Riddle this machine with middle men (gold miners may mine money, bankers print it?) and you have a unique 'value added-value destruction' machine Rube would have been proud of.

In the May 2000 paper *The Benefits of Expediting Government Gold Sales*, co-authored by Federal Reserve economist Dale Henderson, the Rube-ness of this negative-sum operation was perceived. And a rather radical simplification proposed.

"Additional gold for any private use can be obtained either from mines or from government stocks. The cost of extracting gold from the mines is approximately $250 per ounce. However, the resource cost of drawing down government stocks is zero…Governments maximise their discounted revenues by immediate sales." "Production efficiency" is won by "beginning to use costless government gold now and postponing *any* costly extraction from the mines" (italics mine). Of the calculated $340 billion addition to the sum of human welfare, almost three quarters would come from eliminating this production inefficiency. By allowing the Rube Goldberg gold market to clank away, "delayed government sales…force the private sector to rely on a source of supply with higher extraction costs."



Error 1: Physical Demand Perpetual Motion

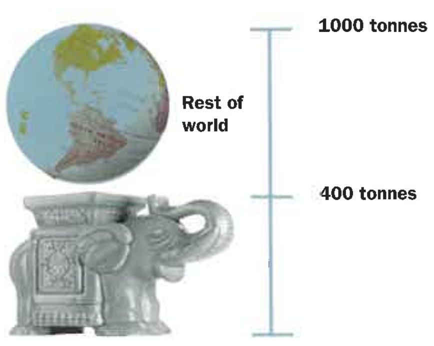
Metal hedges are not the only threat to gold demand in the East. The 'captive' Eastern audience for so-called investment jewellery is being 'freed' by higher-calibre financial choices. If there is a Golden Gate linking Eastern and Western gold-buying cultures, beware: traffic is flowing unerringly West to East.

Physical demand has ridden the back of India for over a decade, precariously, with buying buoyed by a highly developed appreciation of risk in a heavily, sometimes brutally constrained choice set. Serviced by jewellers acting as financial intermediaries.

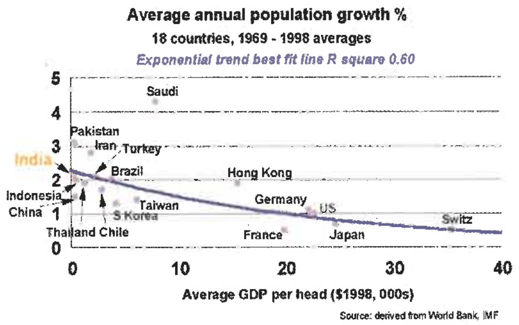
But the Indian beast of burden is buckling – despite growing incomes, the best monsoons Indian Gods could deliver and generally attractive local gold prices. Barriers against and the price of investment gold substitutes are falling fast. It's called 'progress'. It is cumulative. It is a-cultural, recognising few borders. And it is irreversible:

- As incomes rise, population growth slows. In time, women's liberation may even threaten the central role of (gold-lubricated) marriage as the principal means of social mobility in India.

Beast of Burden



India's contribution to growth in jewellery demand 1989-2001



Make love for gold - faster

Source: derived from World Bank, IMF

- Rising incomes also mean there's wealth to preserve, and that demands lower inflation. This trend is re-enforced as freer-flowing international savings flee remaining pockets of high inflation. As money becomes worth the paper it is printed on, formal financial avenues – banks, stock markets – replace the back alleys of informal (gold-based) savings.
- Surprisingly early in this 'coming out' of Eastern savings, outlays on insurance exceed those on gold. Nascent insurance industries in India and China (40% of global population) collect lower premiums than Swiss insurers. Not for long.
- Rising literacy rates and the collapsing cost of communication inform choices formerly made (constrained) in rural isolation.

Contemplating India following the gold tastes of higher-income, wider-choice Eastern neighbours [more proximate role models than Western ones] is to watch an elephant being culled. So how to 'save' India for gold? Or, more fashionably, what can the Western gold market learn from Eastern demand attributes?

Success in proselytising high-carat gold demand the Eastern way would be greatly enhanced by stripping away banks, insurance policies, stock markets, low inflation, democratic government, high literacy rates, women's rights, and social mobility outside marriage. Welcome to an economic sensory deprivation tank.

Let's assume global regress is not the way to shore up physical gold demand in the East or West. Dismount that high-carat horse/elephant. More off-the-wall, or of-the-Walmart ideas are required.

Contrast the gold buying cultures of Italy and the USA. For Italians, unarguably dedicated setters of fashion, gold is not haute but basse couture. In the USA and other gold-demand growth enclaves in the West, low-carat jewellery captures the wallets of the 'great unwashed' seeking to belie/camouflage their status as cheaply and loudly as possible – a phenomenon partly made in India.

In his paper, *Poverty and public celebrations in rural India*, Vijayrendra Rao of the World Bank explains why the very poor in India spend so much in ostentatious demonstrations of status. Maintaining "social reputation" is a must; in extreme poverty "what others think of you… can mean the difference between life and death." Celebrations are "arenas for status-enhancing competitions". On 16th January this year Federal Reserve chairman Alan Greenspan might have been cribbing from the same notes; the traditional acceptability of gold (and silver) as money was linked to "people's desire for ostentatious gold and silver ornaments".

That was when ostentation was cool, of course. But it still is for those at the bottom of the income chain, even in countries with the very highest average incomes per head. On 8th May the Financial Times ('Poor choice for forgotten consumers') journeyed into this "forgotten hinterland of impoverished consumers – the so-called Ds and Es – who have neither the money nor the education to make them interesting fodder for marketers." Some 28% of adults in The West are branded D or E – under-educated and "less likely to experiment". Gold's kind of people.

The typical D/E Western gold buyer is a beer-swilling, video-watching, cigarette-smoking, meat-pie-eating, public transport user (all 'tastes' he tends to grow out of as he gets richer). According to one website synopsis, "his villainous foible is that he 'doesn't trust banks', with the result that he 'puts his money where his mouth is' in the shape of gold teeth."

Chew too on this: gold's people don't need jewellers. They need garden tools. According to *National Jeweller*, of the top ten US jewellery sellers, only three are actually jewellers; seven are discount or department stores. And the top ten sell $11.8 billion of jewellery, more than double the next 20. As John Calnon (formerly with QVC) told the 15th Annual Meeting of the World Gold Council in May 2001, jewellery sales at discount stores grew "an astounding" 272% in the ten years to 2000 while price per unit fell from $89.27 in 1993 to $80.13 in 2000. "Often perceived as a threat, this lower average price has been a competitive opportunity for gold versus other jewellery products as it has become more affordable to a broader base of consumers."

Still sceptical? Surf Tiffany's website, explore their 'jewellery expertise' advice. Note the two bullet points:

- How to buy a diamond
- How to buy pearls.

Now visit Wal-Mart's web store. "Learn the difference between 10-carat and 14-carat" gold. And how about this 'buying tip': "If you are looking for good quality at a good price, choose 10-karat gold" since "in its pure state gold is too soft to be worn as jewellery." This pitch has about as much to do with the marketer's pet social theory – a trickle down of most tastes from the top of a pyramid – as Peoria has to do with the Pharaohs. "Wal-Mart knows the best ideas have come from our front line Associates – greeters, checkers and stockers," i.e., from the bottom up.

Founder Sam Walton never forgot the lesson he learned from a ladies' panties seller: "Say I bought an item for 80 cents. I found that by pricing it at $1.00, I could sell three times more of it than by pricing it at $1.20. I might make only half the profit per item, but because I was selling three times as many, the overall profit was much greater." Along with most Economics 101 students, Sam learnt that cutting price increases demand and revenue when you are selling 'luxury' fripperies. Is the message finally reaching the gold industry? In India, most pieces in the WGC-promoted 'Collection G' sell for less than $100. In South Africa, the 'Oprah charm' sold in the initiative to raise funds for AIDS victims is fully 9 carats.

Follow Sam's logic a while longer (3100 stores across America later, there might be something in it). Admit the possibility that the growth of new uses for gold, from dental fixtures to nanotechnology – the kind where gold sticks and rarely comes back to haunt the market as scrap – will be price dependent, i.e., needs cheaper gold.

Gold requires re-packaging. Literally. So stop the dalliance with McKinseys, welcome to McDonalds. Golden Arches, indeed – they owe us! Through their 29,000 outlets in 121 countries (34 in India), and a $3 billion p.a. advertising budget, let's create 'Fast Gold' nations. "Fries with that earring, sir?"

Error 2: Central Banks' Perpetual Indulgence

Since the September 1999 'Disposal of Gold' Agreement announcement, central banks have had a mission, and a position.

Almost all in the market look forward to the 'DoG' rolling over in 2004. Another five-year 'free' put option – a ceiling on sales no matter what the price? Stability pacts, quotas and other regulations may be the hallmarks of Euroland, but surely a more OPEC-like, market-responsive arrangement on official gold sales might be expected? Presumably sensitive to the room for extra disposals obligingly provided by gold miners reducing their hedging? Even a review of the rationale for treating gold like a special needs asset at all? This is warranted on at least three counts:

- Gold remains the second most important official reserve asset after dollars. Why then treat it as a 'scheduled caste' among assets? Has a victim culture pervaded the market – having suffered from central bank success in reducing global inflation and economic instability, is gold now to be cosseted in an official guilt trip?

- Rollovers of the DoG risk diminishing returns, increasing the possibility that gold will be stigmatised as 'untouchable' by potential new (private) investors.

- Gold activity itself has terrifying time decay. At the current rate of decline, will the last person in the London bullion market in July 2007 turn the lights out?

High time that central banks found some credibly 'important' reason to hold gold. September 11 will do – as at least three eminences grises have hinted: (italics below mine)

First, in his epistle to Berkshire Hathaway shareholders this year, Warren Buffett viewed terrorism as a "new exposure." The probability of "mind-boggling disasters, though likely very low at present, is not zero...there can be no checkmate against hydra-headed foes." A "close-to-worst-case" scenario "could conceivably involve $1 trillion in damage." This would destroy the insurance industry "unless it manages in some manner to dramatically limit its assumption of terrorism risks. *Only the US government has the resources to absorb such a blow.*"

Second, Mr Greenspan's thoughts on terrorist insurance: "It is exceptionally difficult for an insurer or even a reinsurer to have any sense whatever of what the probability distribution of a terrorist event is, and more importantly, what is its magnitude...what may be necessary here is for Congress to stipulate that in the event of a terrorist attack, the federal government, with some deductible, would cover the cost...*before the event it's almost impossible to know precisely how to construct a response to it... we don't know the nature of what it is we are facing.*"

Third, in November 2000, Hervé Ferhani of the Banque de France was more than prescient: "Clearly security is the over-riding quality of gold...contrary to most other assets, gold prices go up when things really go wrong...*gold can be considered an insurance policy for large countries.*"

Marry these musings to the dilemma outlined by the American Insurance Association. In a BBC World Service interview on April 30, they defined terrorism as "uninsurable"; you "cannot price a product." The AIA is lobbying for a federal government "backstop... a mechanism to only be accessed if another terrorist attack occurs." On the same hymn sheet, the Alliance of American Insurers: "terrorism is an uninsurable event...*the federal government must act to provide a backstop for terrorism reinsurance.*" (italics added) and the American Academy of Actuaries: "terrorist attacks are infrequent, possibly unprecedented...the frequency and economic severity of these risks remain unpredictable."

Insurer of last resort, a prima facie case of market failure (the 'pooling' principle of insurance does not work without a cap on payouts); supervisory responsibility for financial markets – government is overqualified for the job. President Bush has proposed the insurance industry pay all terrorist damage claims up to $20 billion, then split them 50/50 with government up to $40 billion, then government would cover 90% of obligations above $40 billion, all subject to a $100 billion cap on federal expenditure. He needs ammunition – a gold arsenal?

Gold's 'conceptual capital' is precisely as insurance against some unquantifiable, unforecastable economic or political risk (have we learned nothing from the sad predicament of individual Eastern buyers of 'investment' jewellery?) A major terrorist attack fits that horrendous bill. For this insurance cover, taxpayers indirectly pay a premium in official storage costs of gold and foregone yield on alternative assets. Willingly? Let's find out. Anyone know Mr Bush's email?

Dear Mr President,

Will the US authorities consider allocating a portion of gold reserves as a Terrorism Re-insurance Fund? Make a commitment now to realise the capital gain on part of the reserves if another major terrorist event caused damage over a certain multi-billion dollar threshold? At current market prices (around $315/oz), 8,150 tonnes of US reserves show a 'conceptual' $72 billion in capital gain over book value of $42/oz.

Claims from the World Trade Centre atrocity lie in a $30-70 billion range. If your burden-sharing formula were in place and another terrorist event inflicted damages in the middle of that range, i.e. $45 billion, the government's liability would be about $15 billion. If half this obligation were met from general tax revenues, then about 850 tonnes of official reserves would need to be sold over a period to realise a $7.5 billion capital gain.

How to define 'terrorist event'? How about when the gold price is rising strongly after a major incident – precisely when official selling into strength would be thinkable [and more sensitive than the block 400 tonnes p.a. sales under current DoG arrangements]. Pledging a portion of gold reserves to this eminently good and logical cause would help prevent the 'market failure' that chokes off anti-terrorism insurance and so hurts the US economy.

Much depends on how such a Terrorism Re-insurance Fund is presented. 'Mobilising war chests in time of war' has a ring to it. If the next DoG embodied some of these re-insurance features, might the US sign up? Properly packaged, it might help restore gold's 'conceptual capital' as a reserve asset.

Yours faithfully
The Gold Industry

Suppress the uneasy feeling that even in this role, for which gold reserves seem ideally suited, the numbers do not add up. Press the send button. If there is half a chance that central banks could transform themselves from Sisters of Perpetual Indulgence into Sisters of Perpetual Insurance, it is surely worth a try.

Cross-dressing not required. ■

***Andy Smith** is principal commodities analyst at Mitsui & Co Precious Metals Inc., a position he has held since 1998. For the ten years prior to this he was precious metals analyst at Union Bank of Switzerland. Previous positions include group economist at Consolidated Gold Fields and senior economist in British Petroleum's corporate strategy division. He has also worked with the UK government, principally in Treasury, modelling world economy and in the economic briefing department.*

Andy holds degrees in economics from Reading University (BA, first class honours, 1975) and London School of Economics (Master of Science, Distinction, 1977).

The True Believer

By Barton M. Biggs, Chief Global Strategist, Morgan Stanley

This article has been adapted from an article that originally appeared in the July 17, 2002 edition of Morgan Stanley's US Investment Perspectives.

We are in for an extended period of mid-single-digit returns in both stocks and bonds. Large portfolios are going to have to be imaginative and unorthodox to beat 6% nominal in my opinion, and there will be bigger allocations to hedge funds, arbitrage strategies, real estate, emerging markets, and private equity. Whether all these asset classes work as advertised – or the capital markets arbitrage out the excess returns – is a horse of another color.

In that regard, a horse I have never believed in is gold, for all the conventional reasons, but now I am changing what's left of my mind. I think there is a plausible case that a professionally managed portfolio consisting of the metal itself and gold shares could realise returns of 15% real per annum in the difficult environment ahead. Here is the story.

Gold: Complex, Misunderstood, Under-Researched

I know a number of investors who are deeply, almost fanatically committed to an investment philosophy. They are the "true believers." The purest, most steadfast disciple of an asset class I know of is an old friend, Peter Palmedo, who is a gold disciple. He came up with gold because it was complex, misunderstood, under-researched, and susceptible to his option-pricing theories. As he studied the literature, Peter focused on a long scholarly piece written in 1988 by Lawrence Summers (later Secretary of the Treasury and now president of Harvard) and Robert Barsky, entitled Gibson's Paradox and the Gold Standard.

The conventional wisdom is that gold is a barbaric metal, it has a negative yield, and its only role is as a hedge against inflation and the apocalypse. By contrast, Summers and Barsky argued that the relative price of gold is driven by (and is the reciprocal of) the real rate of return from capital markets and that this relationship has strengthened since the price of gold was floated.

A horse I have never believed in is gold

Peter points out that this relationship to the capital market's real return and particularly to the stock market has proved stunningly consistent since that paper was written. Since 1988 the price of gold has had a negative 0.85 coefficient of correlation with the S&P 500 and an R squared of 72%. As things got crazier since 1994, the negative correlation rose to 0.94, with an R squared of 88%. In other words, the stock market explains 88% of the weekly price fluctuations of gold over the last eight years. The long-term correlation with Treasury bonds is not as high but still very significant.

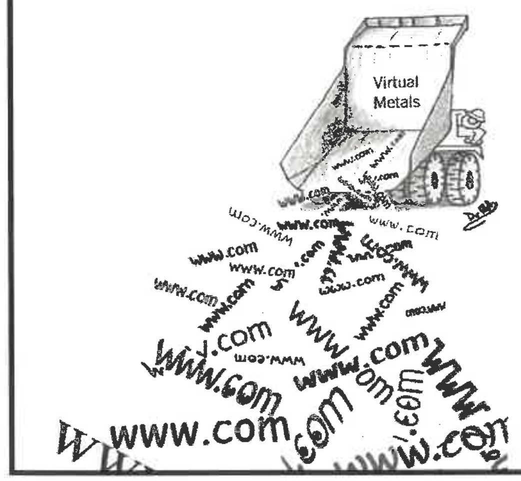
As he explains it, the so-called "problem" with gold, which causes its erratic price behavior, is that the elasticity of a positively sloped investment demand function overwhelms the inelasticity of supply. Only 18% of the gold mined throughout history is held in investment form, or slightly more than $200 billion. The investable capital markets of the world are estimated to be about $60 trillion. In a low-return cycle for stocks and bonds, monetary and investment demand for gold turns positive, and there is a dramatic shortage of available metal...The point is that it is not inflation or deflation that is the principal driver of gold, but the return from other long-term financial assets, particularly equities.

but now I am changing what's left of my mind.

If we are in an extended low-real-return period for financial assets, there is a place for a gold investment programme in both large and small portfolios. So if you believe this story and think the real return from capital markets over the next decade is going to be 4% per annum, the real return from a managed gold portfolio is going to be around 15% real (+7% metal, +1% allocation, +14% gold shares, plus eight percentage points of alpha).

I don't need to tell you that returns of this magnitude would be spectacular, but I strongly suspect that the returns would be highly volatile given the history of gold. How much should a large fund have in professionally managed gold? I say 5%.

It certainly is possible that gold can return to its long-term equilibrium inflation price of $500 an ounce, or even take a run at its all-time high of close to $1,000. What would cause such an explosion? A steep decline in the equities market, higher inflation, or competitive devaluation of the major currencies. In a bleak world, gold could beat almost everything else. ■



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Eating An Elephant with a Small Spoon *India's Tangled Relationship with Gold*

By Gary Mead, Senior Commodity Analyst, Virtual Metals

Receiving a commission to study the socio-economic factors underpinning Indian gold demand felt a bit like being challenged to swallow an elephant. The study was prompted by the concern of several of the world's biggest gold mining companies (Gold Fields, Harmony, Western Areas and Barrick/Homestake) that India, the biggest market for newly mined gold, may be experiencing profound social and economic changes which could seriously affect demand. "How long can we sell our ten-tola bars to India?" was one pithy way of expressing this concern.

Our findings reveal a society in the midst of rapid development in some respects, but in others – many having significant bearing on the gold market – showing little or no expectation of radical change over the next two decades. From what Indians themselves told us – and by definition we can only claim that our research captures current, not eternal, truths – it turns out that much of what is normally published is superficial and poorly examined.

One fundamental issue we needed to tackle was: to what extent are gold and weddings inextricably bound in India?

One difficulty is that there are no hard-and-fast statistics as to how many weddings take place in India each year, and no compulsory registration of marriage. Our sources suggest there may be as many as eight million weddings – and as much as 70% of gold jewellery sales is marriage-related – but even if there were twice as many, to simply say that marriage drives gold demand still begs the question: What is it about gold per se that seems to make it such a necessary component of wedding ceremonies?

In a Hindu wedding, gold has familial connotations. A lot of gold given at weddings is not newly purchased but handed down from mother to daughter. As one of our interviewees put it: "When my mother gives me her gold she is conveying to me her lineage. She is demonstrating to me that she comes from a strong stock. It's a symbol of how well she has done, that she has taken care of herself and her assets – and has never had to liquidate her assets." As the precious metal most closely associated with the many thousands of Hindu deities, gold has religious connotations within Hindu culture as well.

Inheritance is another factor. Traditions among the Hindu population (more than 80% of India) still work against female inheritance of fixed family property. A Hindu woman is often excluded from her father's will because, in an effort to keep the extended family wealth together, the father is determined to ensure that only his sons inherit. Thus the loading of gold jewellery onto a Hindu bride performs several functions, ranging from social display to ensuring that the marrying daughter gains what is seen as her share of the family wealth.

While the giving of dowries has been illegal for many years, the practice is still thriving and, in many parts of the country, on the increase.

As one interviewee put it: "In dowries, consumerism is becoming a major factor. Gold, jewellery, bits and pieces of furniture – now people are demanding vehicles, much more cash. There is a kind of get-rich-quick mentality in many of these cases – get the consumer items you want, TVs and so on. But if there is a shortage in the home, the last thing to get mortgaged is the woman's jewellery."

INDIA'S GOLDEN ERA
THE AGE OF KALIYUG

Dowry is not only illegal but also arguably immoral, as very often it is extorted from the husband and his family. On the other hand, even some Indian feminists defend dowry as, in itself, being one of the few means a woman may have of obtaining property.

There is an important distinction between dowry and stridhan, meaning "property of the woman", which is still very powerful in Hindu culture. While dowry refers to property brought by the marrying daughter to the husband and his family, over which she may have little or no control, stridhan entails gifts – often, gold jewellery – given to the daughter for her sole and exclusive possession. For many women whose marriages end, stridhan is the only form of property they can call their own, the only investment that keeps them from penury.

There are some significant dangers on the horizon to the simplistic notion that Indians will perpetually buy gold just because they love it – among them the impact of aggressively-funded diamonds, the launch of hallmarking and the attempts to brand gold.

But with some careful planning and, above all, a determination to try to see gold's place in Indian society as Indians themselves see it, there are still real opportunities for gold in India. ■

Gary Mead has been a journalist with the BBC, Granada TV, and the Financial Times, where he was commodities correspondent. Prior to joining Virtual Metals, he was head of research at the World Gold Council. Gary is the author of **The Odyssey Illustrated Guide to South Africa**, *and* **The Doughboys - America and the First World War** *(Penguin).*

Copies of the 260-page report, India's Golden Era: The Age of Kaliyug, are available from Virtual Metals, price $9,000.

A Viewpoint From 'Mr Gold'

Giacomo Panizzutti left the Bank for International Settlements on 30 September, after a career spanning 34 years and a wide range of areas with the bank, including asset management, capital markets and foreign exchange and gold. Promoted to head of foreign exchange and gold in 1993, he has been responsible for all marketing and trading activities with central and commercial banks worldwide. In 2000, he was the recipient of the New York Mercantile Exchange's Distinguished Leadership Award for outstanding contribution to the precious metals industry.

A Look Back...

During his 15 years in the gold market, Giacomo has seen quite a shift in central bank attitudes to gold. Years ago, central banks didn't really concentrate on rates of return – until they came under increasing pressure to maximise returns on all their assets and every basis point earned became important, including on gold in the vaults.

The volume of central bank gold being lent expanded greatly in response to increasing demand from producer activity, which drove gold lease rates sharply higher over the course of his career – though today's lease rates have once again been approaching the low levels he first saw when his involvement in the market began.

Since 1999, Giacomo has been co-ordinating the activities of the group of central bankers responsible for supervising the Central Bank Gold Agreement. The agreement was instituted, he says, "by increased central bank awareness of the need to manage their gold reserves – as well as calls from producers and producing countries for more transparency of central bank activities in the market."

The fear of central bank sales disturbed the market, though the price tended to move in response to the announcement that a sale had taken place rather than the sale itself, which was usually conducted in a price-sensitive manner. Speculation focused on future sales – when, how much, by whom. The agreement sought to remove some of these doubts.

...And A Look Ahead

What is the future for the CBGA? "I still believe personally that the Agreement will be extended in 2004," he says. "Prevailing market conditions will determine what modifications – if any – are made. If demand is strong, it is logical to increase the amount; if it is weak, then better to lower it. Of course, the Agreement cannot only be based on then-current conditions, but must take into account what is likely to happen a further five years out."

Since his retirement was announced, Giacomo has received many messages from the central banking community. After all the time spent in his advisory role, he has established many good contacts – some have come to call him 'Mr Gold'. ■

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India's Consuming Interest in Silver

By Rajan Venkatesh, Director of Marketing, India Bullion, The Bank of Nova Scotia - ScotiaMocatta

India, the world's largest consumer of gold and silver, has traditionally been described as a sink for precious metals, 'with a thousand gates for their entry and none for their exit'. Over the centuries, a key element of India's maritime and overland trade has been the import of fairly significant quantities of precious metals – mainly silver – on a regular basis. In the virtual absence of domestic production, the gold and silver used in coinage, in temples, as ornaments by women, and more recently as an investment option has come from overseas.

Historically the most important source has been western Asia, which in turn received its supplies largely through trade channels from southern and eastern Europe via the Levant. Yemen and Persia provided significant quantities to the west coast of India, where the leading ports were Cambay (later Surat) and Calicut. Southeast Asia was also an important source.

Today, apart from London, the largest supplier of silver to India is China. As the Indian market develops and a wider range of precious metal investment products becomes available, there will be increased trading opportunities within India and with the global market – which will benefit from being backed by the quality assurance of the Good Delivery List.

A silver shop in Bangalore

Silver Harvest

Approximately 4,000 tonnes of silver are consumed annually in India, the vast majority of which is used in the production of ornamental items – jewellery, utensils and gift articles. Industrial uses play a smaller part, accounting for about 300 tonnes.

In rural communities, silver, considered a hedge against inflation, also provides an investment function. Far more affordable than gold, it is purchased by small families in the form of jewellery, while more wealthy farmers prefer bars, generally 15-30 kilos in size, which come from Good Delivery bars that have been chopped up. Farmers reportedly bury the silver bars in their fields along with the crops. After a bad monsoon, or if there is a crop failure, it is said that silver becomes the harvest.

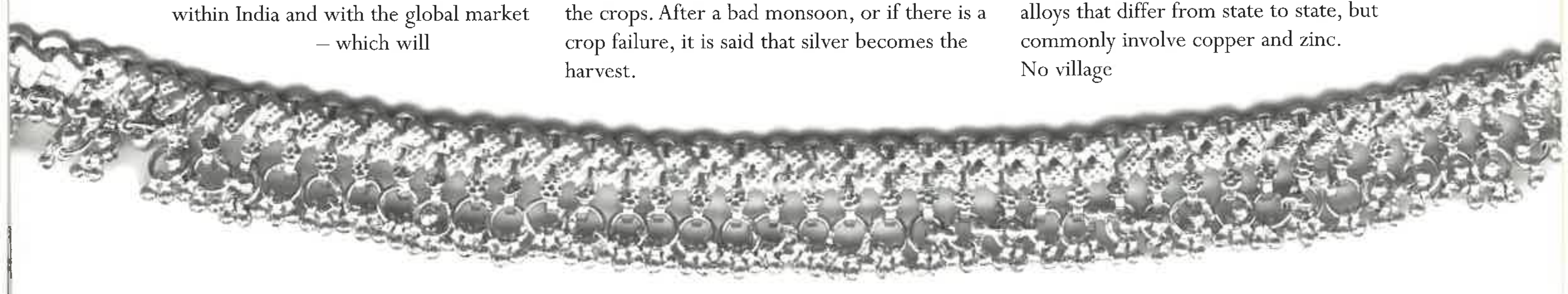
Jewellery Markets – Domestic and Export

Jewellery designs can carry a special significance: some are only worn by young children, others denote marriage and still others widowhood. There are also regional variations, so that the style of jewellery worn in one part of the country is completely unknown in another. Even communities living side by side will each possess their own distinct pattern. This is clearly visible in places like Banni, Kutch in the west India state of Rajasthan, where a huge conglomeration of castes and sub-castes has an enormous range of designs, some of the most spectacular in the country. Thus silver ornaments take the place of a visiting card – one glance at the wearer tells you everything about her, from her address to her marital status.

One tradition among Indian village communities is the wearing of extremely chunky silver jewellery, and the evolution of this style reveals a great deal about Indian village life. It was initially dictated by economic considerations – because it was worn on the person, and no village woman was ever expected to be alone or far from home, jewellery was safer from thieves than cash would be. Secondly, the jewellery conferred status upon the wearer, or more to the point, her husband. Thirdly, for centuries village women have bought silver jewellery in times of wealth only to sell it for cash in periods of distress.

Once the jewellery is sold, it is not put back up for sale to another wearer – no village woman would dream of buying used silver. There is a superstitious horror of possessing something second-hand. The silversmith tosses repurchased items into the melting pot, from which they will be fashioned into new pieces.

Indian silver jewellery must have a minimum purity of 50 %, the rest being made up of alloys that differ from state to state, but commonly involve copper and zinc. No village family would want to purchase silver of a lower purity, nor would any silversmith agree to buy it back. Tradition determines the exact purity, which is not indicated on the piece, but again varies from region to region. For example, silver ornaments in Gujarat usually have a purity of 70 %, while in neighbouring Rajasthan, 85% is the norm.



Over the last decade, India has become an exporter of hand-made sterling silver jewellery, and having comparatively cheap skilled craftsmanship has given the country a competitive edge over other South Asian countries, where silver jewellery is machine-made.

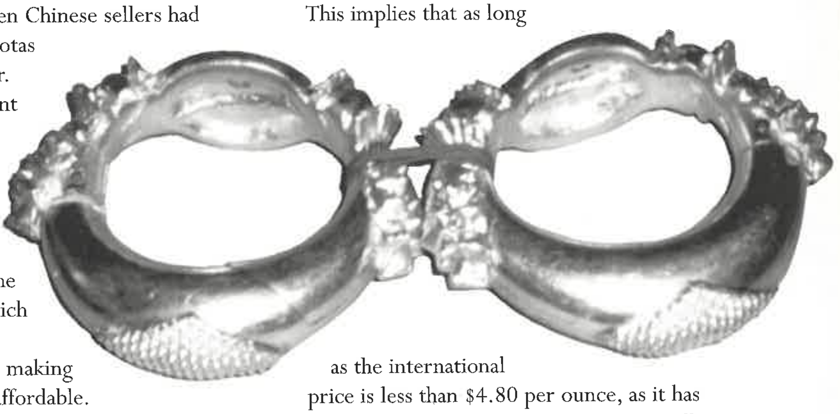
Much of this jewellery is adapted from traditional styles, but is modified to suit the Western wearer, being made from sterling silver, with the highest possible purity of 92.5%. Such purity would be unheard of for domestic jewellery, where the common range is 75 - 85 %. A few dealers sell export-style sterling silver domestically.

Demand in 2002

Indian silver demand has been steady throughout most of 2002. Further buying was sparked following a temporary shortage of overseas supplies in May 2002 when shipments were delayed when Chinese sellers had oversold their quotas earlier in the year. Another important factor underpinning demand this year has been the appreciation of the Indian rupee, which has risen by over 1.1% since June, making the metal more affordable.

Heavy weight silver anklets are the norm among tribal women in Rajastan

At left: A payal, or ankle bracelet. Most Indian women will have several pairs of payals, which are always made of silver – gold is not worn close to the ground, for fear of it becoming dirty



Industrial uses account for about 300 tonnes of consumption a year. The biggest increase in industrial silver demand in India last year came from pharmaceutical and chemical usages, which rose over 60 %, with much of the growth due to silver nitrate production. In addition to its uses in photography and medicine, silver nitrate is used to make mirrors, indelible ink and silver plating.

Though it only accounts for about two tonnes of consumption per annum, uses of silver are also growing in ayurvedic medicine, which involves the use of herbal medicines and preparations, many of which contain gold and silver. It is estimated that in India, ayurvedic practitioners cater to more than 600 million people – a number constantly increasing as many people seek alternatives to the drugs used in allopathic medicines, which are perceived to have adverse side effects. A largely unquantified amount of silver is also literally consumed by Indians in the form of sweets.

Jewellery and silverware offtake in the Indian subcontinent is estimated to have increased by 1.6 % to 2,630 tonnes from 2,589 tonnes in 2001. As with gold, demand for ornamental silver is affected by the festive and marriage seasons in February, April, June and September as well as the monsoons between June and August. Though the monsoons were on time this year, they were very inconsistent throughout the season, and this depressed demand – year-on-year June silver consumption was sharply lower. But as the monsoons progressed, and the festive and marriage season came into sight, demand in silver has steadily increased and good buying has been seen across the country.

Because its demand is very price-elastic, India will remain one of the most important swing factors in the global silver market. The key psychological level for local prices is currently 8,000 rupees per kilo. To translate into international prices, consider that Indian jewellery is sold based on the weight of the piece plus a mark up, usually 10 to 15%. This implies that as long as the international price is less than $4.80 per ounce, as it has been for most of the year, local prices will remain below 8,000 rupees, thereby keeping Indian silver demand buoyant – likely to be the case for the rest of the year. ■

Above, anklets from Indore, Madhyapradesh

Below, silver's anti-toxic properties being put to the test

***Rajan Venkatesh** joined Scotiabank in 1984 and was initially responsible for branch operations in Mumbai.*

In 1998, he joined ScotiaMocatta with responsibility for bullion marketing and product development for all of India.

He has a Masters degree in commerce with a specialisation in banking and international finance.

Market Moves

James E Burton has been appointed chief executive officer of the World Gold Council, with effect from 1 October 2002.

From 1994 until September this year, James was CEO of the California Public Employees Retirement System (Calpers), the largest public pension system in the USA. Prior to working for Calpers he was deputy state controller for the State of California, and has held other positions in the state government.

During his tenure, Calpers pioneered a more activist approach to institutional investing, emphasising corporate governance issues and insisting on management and board accountability to shareholders. He designed and implemented a transformation of Calpers to an innovative, service-oriented, value-added organisation widely respected in the business community.

James Moore has joined TheBullionDesk as Market Analyst. James brings with him several years of trading experience, having previously worked as a spot trader for ScotiaMocatta, the metals trading arm of The Bank of Nova Scotia.

James's role will be to provide up-to-the-minute market information and reports for the company's website.

Giacomo Panizzutti has taken a role with AIG Trading Group as a Senior Adviser to their Central Bank Group, reporting directly to Bradford Klein. His activities will include expanding the Asset Management and Commodity Indexed products as well as the foreign exchange advisory services.

Giacomo will be working very closely with Robert Stein in an effort to enhance the global central bank effort within AIG's trading group.

Christian Pfeifer has re-joined the Heraeus Group as a precious metals trader for Heraeus Precious Metals Management, Inc. in New York. He had left Heraeus Germany in 2001, where he started his career in trading, to join NM Rothschild & Sons, London in precious metals sales. In his new position, Christian will focus on trading and marketing gold and silver.

Richard Strait has joined Triland USA as senior business development advisor.

Formerly marketing director with the New York Mercantile Exchange, Rich will be spearheading the expansion of the Mitsubishi-owned unit's metals-based brokerage and clearing business, focusing on the energy and softs markets. In conjunction with this, he will be assisting the newly installed US CEO, Koichiro Takagi, in further developing and streamlining the growing Mitsubishi fund business. ■

Two easy steps to knowing what's what in the gold mining industry:

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Theophilus Kandawasvika

Facing down dangerous wildlife isn't a requirement for becoming an LBMA bursar, but apparently it doesn't hurt. Last year's bursar, Emmanuel Nyamusika, confronted – and killed – a python while at work in Tanzania.

The LBMA bursar for 2001-2002, Theophilus Kandawasvika, is originally from Buhera, Zimbabwe. He felt there would be good opportunities in the mining field, and graduated from the University of Zimbabwe in 1999 with a degree in Mining Engineering.

In his first week in the job with Delta Gold, Theo heard rumours that a lion had been seen around the project he was assigned to, but wasn't sure how serious the talk was.

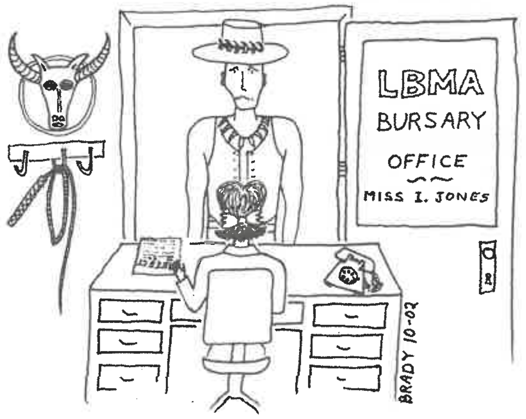
Driving to the mine's dump area around 4 am, he parked and strolled a short distance away from his car, shining his torch around. The beam landed on a lion cub about five metres away – then on its mother, who was staring at Theo in a less-than-friendly manner, having seen him in the dark long before he saw her.

The lioness moved rapidly towards him, the cub trailing behind and Theo sprinting ahead. He made it back to his car, jumped in, slammed the door and turned the key in the ignition (although the engine was already running). Just as he drove off, he heard a scratch at the back of the car. He wasn't very keen to work the night shift after that.

After leaving Delta Gold, Theo spent a year working for Zimplats as a mining engineer, where he was involved with mine planning and design. He felt it would be beneficial to resume his studies and applied for the Master of Science in Mining Engineering programme at Exeter University.

Theo's studies at Exeter have given him a lot of exposure to new methods of appraising mining projects. He has found the most interesting part of the programme to be the finance modules, which he feels complement his technical experience. For his project, he developed a mineral resource-reserve delineation tool, which can evaluate the financial feasibility of mining projects and determine the best method of mining to use.

Theo now plans to continue his studies in the doctorate programme at the University of Nevada, where he doesn't expect to run into too many lions. ■



'I'm sorry , Mr Dundee, but I'm afraid you're a bit too tame for us.'

P.S.

Postscript follows up on developments in issues and articles that have appeared previously in the Alchemist.

AIDS and Comfort in South Africa, highlighting AngloGold's HIV programme, appeared in Alchemist 27.

AngloGold Takes the Next Step in the Fight Against HIV/AIDS, Offers ART to Employees

AngloGold announced in July that it will offer anti-retroviral therapy (ART) to all its HIV-positive employees from next year. ART works by suppressing the HIV viral load and boosting the immune system, thereby prolonging the active life of an HIV- infected person. This is the first time ART will have been implemented on this scale in the gold mining industry worldwide.

Prior to the company-wide roll-out, AngloGold is conducting an implementation study to develop an understanding of and solutions to the problems in the provision of ART within the South African context, which were discussed in the original article. The project, which will take eight months, will examine the operational requirements of providing ART, particularly around supporting patient adherence to the drug regimen. It will include assessing what impact, if any, ART has on patients' capacity to carry out their duties – particularly in underground working conditions – as well as monitoring for drug sensitivity. The study will also explore solutions to questions concerning post-employment treatment as well as extending treatment to employees' spouses and dependents.

AngloGold will fund the cost of ART and is currently reviewing its earlier AIDS projected-impact analysis ($4-$6 per ounce) to include ART. It is difficult to offer an informed estimate at this stage given a range of uncertainties related to, among other things, drug prices and the rate of uptake of this facility by employees, which in turn is dependent on them taking part in Voluntary Counselling and Testing (VCT) to determine their HIV status. However, AngloGold is satisfied that the additional cost of ART, if any, will have a negligible impact on the company's financial performance. ■

LBMA News

By Stewart Murray, Chief Executive, LBMA

Membership

Reclassification

Société Générale was reclassified as a Market Making Member on 10 June.

New Associates

During the past quarter, seven new Associates were admitted on the dates shown below:

Alfred H Knight International Ltd (UK) –1 October
Cendres et Métaux SA (Switzerland) – 1 August
JBR Recovery Ltd (UK) – 1 October
Korea Zinc Co. Ltd (Korea) – 1 August
OJSC Kazzinc (Kazakhstan) – 1 October
Met Mex Peñoles SA de CV (Mexico) – 1 October
Royal Canadian Mint (Canada) – 1 October

There are now 31 LBMA Associates located in 16 countries. They include refiners, mining companies, banks and bullion dealers, assayers, consultancies and transport companies. Address details of these companies, as well as the LBMA's 55 full Members, are included in the Membership List, which can be obtained on request from the LBMA Executive or from www.lbma.org.uk.

Name Change

On the 30 August 2002, **WestLB AG** was established as the commercial bank subsidiary of Landesbank NRW following the restructuring of the Westdeutsche Landesbank. The London Branch of WestLB AG continues the membership of the LBMA formerly held by WestLB, a subsidiary of Westdeutsche Landesbank.

New Address and Contact Numbers

Securicor International Valuables Transport has moved to: 4th Floor, 1-3 College Hill, London EC4R 2RA. Tel: +44 (0)20 7776 1300. Fax: +44 (0)20 7776 1301.

Bin Sabt Jewellery in Dubai has new contact numbers: Tel: +9714 228 5500 / 224 6948. Fax: +9714 224 1799.

Annual General Meeting

The fourteenth AGM of the LBMA took place on 26 June. The normal business transacted included the election of the Management Committee (see below), the approval of the Annual Report and Accounts (which were circulated to all Members and Associates in advance) and receiving reports from the chairmen of the sub-committees. A special resolution amending the Memorandum and Articles of Association was also passed. In part, this represented an updating of some of the clauses to take account of changes in legislation and the regulatory system. The other substantive amendments related mainly to the changes in the Membership categories and criteria that were announced in January this year. These included changing the membership category "International Associate" to "Associate" which was necessary in order to allow UK companies to join as Associates. Other changes were made to allow companies with trading operations not located in the UK to join the LBMA as full Members (as long as they have a full branch with appropriate representation in the UK). It was also decided to drop the term "Ordinary" from "Ordinary Member" in the Articles (although the word will still be used informally to represent full Members not classified as Market Making Members).

Committees

Management Committee

At the AGM in June, the Members of the LBMA elected the following representatives to the Management Committee as mandated by clause 46 of the Constitution:

In category (a), two representatives of Market Making Members which provide clearing services
Martin Stokes – JP Morgan Chase Bank
Simon Weeks – The Bank of Nova Scotia Scotia-Mocatta

In category (b), three representatives of Market Making Members
Peter Fava – HSBC Bank USA, London Branch
Rick McIntire – Deutsche Bank
Clive Turner – NM Rothschild & Sons

In category (c), three representatives of other Members
Nick Frappell – Sumitomo Corporation Europe Plc
Colin Griffith – Standard Bank London Limited
Kamal Naqvi – Macquarie Bank Limited

The new Committee then elected Simon Weeks as chairman and Clive Turner as vice chairman. The new chairman thanked Martin Stokes, who had indicated that he was standing down as chairman at the AGM, for his years of service to the LBMA during 1995 to 1999 as vice chairman and subsequently as chairman for the following three years.

Following the resignation of Clive Turner from the Management Committee on 13 September (and also as vice chairman) the Committee has elected Rick McIntire as vice chairman and voted to co-opt Paul Copsey of NM Rothschild and Sons to fill the vacant position. The LBMA would like to thank the other three candidates who also put their names forward for consideration.

Physical Committee

At present, the Committee is processing three applications for the Silver Good Delivery List through the technical stages of assessment. A further five refiners have submitted applications for the listing of their gold or silver bars, but have not been formally accepted for technical testing pending the provision of various documents required in support of their applications.

The introduction of a system of Proactive Monitoring of Good Delivery List refiners (described in detail in *Alchemist* 26) has been delayed because of the time required to assess the applications from a number of refiners who will form an expanded panel of independent referees (which represents an important part of the new system). During the past several months, applicants for referee status have been performing a very extensive programme of assays on the gold and silver reference samples which they have produced. When all the results are available (it is hoped by the end of October) the LBMA will carry out a detailed evaluation of the data and this will be followed by the announcement of the companies to be included on the new panel. The date for the implementation of Proactive Monitoring will then be announced in November. In the meantime, the Committee has been developing the associated documentation, including a modified set of Good Delivery Rules which will take effect when the Proactive Monitoring system is formally introduced.

Public Affairs Committee

The PAC is now starting to develop the programme for the next LBMA Precious Metals Conference, to be held in Shanghai from 11 to 13 May, 2003. The feedback forms from this year's conference in San Francisco have provided a lot of useful ideas, and the Committee has also held a meeting with London analysts to canvass views on the subjects and speakers to be included. Any suggestions from readers would be most welcome.

Another project now underway is a bullion market seminar in India, which will be held in late January next year. As the Indian bullion market continues to evolve, there is a need for an exchange of views and experience about the requirements of the bullion trade in India and the products and services which London can provide. The aim of the seminar is to allow this exchange to take place especially at the level of market practice, and thus to encourage the development of efficient and reliable trading systems and products.

Biennial Dinner

The dinner will take place in Goldsmiths' Hall on the evening of 29 October with Sir Edward George, Governor of the Bank of England, as guest speaker. Michael Devaney, Chairman of the Comex Governors' Committee, will give the response on behalf of the guests. ■

The LBMA Indian Bullion Market Development Forum

Presentations and discussions will focus on practical issues arising from the ongoing liberalisation of the Indian bullion market.

To receive more information, send an email to: events@lbma.org.uk or visit the LBMA website.

Golf

By John Coley

The LBMA failed in their attempt to wrest the Foster Smith Trophy from their friends at the LME, who triumphed by five points to three in their annual contest. The match was played on a wonderful autumn day at Coombe Hill Golf Club, a location unique being so close to the centre of London but giving the impression of being so far away. Sadly, by lunchtime a victory for the LBMA seemed equally remote as we trailed 3:1 and, despite a spirited attempt in the afternoon that saw those points shared 2:2, it proved to be insufficient.

The match was played in great spirits with the teams meeting and greeting as old friends. It was especially good to see Alan Morris walking the fairways in support of the Essex brigade, and well done to David Spraggs for winning both his matches. Special mention too to Gary Townsend who holed out with a full shot on the par 4 2nd hole for an eagle 2. Better luck next year guys!

The LBMA Annual Golf Day for 2003 will take place at a new venue. Blackmoor Golf Club on the Hants/Surrey borders will host the event on 1 May 2003, so please make a note in the diary. Blackmoor hosts regional Open qualifiers and is at the southern end of the Surrey heathland belt of courses, ending at Wentworth and Sunningdale in the north, about a 20-minute drive from the M25. As a member there I am perhaps biased in my opinion, but I really do feel that a treat is in store!

DIARY OF EVENTS

OCTOBER 2002

21-22
Investing in the Americas
Florida, USA
Tel: +1 305 669 1963
Fax: +1 305 669 7350
johnpanaro@iiconf.com
www.iiconf.com

22
South East Asia Mining and Metals Forum
Singapore
www.omegaconferences.com

NOVEMBER 2002

13-14
World Platinum Congress 2002
Johannesburg, South Africa
Tel +27 (0)11 463 6001
Fax +27 (0)11 463 6903
www.terrapinn.com

14-15
GFMS/Silver Institute Autumn Precious Metals Seminar
Toronto, Canada
Tel: +1 202 835 0185
Fax: +1 202 835 0155
info@silverinstitute.org
www.silverinstitute.org

19-22
EPM - Mining and Metal Working
Hanoi, Vietnam
Tel: +65 220 7633
Fax: +65 220 9733
epm@hfasin.com
www.epm-vietnam.com

25-26
Gold Investment Summit
London, England
Tel: +44 (0)870 9062 600
Fax: +44 (0)20 7779 8603
registrations@euromoneyplc.com
www.euromoneyseminars.com

DECEMBER 2002

1-2
Precious Metals Conference 2002 - New Opportunities
San Francisco, California
Tel: +1 305 669 1963
Fax: +1 305 669 7350
johnpanaro@iiconf.com
www.iiconf.com

2-6
NorthWest Mining Association 108th Annual Meeting and Convention
Spokane, Washington
Tel: +1 509 624 1158
patb@nwma.org
www.nwma.org

JANUARY 2003

12-19
Vicenzaoro1
Vicenza, Italy
Tel: +39 0444 969 111
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info@vicenzafiera.it
www.vicenzafiera.it

FEBRUARY 2003

4-7
GOLD-2003. From deposit to jewellery: the 5th International Exhibition and Conference
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Fax: +7 095 187 8356
expo@amscort.ru
www.amscort.ru/gold

4-7
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Fax: +7 095 187 8356
expo@amscort.ru
www.rusexpo.com/mining

11-13
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Think Global, Not Local

Editorial Comment by Simon Weeks, Chairman, LBMA

"We don't think London anymore, we think the world."

This comment by Keith Smith, one of the founders of the LBMA, is even more apt today than it was in the early days of the Association.

The LBMA has been broadening its horizons in ways that might have been difficult to imagine back then. It has been growing increasingly international, a trend clearly evident in the membership structure. The Associate category, originally introduced as 'International Associates' to allow companies based outside the UK to participate in the Association, now numbers 31, of which 27 are based overseas. Following the modifications to membership criteria at the start of the year, which allow suitably qualified companies located outside the UK to join as full Members, Société Générale Paris has become a Market Maker and Bayerische Landesbank Munich has joined as a Member.

Connections between London and the rest of the world grow stronger through the Association's website, which receives thousands of hits from more than 50 countries a week and the Alchemist, which is distributed to over 2,500 names around the world.

LBMA events – in particular the annual Conference – provide an open forum to discuss a wide range of timely subjects. As indicated by its slogan – 'by the industry, for the industry', the Conference is designed to encompass topics of concern to market participants around the world and from every market sector – from miners to jewellers and everyone in between.

China, a significant producer of silver as well as an important producer and consumer of gold, has been under consideration for some time as a possible location for the Conference. The liberalisation process of the Chinese market, which began with silver, then gold, is now reaching an important stage with the Shanghai Gold Exchange due to begin trading shortly, and it has thus been decided to hold next year's Conference in Shanghai on 12-13 May. The Conference will provide a perfect opportunity to discuss the ways that both the Exchange and the market in China will develop and integrate into the global market.

In addition to the Conference next year, the LBMA will hold a seminar in India in late January. The seminar will allow an exchange of views and information between active market practitioners, representatives of the Indian trade and regulators. With an eye on the introduction of new services – such as derivatives trading – into the traditional physical market, the seminar will be a good opportunity to discuss existing practices and issues facing the local market.

This trend towards internationalisation is the key to the evolution of both the LBMA and the global bullion market. To continue the process, the LBMA now needs to encourage greater interaction between other bullion centres around the world.

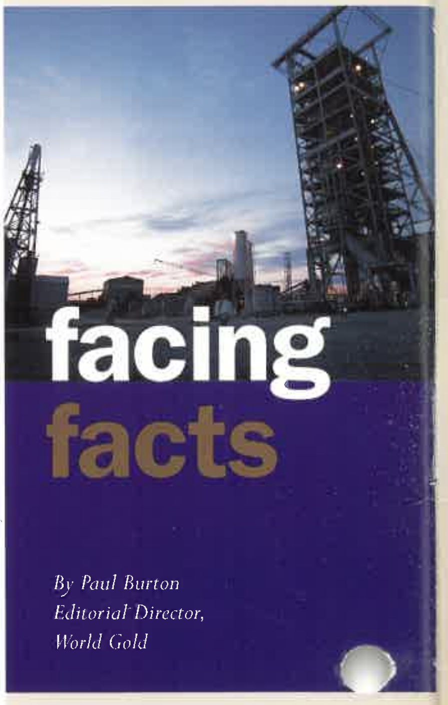
With this in mind, the LBMA is planning to host a forum at the Shanghai Conference with senior representatives of bullion associations, exchanges and related organisations. As a mature market, London is keen to share its experience in developing the tools needed to operate in an efficient and secure manner and can benefit from having the perspective and insights of others around the world. Establishing a more open dialogue between the world's bullion centres will help to promote more consistent and efficient practices and will ultimately benefit all market users. ■

The LBMA Precious Metals Conference 2003

11-13 May Pudong Shangri-La Hotel, Shanghai, China

Join representatives of all sectors of the industry at the Conference to discuss the current developments and trends facing the global market. With a comprehensive programme of presentations on the world markets for precious metals and ample opportunities for networking, the LBMA Conference has become the industry's premier event.

Visit the LBMA website for further information or email conference@lbma.org.uk to join our distribution list.



facing facts

By Paul Burton
Editorial Director,
World Gold

It has been a very good year for gold shares in general. Although recent corrections have dampened performance, gold stocks rallied impressively in the first half of the year as the gold price rose from US$280/o[illegible] US$325/oz, a 16 % gain. Against this rise in the US dollar price, the FTSE Gold Mines index and the gold indices on the Johannesburg, Australian, Philadelphia and Toronto exchanges produced exceptionally leveraged returns, as shown at top right:

FTSE Gold Mines	+59%
JSE All Gold	+80%
ASX Gold	+50%
Philadelphia Gold & Silver	+44%
TSE Gold & Precious Minerals	+37%

These appreciations contrast starkly with the decline experienced by most of the major stock indices over the same period.

FTSE 100	-12%
Dow Jones	-8%
NASDAQ	-34%
S&P 500	-14%

A breakdown by production size and market capitalisation of individual gold company share performances showed that juniors produced the highest returns, intermediates the next highest, with majors lagging the rest of the industry.

South African Gold Fields was the top performer amongst the majors with a rise of 140%, but this was surpassed by a number of the smaller gold producers, which boasted exceptional performances with, for example, SEMAFO Inc, Bema Gold and Eldorado Gold all appreciating by more than 400%.

Pure exploration plays, often the leaders in a rising market, were not as prominent, suggesting that that sector has yet to show signs of recovery.

The Largest Grass Roots Discovery in History

This has prompted one of the world's leading gold producers, Barrick Gold, to pursue an aggressive exploration strategy to compensate for the decline in exploration by the juniors over the past few years. "Historically, seniors could rely on the juniors to provide a pipeline for new development. But those days are over", Barrick Gold's senior vice-president, exploration, Alex Davidson, told delegates at the Diggers & Dealers conference, in Australia in August.

Barrick is boosting its exploration spending from US$52 million in 2001 to US$95 million this year. Much of the increase is accounted for by the new discovery at Alto Chicama, in Peru, where, as a result of success in outlining a new resource of 7.3 Moz of gold, Barrick will spend a total of US$35 million this year.

Barrick is not being shy about this new major gold find. Chief executive Randall Oliphant described it as "the largest grass roots discovery in the history of Barrick".

But Barrick was built mainly by acquisitions, and continues to be a major force in consolidating the industry. Such consolidation over the past couple of years has led to a changed pattern of ownership of gold producing assets, with mainly South African and Canadian companies benefiting at the expense of others, particularly the Australians.

And at the time of this writing, one of the most protracted episodes in the consolidation game had yet to reach a conclusion. Placer Dome (2.3 Moz/y) made a hostile bid for AurionGold (1 Moz/y) back in May. By the middle of September, the bid had been extended numerous times without the Canadian achieving overall control.

Meanwhile, Newmont's successful capture of Normandy Mining and Franco-Nevada Mining earlier this year has now seen it firmly entrench itself as the world's largest producer – according to June quarter production figures presented in the recent World Gold Analyst.

Updating the Producers' League Table

Following the corporate action of Barrick and Newmont, there has been something of a structural change in the list of the top ten producers.

Harmony has made an impressive leap up the table to reach the number five spot. We have also seen an impressive debut for fellow South African producer

Top Five Producers

in June 2002 quarter

Company	Production (oz)
1 – Newmont Mining (2)	1,845,200
2 – AngloGold (1)	1,426,000
3 – Barrick Gold (3)	1,349,000
4 – Gold Fields (5)	1,159,000
5 – Harmony (10)	784,155

Figures in parenthesis represent positions in the June 2001 quarter.

ARMGold (1 Moz forecast for 2002). Not only has this recently-listed company made its presence felt in the production stakes, but it also features prominently in the lowest cost rankings. In fact, it has become the lowest cost major in terms of either cash or total production costs – quite an achievement for a new breed of black entrepreneurial businessman in South Africa.

ARMGold's production profile was boosted earlier in the year when, together with Harmony in a 50/50 joint venture under the name FreeGold, it acquired the Bambanani, Tshepong, Matjhabeng and Joel mines from AngloGold. In a subsequent development, FreeGold has reached agreement with Gold Fields to acquire its St Helena mine, also in the Free State. This mine will add about 100,000 oz/y to the joint venture's production level and represents another step in the consolidation of the region's mines under the banners of the two operational partners.

The growing cooperation between Harmony and ARMGold could be the blueprint for the future of South African mining. Their rise to prominence comes at a time when the future of the mining industry in South Africa has come under the spotlight with the passing of the Mineral and Petroleum Resources Development Bill and subsequent revelations about a proposed Mining Charter.

A key element of the bill is the change from the current system, which allows private ownership of mineral rights, to one of exclusive state ownership with exploration and mining activities being licensed by the government. The African National Congress hopes that this will enable new entrants to develop mines, with the consequent possibility of ownership participation by black South Africans. This forms part of the ANC's electoral mandate to redress the perceived wrongs of the former apartheid regime.

Few in the mining industry would take issue with this aim, and the debate has now boiled down to the practicalities of how that might best be achieved. The mining industry argues that the reform must result in a legislative regime that encourages long-term investment, as this will not only create sustainable jobs but will also encourage the industry to invest in education, healthcare and training.

The leak of a draft document proposing some draconian reform measures has alarmed current participants and threatens to do serious damage to the investment climate within the South African mining industry. And, in the past few weeks, the ANC-led government has been involved in a 'damage limitation exercise' with major mining groups. ■

The *Alchemist* is published quarterly by the LBMA. For further information please contact Susanne M Capano, Editor, Stewart Murray or Andrea Smith.
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gold standard

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