Alchemist

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LBMA

A thin layer of gold on his visor protects the fireman from intense heat. (see page 12)

In this issue:

A Year Down the Track

By Shelagh Blackman, Divisional Communications Manager, AngloGold

Adam Bremner is about to take his first trip to Italy.

As overall winner of the "Riches of Africa" jewellery contest,sponsored by South African-based AngloGold, part of his prize is an all-expenses paid trip to the VicenzOro 2 Fair and the World Gold Council Technical Symposium in Vicenza, Italy. He found out about the contest in his final year of studies at Natal Technikon in Durban, South Africa, where he was best overall student in 1998.

"I was thinking about using a strong shape – to represent the strength of Africa and the gold that comes out of Africa", he says. The marquee shape reminded him of the Zulu shield, and provided the inspiration for his prize-winning brooch and bangle (see photo).

18k gold brooch with movable bar and oval bangle, designed by Adam Bremner, the winner of the "Riches of Africa" contest.

The "Riches of Africa" was one of a series of jewellery competitions sponsored this year by Anglogold as part of an aggressive new market development campaign.

The merging of the gold operations, mineral rights and exploration interests of Anglo American Corporation gave birth to AngloGold, the world's largest gold producer at 7.1 million ounces a year, and holder of the most extensive global reserves and resources (126 million ounces and 382 million ounces, respectively).

Its launch in June 1998 was a bold venture but one that arose out of necessity. About a year before, those involved in Anglo American's gold mining activities realised that things could not continue as they were. At that stage the corporation was managing five of South Africa's leading gold producing companies. Along with the country's gold mining industry as a whole, these companies were heading for trouble. The warning signs were there for all who cared to read them: low productivity; a margin squeeze, arising from a flat gold price and increasing costs; and a complex corporate structure.

The answer was to establish a single focused company that was independently managed, adequately resourced and had the capacity for growth. At the outset, however, mere survival was never the intention. The world's largest gold company had been created, but its size was no guarantee that AngloGold would retain the interest of its shareholders – let alone attract new investors. The goal was to become the world's leading gold company and to this end three core objectives were set:

- Globally competitive performance
- Growth for future production
- An investor-friendly corporate structure.

Well before a year was up these targets had been reached.

From its origins as the Gold and Uranium Division of Anglo American Corporation, AngloGold has become an independent company listed on the Johannesburg, London, Paris, Brussels and New York stock exchanges.

The company's complex ownership structure has been simplified. Management, operations and exploration activities reside in one company and there are no management or other contracts in terms of which turnover or profit-related fees are payable to the major shareholder, Anglo American. Favoured by investors globally, the new structure offers a better alignment of interests to maximise value for shareholders.

GLOBAL EXPANSION

From a position where all mines and exploration were confined to South Africa, the company now has 21 operations in six countries – South Africa, Namibia, Mali, the United States of America, Brazil and Argentina – across three continents. Navachab Mine in Namibia and Sadiola Mine in Mali came into the fold through the merger which created AngloGold; the five mines in the Americas (Jerritt Canyon and Cripple Creek and Victor in the USA, Serra Grande and Morro Velho in Brazil and Cerro Vanguardia in Argentina) were acquired from Minorco at the beginning of this year.

The same transactions broadened the company's exploration activities. There are now programmes under way in no fewer than ten countries: South Africa, Botswana, Tanzania, the Democratic Republic of the Congo, Mali, Senegal, USA, Venezuela, Brazil and Argentina.

The acquisition of operations in other countries has diversified both AngloGold's asset base and its mining risk profile. With its background as a major force on the South African mining scene, the company is an industry leader in deep- and ultra-deep-level mining. It is now gaining experience in open-pit and shallow underground mining.

In the same way, AngloGold's exploration programme has been strengthened considerably. Gold comes from three sources: sediment-hosted, greenstone and plate margin/epithermal mineralisations. The company has a commanding position in the first area (the Wits Basin is sediment-hosted) and an increasing presence in the second, while the Minorco deal has thrust it into the third. Exposure to all three environments bodes well for further exploration in other parts of the world.

Major steps have been taken towards achieving globally competitive production. During the course of 1998 AngloGold disposed of half of its 34 shafts in South Africa. Those sold or closed did not meet the criterion of operating at or close to the target of R40,000 per kilogram of gold produced. A cash cost of $250 per ounce was set as the goal for 1998, and to achieve this a number of productivity targets were established.

In spite of halving its South African operations, AngloGold gold production in 1998 only declined by ten percent compared to the previous year, while operating profit increased by 222 percent. A cash cost of $250 was reached in the first quarter; by the end of the year it had dropped to $229 per ounce. Total earnings rose by 78 percent while a 77 percent improvement in earnings per share was recorded.

AngloGold has made great strides in its first year but is aware that with the prevailing gold price, there is no room for complacency. At a strategic planning session held towards the end of last year, goals were set for 1999 and beyond. Some of these took the core objectives a step or two further.

Competitive production remains a central concern and further improvements in cash costs and productivity have been targeted. To achieve these a $50 million programme has been put in place to eliminate functional illiteracy in the workforce; wage deals with the National Union of Mineworkers are being linked to innovative productivity targets so as not to raise unit labour costs; a campaign of zero tolerance for any unsafe behaviour in the workplace has been launched; and an amount of $14 million has been earmarked for technology research and development.

The search for growth to secure production in the future is still a key consideration and new ounces will be sought through a combination of exploration and acquisition. The guideline for any new prospect is a double digit real rate of return, a guaranteed annual production of 200,000 ounces, reserves of no less than two million ounces and cash costs of below $200 per ounce. Total expenditure for world exploration in 1999 is budgeted at $53 million.

MARKET DEVELOPMENT – A NEW FOCUS

Traditionally, gold producers have concentrated on the mining side of their business and it is this area that has had

Called "Bridal Ensemble", the gold head piece, necklace and armlet modelled here was one of the works in the finals of the 1999 Swarnanjali gold jewellery competition in India.

The main shaft of Moab Khotsong, a new AngloGold mine in development near Klerksdorp in South Africa. It is planned to a depth of 3,100 metres.

a public profile. Down the years photographs of mining headgear, shaft sinking and other such subjects have dominated annual reports and company brochures. Gold producers have not felt any sense of ownership about their product or any sense of responsibility for it in the marketplace. In part this is because of the universality of gold, and in part because gold producers conventionally sell their metal directly to bullion banks and are therefore removed by some distance from believes that they have very real responsibilities for their product. Some $21 million will be spent on vigorous market development initiatives in 1999. The intention is to fund projects which have the potential to impact favourably on gold off-take; to enhance the image of the product; and to improve sentiment towards it. In some of these the company will take the initiative; in others it will act with the World Gold Council (WGC) and other partners.

The WGC has estimated that 780 million people bought gold jewellery in 1998.

Activities to date this year include sponsorship of:

- The Gold for Eternity competition in ten Asian countries, including China which was launched in January;
- The making of the world's longest gold chain during the Dubai Shopping Festival in March;
- The Swarnanjali 1999 national gold jewellery design competition in India, the finals of which were held in April;
- The first gold jewellery design competition to be held in South Africa for many years. Launched towards the end of last year, the Riches of Africa collection was unveiled in Johannesburg in May.

There are sound reasons for promoting gold jewellery, which accounts for 77 percent of total physical demand. The WGC has estimated that around 780 million people bought gold jewellery in 1998, with the last quarter seeing the highest level of demand in history. One of the forces behind the growing demand for jewellery in the last decade has undoubtedly been the progressive deregulation of key jewellery markets, especially those of Turkey, Dubai and India.

To develop the customer base for gold further, AngloGold is actively promoting further deregulation, working with other producers, both through the WGC and through other avenues. China was visited early in the year, as the company is convinced of the possibilities for expansion in that gold industry.

First-world countries are not being ignored, since the potential for growth is considerable. The United States provides an apt example. Although 78 percent of the urban American population purchased an item of jewellery in 1997, only 39 per cent bought gold jewellery. To gain a better understanding of gold consumption in developed countries, the company is funding both market research and strategic scenario planning ventures.

If AngloGold achieves all the objectives that it has set for itself in the current year – in the spheres of operational excellence, growth and market development – then it will enter the 21st Century as a truly global gold mining company, able to compete with the best in the world. ■

Standard Documentation For Bullion Derivatives

A new LBMA Initiative for the Global Market

By Martin Stokes, Vice President, Commodities, Morgan Guaranty Trust Company of New York

"The challenge for the bullion banking community remains that of bridging the gap of tenor between the lenders [of gold], who for reasons of flexibility or conservatism are only prepared to place deposits of around three months duration, and the borrowers...whose preferred term is probably three years!"

Since I wrote these lines in an article in Alchemist No. 3 in April 1996, the use of derivatives on gold interest rates in the OTC market has increased substantially. The primary benefit of these instruments is that they significantly reduce bilateral credit exposures arising from longer dated fixed deposits and forwards. These derivatives are cash settled on the basis of benchmarks on interim maturity dates and while they are not new, they are receiving greater attention now with the market's greater focus on credit and balance sheet usage.

However, the documentation currently being used to cover the terms and conditions of these instruments in the OTC gold market is somewhat fragmented. Therefore the Management Committee of the LBMA has established a sub-committee to work on Standard ISDA-based documentation for gold interest rate derivative transactions. This group will work with Allen & Overy, the lawyers who were responsible for the 1997 ISDA Bullion Definitions.

The benefits of standardised documentation are:

- To create market-wide confidence and credibility in the interest rate products and to further publicise the tools which are available to the market's clientbase
- To fully clarify OTC market convention in order to prevent misunderstandings
- To tie this derivative business into the ISDA framework
- To reduce expensive lawyer time which would be taken to negotiate bilateral agreements.

THE GOFO BENCHMARK – 10 YEARS YOUNG

The single most important issue in establishing a successful derivative product is the absolute credibility of the benchmark used for the settlement of transactions. In this regard, the GOFO (gold lending vs. US$) page on Reuters admirably fills the bill for gold interest rates. GOFO will be10 years old on 17th July 1999 and over the years it has become established as an efficient, credible and transparent benchmark for the OTC gold interest rate market. Deducting the GOFO rate from the US$ LIBOR rate for the same period creates an implied gold lease rate and it is against this rate that most gold interest rate derivatives are currently settled.

BENEFITS OF USING DERIVATIVES

Lenders

1) They gain the benefit of the higher yield available in the long-term tenors without the full credit exposure associated with a physical deposit. Recently the steepness of the curve – with rates escalating from around 50bp in the one month to in excess of 200bp in the five years – has certainly attracted the attention of the lenders.

2) The credit exposure for the lender is limited to the absolute level of the fixed rate – i.e., around two percent of notional for a five year transaction.

3) Credit exposure will not escalate in the event that gold prices increase.

4) Lenders reduce the volatility of earnings in their gold portfolio. Any loss sustained in case of short-term spikes in interest rates should be viewed as an opportunity loss, as gold in the lender's physical portfolio can be placed at the prevailing higher rates in the short-term maturity to match any derivative exposure.

5) The benchmarks for the interim reset dates (LIBOR and GOFO) are well established and thoroughly transparent.

6) OTC gold market standard documentation for the transactions is ISDA based and should give all participants confidence in the product.

Borrowers

1) The flexibility to roll physical hedge positions at the short end of the market, without being exposed in the event that gold lease rates escalate sharply.

2) The ability to lock in higher long-term dollar rates while capping the gold borrowing cost for the period.

3) The flexibility to trade on a forward/forward basis when gold borrowing rates are attractive.

4) The reduction of credit exposure to counterparties in the event that outright gold prices fall sharply.

5) For borrowers of physical gold in the industrial/refining sector, the ability to lock in longer-term cover without using up long-term bank lines.

6) Settlement exposure on maturity dates is limited to an interest rate difference rather than the full notional amount.

THE FUTURE – MORE ACTIVITY AND COMPETITION

Currently, the activity in the longer dated gold forward market is relatively restricted, largely on account of the width of the bid/offer spread quoted by dealers. A substantial component of this spread relates to credit; clearly if this credit element is significantly reduced by fully accepted, credible derivative instruments, then much narrower spreads will be seen. This development will be of benefit to all the participants and more activity and deeper markets will certainly result.

Moreover, creating standardised documentation and establishing fully accepted and clear conventions will enable clients to open long-dated positions with one market maker and not necessarily be tied to that name if and when an unwind is contemplated.

IMPLEMENTATION PLANS

The LBMA's goal is to have a final draft of Standard ISDA-based documentation to cover gold interest rate derivatives ready by the end of July. Following a consultative period for gold market participant comment, the documentation should be fully completed by the autumn. The Association will then send final copies of the Standard Terms and Conditions to all LBMA members.

The Management Committee of the LBMA is determined to continue the work of improving the day-to-day operating conditions and practices in the global OTC bullion market and looks forward to the publication of the Standard Terms for gold interest rate derivative products ■

PRECISE DEFINITIONS OF DERIVATIVE PRODUCTS

Gold Interest Rate Swaps

(requiring a strip of calculation events)

One of the problems currently facing the market is the lack of absolutely transparent conventions in both structure and pricing of these products. Central banks, the main lenders to the market, are certainly not prepared to participate in deals in which there is any vestige of concern about convention or clarity of structure.

These transactions are similar to currency Interest Rate Swaps and Forward Rate Agreements and do not involve significant term credit exposure. Generally, differences between the fixed and floating interest rates on the principal amount of gold are settled between parties on interim maturity dates.

There are currently at least four separate conventions, all of which imply slightly different pricing. The conventions apply to the basis price(s) used in the calculation of interest payable on the interim reset dates and to the medium of settlement (gold or dollars).

In all of these conventions, interest differentials are calculated as if they were due for payment on the maturity date at the end of each interim period. However, if required, the interest difference can (if mutually agreed between the parties) be paid two business days following each reset date. The conventions pertaining to this discounting are noted along with each separate structure:

1) Gold swap payable in gold – effectively floating/floating without any basis price.
In this convention there is no set US$ basis price for gold in respect of the interim calculations. Interest differences are therefore paid in gold. Clearly, participants can, if they wish, cover their liabilities by buying or selling gold vs dollars on the interim maturity dates.
Discounting convention – the interest difference should be discounted at the prevailing gold interest rate (i.e. LIBOR minus GOFO).

We believe that this structure will eventually become established as the interbank trading norm.

2) Gold swap payable in dollars – floating/floating basis price but using mutually agreed future gold fixing prices (on reset days) as the specific basis prices for interim payments and receipts of interest differences. Therefore, interest differences are settled in US$.
Discounting convention – the interest difference should be discounted at the prevailing LIBOR.

3) Gold swap payable in dollars – fixed/fixed basis price.
In this structure, the prevailing spot price of gold in US$ at the inception of the deal is agreed upon between the parties and used as the basis price for calculations for both the fixed interest rate and the floating interest rate throughout the life of the transaction. In this convention, interest difference payments can ONLY be made in US$.
Discounting convention – the interest difference should be discounted at the prevailing LIBOR.

4) Gold swap payable in dollars – fixed/floating basis price.
In this convention, the gold basis price for the fixed leg is the spot price prevailing at the inception of the transaction. The basis price for the interim periods is established on the interim reset days. Interest difference payments should be made in US$.
Discounting convention – the interest difference should be discounted at the prevailing LIBOR.

Gold Forward Rate Agreements (FRAS)

(a rate agreement for one single calculation period – i.e. effectively a gold interest rate swap as above, but for only one single period.)

Not requiring a calculation event until two Business days prior to the first day of the period of any swap. Generally, any sums owed on account of interest rate differences will be discounted and paid two business days following the reset date, thereby terminating any liability between the parties at that date.

Basis price conventions can be agreed between the parties, as under the section above.

For an example of a GOLDFRA, see the Quick Study on page 19.

***Martin Stokes** began working in precious metals for Johnson Matthey Bankers Ltd in 1972. He became their chief gold trader in London from 1976 to 1980, after which he transferred to New York, where he worked until 1985 as a Director of Johnson Matthey Commodities Inc. He subsequently joined JP Morgan in London, and is currently co-head of its world-wide metals trading. A member of the LBMA Management Committee since 1989, Martin has been the organisation's Vice Chairman for the past four years. He was instrumental in the development of the IBMA documentation in 1994, as well as the 1997 ISDA Bullion Definitions.*

Gold Auctions
The Way Forward

By Clifford Smout, Head of Foreign Exchange Division, Bank of England

As every reader of The Alchemist will know, on 7 May the UK announced plans to sell a total of 125 tonnes of gold through five auctions, the first of which will take place on 6 July. The UK also announced its intention to reduce its gold holdings from 715 tonnes to 300 tonnes over the medium term. As a result of these changes, the share of gold in the net reserves will fall from 43% to 15-20%. (Unlike some other countries, the UK manages its foreign currency assets and liabilities together, hedging the risk on its "borrowed" reserves, and spreading the risk on the remainder through diversification.) So through its continuing holdings, the UK will continue to benefit from the diversification that gold provides, in bad times as well as good; it still sees gold playing an important role in the official reserves. The decision represents a straightforward portfolio management operation, designed to rebalance the composition of the UK's external reserves – not a view on future movements in the gold price, nor on entry or otherwise into monetary union, nor a conspiracy with persons known or unknown!

The announcement came as a surprise to the market, which had not focussed on the UK as a potential seller of gold. But although it was important to maintain confidentiality ahead of the announcement, the sales will be carried out in an open and transparent way by means of a series of auctions. And the Bank of England has asked the members of the LBMA for their views about the details of the auction process.

So why did the UK choose to use auctions for the sales, rather than sell first and announce later? As you might expect, the answer reflects a mixture of pragmatism and principle.

With the market increasingly on the look-out for sales of gold from the official sector, it would have been difficult to sell covertly within the relatively short period allowed by reserves publication policy, a policy which has been agreed under the auspices of the IMF. In particular, it would not have been possible to sell gold covertly over a number of years, and so the sales would have been bunched, with no opportunity to spread the price risk on them. And signs of the activity might well have been detected, leading to uncertainty and a possible over-reaction in price terms together with a significant disruption to the market.

But in any case we believe in principle in acting in an orderly and transparent way. This helps all participants in the market, by reducing volatility and uncertainty about our intentions. As a result we need not sell at a discount to the spot price, as would have been the case with a covert sale. By announcing our plans in advance, we can avoid disruption to the market, and allow prospective purchasers to bid in the auctions with greater confidence about future supply, improving the prospects for a successful outcome.

For the same reason, we have chosen a 'single price' format for the auction, so that all bidders get gold at the lowest successful bid, rather than the price at which they bid. This much reduces the risk of anyone paying over the odds for the gold, and should thereby encourage bidding. We think that this will maximise the prospects of a series of successful auctions, and in consequence the average prices we receive at them. For while the gold price has fallen following the UK's announcement – it would have been extraordinary if it had not done so – the more relevant test is the price which we will receive at each of the auctions we hold over the coming years.

The auction format has been chosen so as to maximise participation and spark interest among prospective purchasers. We believe that the amounts are of a size which should be easily absorbed by the market; this impression has been confirmed by the feedback we have so far received. The auctions will be open to all members of the LBMA, and thus through them to their customers, as well as to central banks with accounts with us. With the millennium on its way, together with the removal of VAT on investment gold, we hope this will act as an opportunity to market gold not only to those who have bought it in the past but to a wider circle of potential buyers. Our actions demonstrate that we believe it has a key role to play in a balanced portfolio of assets.

The decision to sell openly via the auction process has been welcomed by many of you, though not by all: one prominent figure in the gold industry was good enough to admit that like some others, he preferred transparency when it related to central bank purchases of gold rather than central bank sales! That said, many observers consider that it is the uncertainty about the intentions of the official sector which acts as the major bearish influence on the market in current circumstances, and it is precisely this uncertainty which the auctions route is designed to address.

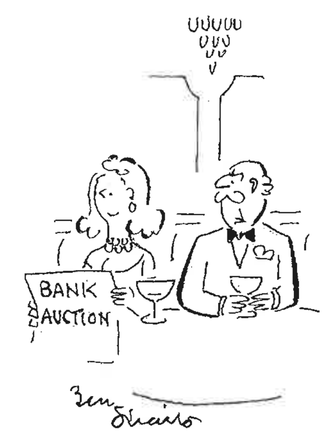
What are the next steps? At present we are working on an Information Memorandum, which should have appeared by the time you read this or very shortly thereafter, and which will set out the definitive arrangements for the auctions, such as the means whereby the bids should be submitted to the Bank, the timetable and content for the announcements on the day itself, and the methods of "scaling back" bids if that should prove necessary – on all of which we have been consulting members of the LBMA. With the first auction on 6 July, there will then need to be a lot of work, not just from the Bank of England but also from the members of the LBMA themselves, who will know better than anyone the range and scale of interest in gold and can tailor their marketing accordingly.

Now that the decision to sell gold has been taken, it is important to look ahead to the auctions themselves, and at the opportunities these can provide for the gold market. If properly marketed, these could act as a shop window for gold, and as a means – on a regular and orderly basis – to focus the attention of investors on it. If the auctions go well, this will not only be good for the industry, but for the position of London as the centre of the gold market. And if that happens, it will in no small way be due to the skills and the global reach of the members of the LBMA, who are absolutely central to this process ■

Clifford Smout joined the Bank of England's International Division in 1978, and spent several years co-ordinating the Bank's World Economy Forecast. After five years he moved across to the Money Markets Division, where among other jobs he deputised (complete with top hat!) in the "markets contact" job and helped set up the Wholesale Markets Supervision Division as part of the changes introduced by the Financial Services Act.

Six weeks before the 1987 stock market crash, Clifford became private secretary to the Deputy Governor (Sir George Blunden) – a two year posting, followed by 18 months as a reserve manager in the Bank's Foreign Exchange Division, managing a multi-billion dollar portfolio. After that he worked as a banking supervisor for 2 ½ years looking after the US banks in London and then being responsible for policy issues, where he was a member of the Basle Committee sub-groups from 1994 to 1996.

In February 1998, Clifford rejoined the Foreign Exchange Division – just in time to deal with the introduction of the Euro, the year 2000, the transfer of the Eurobill programme to the Bank and the gold sales announcement.



SUDDENLY GOLD'S BECOME A GIRL'S BEST FRIEND!

Howzzat? OUT!!!

Societe Generale, in conjunction with Corporation Bank, India, has launched a gold medallion to commemorate the Cricket World Cup, which is running from mid-May until late June. Corporation Bank were granted a licence to import gold into India in 1998, and SG has become one of their main counterparts in sourcing gold from international refiners.

The Commemorative Medallion contains a quarter ounce of 99.99 gold and is being minted by the Perth Mint. On its face, it features the image of master Indian batsman Sachin Tendulkar. The artwork for the image of Tendulkar was completed by one of the masters of coin and medallion artistry, Stuart Devlin, who has also recently completed artwork for the Perth Mint on a full range of coins for the Sydney Olympics. It is presented in an attractive wallet containing a Certificate of Authenticity, a photograph and signature of Tendulkar and the Indian itinerary for the World Cup.

The Medallion was launched in Mumbai, Calcutta and Bangalore in late March in the presence of Tendulkar, some of his team-mates and Kapil Dev, India's inspirational captain when they last captured the Cricket World Cup back in 1983. Corporation Bank is marketing the Medallion throughout India, where there is a passionate culture for both cricket and gold. The Medallion has also attracted interest among Indian ex-pat communities in other countries, including the World Cup host country England. Availability of the Medallion is limited to the end of the World Cup in late June ■

Clearing Misconceptions

By Andy Smith, Commodities Analyst, Mitsui & Company UK

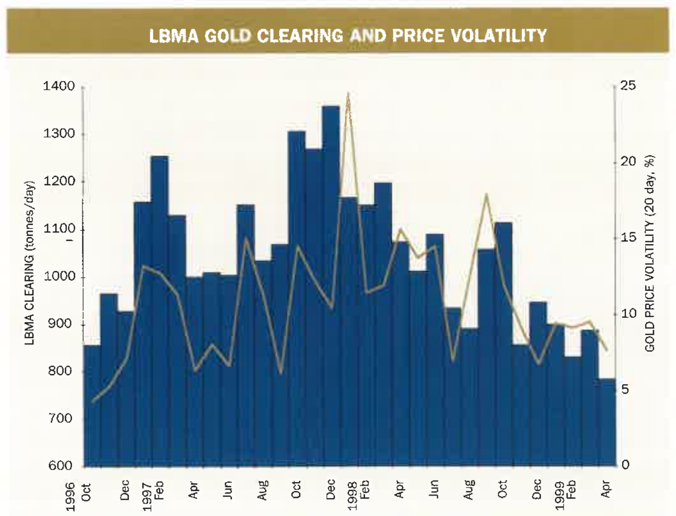
It has been known for those at some (planetary) distance from the markets to accuse the LBMA of being a club. But one club its monthly clearing numbers are not a member of is the over-subscribed 'damned lies and statistics' association. As a reflection of 'where the action is' clearing data are getting better and better. Quibbles, even laments, about how accurately they capture the level of London business miss the main point; as a former leader of the Free World might say: "it's the correlation, stupid".

As the table shows, the 'fit' of clearing data with 'the action' has been getting more intimate since the series began in October 1996. Especially so, as might be expected, with price volatility (here 20-day historic, taken at the end of month) rather than price itself . Correlations between 'voly' and clearing, for both silver and gold, are uniformly higher across all sub-periods. Churning and clearing go together – we suspected as much, but now we know it, officially.

LBMA Clearing Data Correlation Matrix
('1.00' represents a perfect fit) with:

	Gold		Silver	
	Price	**Voly**	**Price**	**Voly**
1997	-0.55	0.65	0.73	0.78
1998	0.30	0.54	0.83	0.84
1999	0.74	0.91	0.92	0.96
Since Oct 1996	**0.05**	**0.51**	**0.34**	**0.51**

And if the clearing data 'front run' any more major turning points in volatility – as they did at the start of 1998 – the queue of option dealers for the next release might stretch around Frederick's Place (and be visible even from other planets). ■



Industrial Strength Metal

Gold's practical side finds increasing applications in a variety of industries

By John Lutley, President, The Gold Institute

When Air Force Captain Scott O'Grady's plane was shot from the skies over Bosnia, tiny pieces of gold helped save his life.

The New York Air Traffic Control Center, which relies on gold circuited microprocessors.

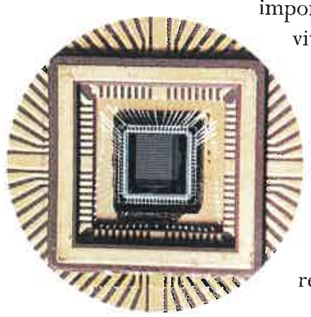
The escape mechanism of Scott O'Grady's F-16, the parachute that carried him safely to earth, and the air-survival radio that enabled him to reach his rescuers after six days in a rain-soaked forest all relied on gold components. No other metal would be as dependable as gold. It doesn't corrode, crumble or tarnish.

While gold's beauty was the quality that first drew man's attention to it thousands of years ago, today, its useful qualities are making it increasingly attractive for applications ranging from the home to the hospital to outer space.

- It is unaffected by moisture, oxygen or ordinary acids
- It is biologically inactive
- It has superior electrical conductivity
- It has extraordinarily high reflective powers
- It is the most ductile and malleable of all metals.

ELECTRONICS

Gold's superior electrical conductivity, the ease with which it can be shaped and deposited on other surfaces and, most importantly, its resistance to corrosion makes it vital in contacts and connectors used in a wide range of electronic equipment – the largest industrial application of gold – to ensure accuracy and reliability.



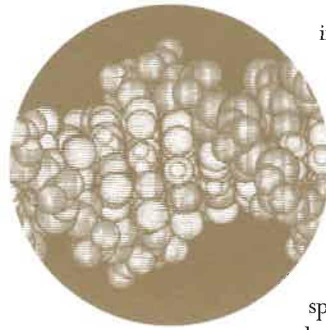
Thin gold pastes and gold platings are applied to printed circuit boards in computers and to contacts for switches, relays and connectors to guarantee dependable connection. And each year, well over two million miles of slender gold bonding wires are used in semiconductor packages.

The over 4-trillion sections of gold wire – each thinner than a human hair – that connect 40-to 50-billion tiny microprocessor chips in computers and other devices are triumphs of modern metallurgy. In 1996 alone, these connecting wires used 53 metric tons of gold (1.7 million troy ounces), worth over $544 million, yet each individual computer only needs a few cents worth to perform reliably for decades.

The number of these gold interconnections is increasing at about twelve percent a year. Because gold does not oxidise, it is the metal connection of choice between microchips and their lead frames. It possesses a lower electrical resistivity than other metals, yet has a higher melting point. Thus, gold wire will survive a higher burnout current, before failure, than aluminium, its closest competitor. Connector contacts in all miniature telephone jacks and receptacles are gold-coated, as are the switch contacts in portable cellular telephones – where use outdoors would quickly degrade other metals.

Researchers have recently developed the world's smallest pen, capable of drawing lines as thin as 30 nanometers, or about one-millionth of an inch. Experts expect the pen to be used for drawing nano-circuit components a thousand times smaller than today's microchips. It could also be used for the precise placement and shaping of molecules of different chemicals, which act as sensors, onto microchips. This pen should make an important contribution as microchip technology becomes smaller and is based more on biology than electronics.

MEDICINE



Medicinal usage of gold dates back at least as far as ancient Rome, where gold salves were used in the treatment of skin ulcers. Alchemists in medieval Europe mixed powdered gold into drinks to "comfort sore limbs" – an early reference to arthritis. Gold is still used today to relieve both rheumatoid arthritis and chronic ulcers.

Its medical applications are growing. Surgeons use gold instruments to clear coronary arteries. An injection of microscopic gold pellets helps retard prostate cancer in men. Women with ovarian cancer are treated with colloidal gold. Gold-coated lasers literally give new life to patients with once-inoperable heart conditions and tumours.

Because it is biologically benign, biochemists use gold to form compounds with complex materials like proteins to create new lifesaving drugs. One experimental new gold compound being tested for AIDS blocks virus replication in infected cells.

Because of gold's unsurpassed ability to reflect infrared radiation, it has become an important biomedical tool for scientists studying the body's behaviour. For example, by attaching a molecular marker to a microscopic piece of gold, scientists can follow its movement through the body. And because gold is readily visible under an electron microscope, scientists can, for the first time, see whether and where a reaction takes place in an individual cell.

Some researchers are placing gold on DNA to study the hybrid genetic material in cells. Others are using it to determine how cells respond to toxins, heat and physical stress. Still others are studying the chemical changes that occur in normally functioning cells.

One of the most promising new areas of medical research involves the use of lasers whose interior surfaces are coated with gold to control the focus of the beam. In one development, gold vapour lasers create a high intensity red light with the required wavelength to seek out and selectively destroy cancerous cells without harming their healthy neighbours.

A new lightweight laser designed by the military, using gold-plated contacts, enables medics to seal wounds on the battlefield and improves survival chances for the seriously wounded. In hospitals, this new design brings lasers to critically injured emergency room patients, saving precious minutes.

SATELLITES & SPACECRAFT

Gold-coated electrical connectors and contact pads provide flawless connections that ensure broadcast of static-free digital images from satellites and spacecraft, which must function unattended for years. And like the TV cameras and camcorders used at home, the satellite cameras that track weather systems or send images of other planets back to Earth depend on gold-coated wave guides to focus high frequency signals.

Because gold is a superior reflector of heat, gold-coated shielding is also used to protect delicate instruments and other spacecraft systems from intense solar radiation. Gold-coated visors also screen astronauts' eyes from damaging radiation during walks in space, a use now extended to the visors of fire fighters.

In November 1996, the Mars Global Surveyor lifted off from Cape Canaveral on a ten-month voyage to Mars. Among the spacecraft's scientific payload was the Mars Orbiter Laser Altimeter. With the aid of a gold-coated parabolic telescope mirror, the altimeter will be generating extraordinarily detailed topographic maps of the entire Martian surface over a period of years.

A tracking and data relay satellite uses gold-coated Mylar to reflect intense heat from the sun.

MANUFACTURING

Gold-coated reflectors amplify light beams in lasers that are used in a wide range of manufacturing applications, including heat-treatment to increase the life of cylinders in locomotive diesels and to cut hard-to-work metals, like titanium, for aircraft fuselages.

Because gold is chemically inactive, it also increases the efficiency of a number of chemical reactions. For example, because gold reduces the number of unwanted compounds created in the manufacturing process, a gold-palladium catalyst is used in the production of vinyl acetate, a building block for plastics.

And gold-coated optical fibers are gaining wide use by researchers who are studying chemical containment vessels and rocket engines that are subject to hazardous environments or high temperatures.

New research has also developed an affordable method of dyeing fabrics with gold and other precious metals to offer permanent bright colours. A chemical reduction of free metal ions deep into the textile fibres makes the metal part of the cloth's structure. While common organic dyes bleach out when exposed to sun and chemicals, colours made by metals will remain true forever: in a test, the colour of gold-dyed silk remained unchanged after a ten-minute soak in chlorine bleach. One ounce of gold will colour roughly 380 miles of spun viscose yarn.

SAFETY FEATURES

In the air, gold has helped save the lives of more than 300 pilots since 1978 through the faultless operation of aircraft escape. And on the road, only gold-coated electrical contacts can assure fail-safe deployment of life-saving air bags in millions of cars on the road today. Gold contacts, because of their unique resistance to extreme weather, also make possible the minimum

Aircraft engines use gold brazes in the compressor section.

10-year or 150,000-mile design standard for ABS (anti-locking braking systems). Over 28 million automobiles and light trucks built over the past four years have factory-installed ABS.

In the standard 25-position ABS, sensors at each wheel monitor motion and conduct their signals through 21 gold-plated contacts to an on-board computer programmed to integrate brake-pedal pressure and wheel rotation. When ABS are activated, the computer signals the driver by rapidly fluctuating the hydraulic pressure and producing a pulsating effect on the brake pedal, warning the motorist that the car is on the verge of skidding. Enough hydraulic pressure is released to allow the tire to continue travelling forward without the uncontrolled spinout that occurs when tires lock up. The driver is able to execute a controlled turnout to avoid an obstacle or to complete a corner under full brake-pedal pressure.

Gold contributes to safety in many other ways. Since the beginning of the jet age, gold has been used with nickel to bond compressor vanes in the huge turbines of commercial jetliners, enabling them to withstand exhaust temperatures of more than 1150 degrees Fahrenheit. At the opposite extreme, when subfreezing temperatures threaten visibility, a thin transparent film of gold on the windscreen of a plane helps keep it clear on the ground and in the air.

In hospitals and office buildings, a gold-coated infrared instrument has been developed that immediately detects unhealthy build-up of carbon monoxide and other indoor pollutants. Whenever indoor air quality falls below an acceptable level, blowers are activated to bring in outside air. ■

John Lutley received a degree in Metallurgy from Cambridge University in England in 1958, and joined Johnson Matthey, a major international precious metals company. After 20 years in the UK and Canada, he became Chief Executive Officer of their North American operations based in the United States. He retired from the Johnson Matthey Group in 1984.

In 1985, he became President of the Gold Institute. He was also Executive Director of the Silver Institute from 1985 to 1996, when he retired from that position. He remains a consultant to The Silver Institute. Both of the Institutes are international, non-profit organisations.

As President of The Gold Institute, he acts as spokesperson for the industry and directs programs that: provide members with relevant current statistical data and other information on the gold industry; provide members with early identification of changes in the operating climate for the industry; provide information and statistics on the gold industry to the media and the public.

SITUATION VACANT
Chief Executive

On the forthcoming retirement of the present Chief Executive, the Committee invites applications for the appointment of a full-time successor.

Under the proposed revised Constitution, the Chief Executive's role will be expanded. He will sit as a voting member on the Management Committee and will represent there the interests of the new category of International Associates. As now, the main role is to co-ordinate and implement the policy decisions of the Management Committee and, through that, of the Sub-Committees; to manage the Executive Office of the Association; and to act as Company Secretary.

Candidates will ideally have many years of professional experience in the bullion market. Relevant experience gained in a range of activities or types of institutions will be considered. The Chief Executive should have strong organisational skills and the ability to write clearly and concisely.

Salary negotiable on the basis of experience.

Applications, together with a curriculum vitae, should be made in writing and marked IN CONFIDENCE to:

The Chairman
The London Bullion Market Association
6 Frederick's Place
London EC2R 8BT

Closing date: 1 July 1999.

真金不怕火炼

True Gold Fears No Fire

Will China's Gold Market Overcome Growing Pains?

By Kevin Norrish, Minerals Economist, Barclays Capital

True gold fears no fire
zhenjin bu pa huo lian
(Chinese proverb)

Today's familiar Panda coin has an ancient ancestor in the little squares of gold which circulated as currency at least as early as 1091 BC. The Hebei province claims to have been producing gold for over three thousand years and is still one of the country's main mining areas today. China and gold have had a relationship for thousands of years.

The Chinese love of gold has nevertheless run into difficulties, notably after the Communist Revolution. For 35 years between 1949 and 1984, Chinese citizens were not allowed to own gold in any form. During the Cultural Revolution between 1966 and 1976, many families were forced to surrender their traditional belongings – including gold – to the state. However, with the introduction of the "open door" policy in 1978, which was designed to galvanise an antiquated economy, the Chinese began rapidly rediscovering their affinity for the yellow metal, "kam", and both gold production and consumption climbed rapidly throughout the late 1980s and early 1990s.

More recently, the Chinese gold sector has fallen victim to many of the problems afflicting the wider Chinese economy. Growth has stagnated under the restrictive influence of burdensome state controls, outdated technology and lack of investment. With the international gold market depressed and gold prices at their lowest levels for 20 years, a second wave of growth in the Chinese gold industry would be welcome. The prospects of this happening depend crucially on how successful the Chinese government is in modernising the country's gold mining sector and freeing up the restrictions that currently exist in the local market for jewellery and other gold items.

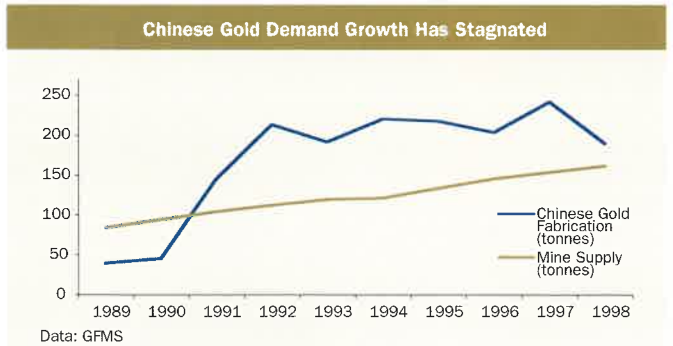
PRODUCTION STAGNATING

Chinese gold production increased rapidly following the liberalisation of the economy in the 1980s, growing at an average rate of ten percent p.a. since 1974. Encouraged by the government, many non-state gold mines were set up. Today there are over 1,200 mines across China, many of which are very small indeed. This rapid proliferation has brought its own problems. Many of the small mines use very rudimentary technology and waste resources. Officially, the number of mines reporting a loss at the end of 1997 was almost a third but in reality the figure was probably even higher. In addition to the formally approved sector there are a huge number of illegal mines. Here environmental precautions are often inadequate and "high grading" is a particular problem. Illegal miners high grade a gold deposit by taking only the 20-30 percent of the oxidised surface

Chuk Kam 24k necklace. *(photo courtesy World Gold Council)*

that is easily processed, making the remaining ore much less attractive to exploit.

In order to deal with problems such as these, new rules tightening control over the issue of mining rights were introduced in February 1998. These were intended to ensure the implementation of the 1997 Mineral Resources Law and are designed to ensure that ownership of mineral resources resides with the state. Tighter control has reduced the number of unprofitable mines to a quarter but has also slowed the rate of gold output growth. Production this year is expected to rise by less than two percent. A priority now is to intensify geological prospecting in the next three to five years because there is a perceived shortage of ore reserves necessary to fuel continued growth into the next century. To achieve this, the authorities hope to attract foreign participation.



DIFFICULT FOR FOREIGNERS

However, until recently, investing in the Chinese gold sector was not a happy experience for the few foreign companies prepared to take the plunge. Indeed, China's own Gold Bureau, part of the State Economic and Trade Commission, recently admitted that foreign participation had mainly been restricted to low grade and refractory gold reserves, generating little interest from foreign companies. Neither have joint venture (jv) relationships with local entities always run smoothly. Asia Mineral Corp (AMP) of Canada was the first foreign company to form a jv to develop a gold mine in China (with Shandong Zhaoyuan City Gold Corp in 1996). But in early 1998, AMP terminated the project, stating that the Chinese company had breached numerous provisions and principles of the jv contract.

More recently, there have been some signs that the environment for foreign investors may be improving. The new mining law introduced in early 1998 not only centralised the ownership of mineral resources by the Chinese State but also allowed foreign-controlled joint ventures to directly hold exploration licences for the first time. Since then a number of Western companies have been issued gold mining licences, including the UK's Griffin Mining Limited (via its 60 percent owned Hebei Sino Australian Mining Development Company), Southwestern Gold Corp and Global Pacific Minerals (both of which are co-operating with China's Northwest Geological Bureau). Perhaps of most significance however is the involvement of mining giant BHP which in late 1998 signed a contract with Guizhou Province to jointly seek gold deposits in the province's Nanpan River Valley. In a recent interview, BHP group general manager Hugo Dummett said that "the gold program in China is one that we like very much because it is very much like Nevada, which means if we're successful there we're going to find large, high-grade gold deposits [like those] found in Nevada in the past 5 or 6 years".

CHINA'S GOLD "FIX"

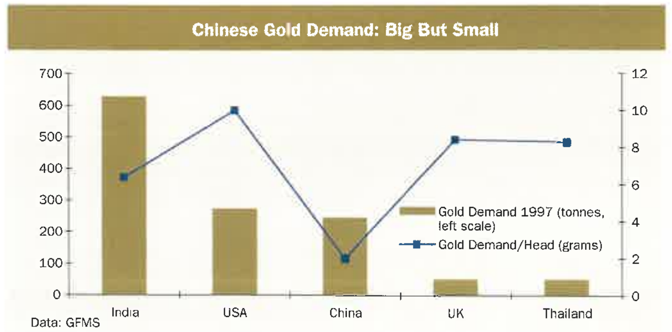
Another reason for China's image as a difficult place for foreign mining companies to be involved has been the fact that the only legal gold purchasing agent is the People's Bank of China (PBOC), and the price that it pays to local gold producers is fixed by the Bank itself. Through most of the early 1990s China's official bullion buying price was fixed at levels significantly below the international price. However, since early 1997 the authorities have tried to align the PBOC's price more closely with international prices. Since then it has traded at a consistent premium, encouraging gold smuggling from neighbouring countries, primarily Hong Kong, as well as encouraging illegal mining within China itself. During 1998 the PBOC cut its gold price several times as world prices fell but despite this Gold Fields Mineral Services estimates that local prices were on average still around $15/oz higher than the London fix.

Chuk Kam jewellery *(photo courtesy Tem Fat Hing Fung)*

A jewellery store in Shanghai

DEMAND – UNFULFILLED POTENTIAL

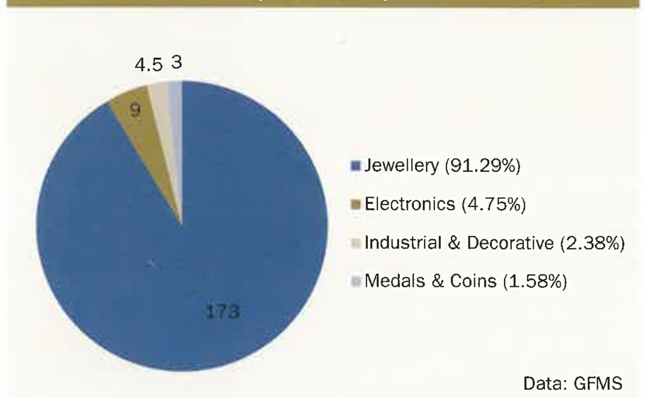
Chinese demand for gold has increased enormously in the past ten years: it now ranks amongst the world's top five consumers of gold. Gold for use in the fabrication of jewellery rose from just 29.3



tonnes in 1989 to a peak of 224 tonnes in 1997. Over the same period, the number of shops selling gold jewellery has grown from around 2,000 to more than 9,000.

Despite these impressive figures, there is a feeling that China is yet to fully develop its gold consuming potential. Per capita consumption of gold remains very low by global standards at just 0.2gm. By comparison, consumption in Hong Kong stands at 9 grams, and in India, a country with significantly lower per capita earnings than China, consumption is three times as great at 0.6gm. There has been very little growth in gold consumption in the past six years, and last year it actually fell to below the level reached in 1992.

Chinese Gold Fabrication by Sector (metric tonnes)



The main factor hampering the development of gold demand in China is tight government regulation. Neither bullion bars nor foreign coins can be sold locally, so gold sales are heavily dependent on the jewellery sector. Government control of jewellery and gold bullion prices and the resulting high premiums over international prices have encouraged smuggled imports of jewellery and also mean that there is little incentive to improve the attractiveness of local designs or the local gold jewellery distribution network. Interestingly platinum, whose price is not controlled, appears to have gained market share at the expense of gold jewellery in recent years, growing at average annual rates of around 20 pecent to a level of around 500,000oz in 1998. Thanks to the recent liberalisation of the economy, gold jewellery now has to compete in the family budget with an explosion in the availability of consumer goods such as televisions, washing machines, and refrigerators.

With a population the size of China's, even a slight increase in gold consumption could have a large impact: a per capita purchase of one single gram of gold translates into 1,200 tonnes. The World Gold Council has identified market deregulation as a key issue in boosting Chinese gold demand. It is also working on educating the trade to upgrade its products and services and has run marketing campaigns designed to attract the attention of younger buyers.

OFFICIAL RESERVES – INCREASE IN GOLD HOLDINGS UNLIKELY

China's gold reserves are extremely low by world standards when measured by official data. At 397 tonnes according to the IMF, the proportion accounted for by gold in China's foreign exchange reserves is less than one percent, significantly below those of other major world economic powers. Recently there has been talk of China increasing the proportion of gold in its reserves. Liu Shanen, Deputy Director of China's Gold Economic Development Research Centre, warned that excessive $US weighting of the foreign exchange reserves could make China vulnerable to any fall in the value of the dollar. At the end of March China's official foreign exchange reserves were $146.6 billion. To raise its gold holdings to ten percent of this, China would need to buy around 700 tonnes of gold.

However, the gold market should probably not hold its breath waiting for massive Chinese purchases. With a number of central banks divesting themselves of at least a portion of their gold holdings over the past few years, it is unlikely that China will buck the general trend. In any case China's officially reported figures for gold holdings are regarded with great scepticism by the industry at large. In fact, some estimates suggest that the Central Bank already holds as much as 1,000 tonnes of gold ■

Official Sector Gold Holdings in Selected Countries

	Million oz	*$Billion*	*Reserves Excluding Gold ($bn)*	*Gold % of Total Reserves*
USA	**261.61**	**11.05**	**70.71**	**13.5%**
Germany	118.98	10.23	74.02	12.1%
France	**102.37**	**29.87**	**44.31**	**40.3%**
Italy	83.36	24.71	29.89	45.3%
Switzerland	**83.28**	**8.67**	**41.19**	**17.4%**
Netherlands	33.83	7.30	21.42	25.4%
Japan	**24.23**	**1.19**	**215.47**	**0.5%**
United Kingdom	23.00	5.08	32.21	13.6%
Portugal	**20.09**	**3.39**	**15.83**	**17.6%**
Spain	19.54	5.62	55.26	9.2%
Russia	**14.74**	**4.42**	**7.80**	**36.2%**
Taiwan	13.57	4.74	90.34	5.0%
China	**12.70**	**0.62**	**149.19**	**0.4%**

Data:GFMS Notes: Gold holding and reserves at end 1998. Gold reserves at national valuations.

***Kevin Norrish** is the Minerals Economist at Barclays Capital. The Barclays Capital Commodities Group is a Market-Making Member of the LBMA and its Mining Finance Team is a major provider of finance to the mining industry.*

Kevin began his career in metals ten years ago at CRU International, ending his career there as Research Manager for Copper. In researching the metals industry he has travelled widely, including several trips to China. He is a regular speaker at metals conferences and has a weekly slot (Wednesday mornings at 11:19) commenting on metals market developments for Bloomberg TV.

He holds an MSc in Economics from the University of Reading.

Quick Study...

A Gold Forward Rate Agreement (GOLDFRA)

By Martyn Whitehead, Manager, NM Rothschild & Sons Limited

The GOLDFRA – designed to assist in managing movements in gold interest rates – is an agreement between two parties to determine the interest rate that will apply to a notional future loan (or deposit) of an agreed amount of gold for a single interest period of up to one year.

There is no exchange of a notional principal amount, only an agreement that an adjusting payment will be made in one direction or the other. This payment compensates for any movement of interest rates between the contracted rate and the actual market rate on the future date. GOLDFRAs have become increasingly popular with both the official and producer sectors. Producers have over recent years been prolific users of gold interest swaps and as such, the GOLDFRA provides a useful tool for managing short-term spikes in gold interest rates. The GOLDFRA plays an important role in managing their interest rate exposure.

The advantages

- Future interest rate exposure can be hedged without commitment to a specific borrowing or deposit
- Credit exposure is limited since a GOLDFRA is a contract for difference (i.e., no notional principal amount is exchanged)
- Transactions are easily reversible at any time prior to the start of the notional loan or deposit period
- Notional loan or deposit lengths of 1, 2, 3, 6 and 12 months are available
- Transactions are off balance sheet
- No fees are payable; the rate quoted represents an all-in cost

Mechanics

A GOLDFRA is settled by the payment of the net difference between the fixed rate agreed at the outset of the transaction and the actual market rate at the future date. As with any forward rate agreement, this difference (payable in gold ounces) must be discounted at the market gold lending rate to account for the fact that it is being settled at the beginning of the notional period rather than at the end. By agreeing a gold reference price at the outset, settlement may be paid in US$. The market gold lending rate is defined as USD LIBOR – GOFO.

Example: On 30th June, counterparty A, a notional lender of gold, enters into a GOLDFRA 3 months against 9 months. They sell 100,000 ounces of a 1.00% GOLDFRA fixing 28th September for the period 30th September to 31st March. On 28th September (the fixing date) the actual interest rate period for 6 months is calculated as 0.75% (6 month USD LIBOR minus 6 month GOFO).

Settlement Calculation

Settlement amount (ounces) **(S)**
Notional ounces = 100,000
GOLDFRA Price **(F)** = 1.00
Reference rate (USD LIBOR – GOFO) **(R)** = 0.75
Number of days in period **(N)** = 183

((F - R) x N/36000) x notional ounces = S
((1.00 - 0.75) x 183 /36000) x 100,000 = 127.083 ounces

The settlement amount is discounted at the lease discount factor (0.75%) to arrive at settlement for value 30th September.

S x (1/(1 + (N x 0.75/36000))= 127.083
= 127.083 x 0.99624 = 126.606

Counterparty A simultaneously deposits 100,000 ounces for 6 months at 0.75% and is compensated 0.25% (126.606 ounces) against the GOLDFRA, thus achieving an all-in deposit rate of 1.00%. The overall deposit rate would require Counterparty A be given the offered side of the lease rate as a deposit rate and in reality this would probably be adjusted for a suitable spread, (20bp), thereby reducing the overall rate to 0.80%.■

The New World Gold Council

By Haruko Fukuda, Chief Executive Officer, The World Gold Council

In the early morning of Friday May 7 I arrived at the World Gold Council's office in London to discover two things. The first was that the UK Treasury had put out a press release informing the world it intended selling more than half of Britain's gold reserves. The second, rather more pleasant, was that a draft press statement in response to this was already on my desk. By early afternoon our views were being circulated to the world's press and my colleagues and I were conducting media interviews left right and centre. The rest is almost – but not quite yet – history.

Why do I mention this incident? Not from boastfulness, because we all at the WGC are highly conscious of how much work we have yet to do, to remind the world's central bankers and other official holders of gold of the sound reasons why they should continue to do so.

Rather I highlight it to try to indicate to a possibly sceptical outside world just how the WGC has evolved, enabling it to respond swiftly and decisively to the news from the UK Treasury, and I know for a fact that our members – some of the world's biggest gold mining companies – were appreciative of this rapid rebuttal. At our recent Annual General Meeting – held in London on May 20-21 – one speaker suggested that the speed and firmness of the response reminded him of the media savvy of 'new' Labour under Tony Blair. Given the persuasive success of the Labour spin-doctoring machine at the last general election, I take that as a compliment.

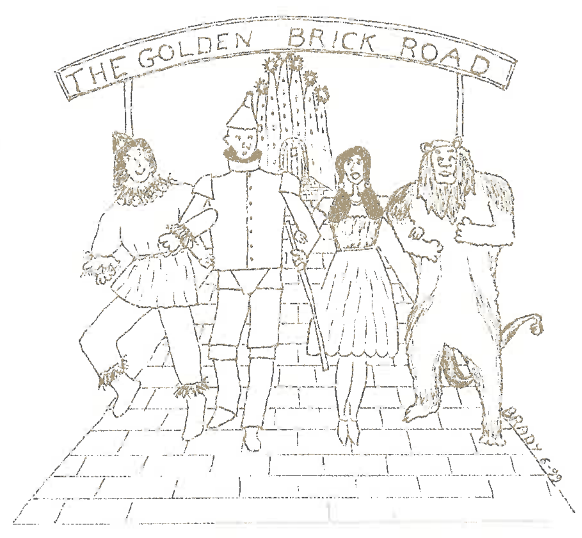
But the WGC has changed and will continue to develop in more fundamental and important respects than taking the initiative with the world's media, important though that is. My central mission is to grow the organisation's membership, so that the WGC's role as the only global advocate for gold is put on a wider and firmer footing. To that end I have had and will continue to have close, regular contact with not only existing but potential members. Existing members who attended the AGM could sense the reinvigorated spirit abroad in the leaner, more energetic Council; potential members will I hope be alive to the efforts being made by Council staff on their behalf.

But there is only one way of expanding the Council's membership – by proving to those non-members that this is an association with real benefits. We at the Council must, in other words, enter into much closer relationships with gold mining companies, so that we understand them and their needs, and that they are best able to utilise our collective skills. This process of greater interaction between members and Council staff has already begun and I hope will continue.

In terms of our practical activities, we have already gone far in grappling with the big issues facing the gold world – the threatened sales by the Swiss National Bank, the International Monetary Fund, and now the UK Treasury – by researching and publishing what we believe are objective yet relevant studies. One major effort of the Council over the next 12 months will be to dig into precisely what role the derivatives market plays. We are imminently publishing a report on the importance of gold mining for developing economies, which has been given extra significance by the announced intention of the IMF to sell some of its gold. We shall continue to monitor and work on the developing situation inside Switzerland.

We have conducted opinion polls in Europe (including the UK) and the US to try to gauge (and then publish) what ordinary citizens think of government moves which diminish the role of gold as a reserve asset. Advertising campaigns in various media have continued the offensive. In the pipeline are yet more creative media-related ideas, designed to extend our efforts beyond that of firefighting and into promoting greater gold demand, by increasing the broadest possible public understanding of gold's historic and future importance.

The Council is in a process of metamorphosis, shedding its former low profile with respect to the media and adopting a more pro-active approach whenever problems appear. Under my leadership we shall continue to evangelise on behalf of gold in all its uses, but with greater vigour, determination, and alacrity, and thereby, hopefully, convince those who have remained on the sidelines that it is an organisation which has their interests at heart. Such a corporate change cannot be effected overnight, but an enthusiastic start has already been made ■



"Wow! The wizard really did well at the Bank of England auction!"

To the editor:

This edition's Letters to the Editor section is entirely devoted to reactions to the Bank of England gold auction announcement

The news that the Bank will be selling part of the UK's gold reserves is an historic decision both for the Bank itself and for the London gold market The Bank has been at the centre of the gold business in London for most of its 300 years, since its Bullion Warehouse (later the Bullion Office) opened in 1732. Almost all the gold coming into the country was lodged and weighed there, confirming London as the premier market. Since then, it has fulfilled a unique role in everything from marshalling gold for coinage in the days of the gold standard, to advising, storing, trading and marketing gold for other central banks during the 20th century. As a Swiss trader once put it to me, "The Old Lady is doing a beautiful job for the London market". If the "Old Lady" is now to dispose of much of the UK's gold, will she continue to carry such authority in the world of gold?

Timothy Green

With the recent vociferous arguments for IMF gold sales from the UK Chancellor, the move by the UK Treasury to reduce the Bank of England's (BoE) exposure to gold, although unexpected, cannot be described as a total surprise.

However, the news that the world's 8th largest central bank gold holder has decided to dispose of 415 tonnes from its 715 tonnes of gold should not be underestimated, with the market receiving further evidence of official disenchantment with gold as a reserve asset. In addition, the news increases the likelihood that the major gold holders within the EMU will mobilise their gold in the near future, raising the spectre of further official sector sales sometime next year.

Doubtless as the market assesses the impact of the announcement it will be easy to focus on the subsequent $15 fall in the gold price. However, the transparency and staged structure of the sale provides a positive element. It will remove much of the uncertainty that has plagued the market over the past couple of years.

Helen McCaffrey
Treasury Analyst
N M Rothschild & Sons Ltd

The period of large-scale central bank dishoarding is behind the market. The disposals planned by the Bank of England—and the potential IMF and SNB gold sales—are more likely to represent the final acts of the more substantial official sector net sales experienced during the past decade.

Anticipated gold sales through auctions should help dispel market uncertainties somewhat. Additionally, UK sales of 25 mt (800,000 ounces) at each auction would add only 2.5% - 3.0% to the typical daily turnover on the LBMA on any given auction day – once every two months – which is unlikely to cause any major disruption in the gold market.

Florence Mui
Research Analyst
CPM Group, New York

When the UK joins EMU – as the government clearly favours – it will have to contribute to the gold reserves of the ECB. If it puts up a bit more than Italy (141t) and a bit less than France (159t), the Bank will have no more than about 150t of gold to look after on behalf of the Treasury. For any serious purposes of defence of the currency, Britannia is going ex-gold.

The danger is that this initiative – the first official gold auctions in 20 years – sets a giant precedent. Others will be watching, quietly but with intense interest. Let's hope they don't feel the need to jump the queue.

Tony Warwick-Ching
Virtual Metals Research and Consulting

The gold auction by the Bank of England looks to be an indication that the United Kingdom is preparing herself to join the Euro system. The British have been watching the performance of the Euro closely since its launch and consider that they may be getting closer to joining. So the UK can find a better deal by selling off its own 400 tonnes of gold and share the bigger pie of over 12,000 tonnes without having to carry as much gold herself.

We will see an increase in gold price volatility in the coming months since auctioneers would bid low in the auction and sell high in the market, meaning a deal is available every two months for bullion dealers!

> *"If the 'Old Lady' is now to dispose of much of the UK's gold, will she continue to carry such authority in the world of gold?"*

Raymond Chan
Chairman, The Hong Kong Gold & Silver Exchange

I think that the timing of the announcement on Friday 7 May was appalling, just as the gold price and gold shares were finally starting to show some life.

While I can understand that the B of E wants to sell some gold ahead of the UK joining the ECB and another central banker dictating what is/is not permissible, the clarification that the auctions were to be made bi-monthly was not required, since it put the 125t firmly into 1999 and not 50t in 1999 and 75t in 2000.

The gold market had accepted a responsible sale spread over 5 years so as not to overly disrupt the gold price. However, the clarification trampled any thoughts of a recovery on Monday 10 May. One questions whether the B of E knows the risks behind selling gold assets such as a weaker currency (the A$ was at US$0.76 ahead of the RBA sale in Jun 97 and is now US$0.66, having risen from a low of US$0.59 one year earlier in Jun 98). One also questions why the B of E needs to have a lower gold price at which to sell its gold: does it have to payback a favour to another nation? Only time will tell.

Keith Goode
Bell Securities

The gold market needs official sector metal to feed demand. The tonnage from the IMF, Switzerland and the UK could be absorbed by the open market over anything up to five years, subject to circumstances, if necessary. Price responses to repeated talk of IMF and Swiss sales (neither of which are yet sanctioned) have been decreasing and private demand has recently been absorbing any metal channelled into the system via the professional shorts. Why then, the timing of the announcement of the Treasury's (not the Bank of England's) decision? Was it to demonstrate that by announcing the sale in advance (and thus constraining prices), we are not distress sellers, but are emphasising gold's redundancy, as naturally befits our role as the centre of the world's physical dealing? Or was it forced upon the Government? It has not been generally published that the statement was in response to a Parliamentary question tabled by Mr. Ivor Caplin, Labour MP for Hove. Did he catch them out, or was it a plant?

Rhona O'Connell
T. Hoare Canaccord

The World Gold Council has expressed its concern about the sale because it betrays a singular failure to understand the historic importance of maintaining strong gold reserves. The underlying assumption seems to be that the UK Treasury has somehow finally managed to elude the global economic risks that other nations appear to consider as real as ever. Why else would it have decided to reduce Britain's gold reserves - the final defence in any serious international financial meltdown - to just seven percent of gross reserves, when the world average is around 17 percent?

Haruko Fukuda
Chief Executive Officer
World Gold Council

The process of "reverse alchemy" continues. Certainly the central banks which have so far divested gold in favour of interest-bearing securities have made the right decision. We believe the UK's decision will be vindicated in time as well. Gold no longer has a meaningful role in the international monetary system. Therefore, it is logical to expect portfolio adjustments. In an inventory liquidation, it makes sense to be one of the first sellers. We believe more will follow.

Clearly, the auction process adds visibility. However, it remains to be seen if constant headlines reporting central bank disinvestment will be positive for the price of gold. We remain bearish.

Peter Ward
Vice President, Equity Research
Lehman Brothers

The decision of the British treasury to sell a large part of its gold reserves comes as no surprise to me. Gold no longer plays a role in monetary policy and if a central bank wants to have a decent return on its reserves, gold is certainly not the asset of choice. The market should have no problems absorbing a yearly quota of 125 tons, as long as this is the only official gold placed on the market. However, there is a good chance that other central banks will try to reduce their gold holdings as well and that the market will have to absorb a much higher total amount. As a result, I think that the gold price will remain under pressure.

Hanspeter Hausheer
Senior Economist
Warburg Dillon Read, Zurich

Three cheers for the BoE. Cheer number one: They got in first with a pre-emptive strike ahead of the Swiss and the IMF sales. Cheer number two: Their action will make all the other banks around the world think hard about what to do with their gold. But will they all be orderly sellers? We very much doubt it. Cheer number three: This action may just force the gold bugs to realise gold is a commodity in oversupply. Where does the gold price eventually stop? Ultimately we need to close down a very large chunk of mine production to balance the market. So our guess is that $150 will be a floor. In the meantime our advice of the last five years remains unchanged: Always sell forward into all the rallies.

Ted Arnold, *Minerals Strategist,*
Hamburg Metals Div.
Prudential-Bache Int'l Ltd London

> *"Blindfold' or 'No blindfold' is academic if you're about to be shot."*

The initial reaction by the market to the announced sales was obvious; there is a seller in the market so let us drive the price lower.
The price of gold must be of no consequence to the Bank, otherwise the announcement would have followed the deed. So what is the Bank up to? Hopefully they are expecting the same result as when the Americans tried the same trick in order to drive the price down and boost the dollar. Those who were around remember that the effect of the auctions actually improved the price.

Gold is a commodity to be traded.

David Giese
Venmyn Rand (Pty) Ltd

Much has been said and written about the Treasury decision and the next decade may well prove whether it was far or short sighted. But the caravan moves on and I have been seeking some positive aspects to the announcement. Like swallows in summer nowadays, these are not easy to find but I think the prior announcement of sale is to be applauded; it should in future be more difficult for any other official sellers to follow the surreptitious forward sales route. Secondly, I think the London market should welcome the resuscitation of the auction process, which may flush out some investment interest. Thirdly, I will sleep much more soundly at night in the knowledge that UK policymakers can now see the future and, for us, there are no euro falls, or even shoals, ahead.

Terry Smeeton

Blindfold' or 'No blindfold' is academic if you're about to be shot. Similarly, how the Bank of England executes a gold sale - in the dark or in your face - is of relatively small consequence. For those still vainly seeking the abolition of capital punishment for official gold, there never would be a right means or moment to sell.

But 'transparency' - a salvo of public auctions - is a very blunt instrument, leaving contango (from a forward sale) or option premium (writing calls) on the table. On May 19 Alan Greenspan seemed to argue that central banks should be above this law of the jungle: "it would be inappropriate for a public institution to take advantage of private market participants and effectively sell into the market". Why? Central banks do it daily in bond or forex markets. Turn this around: private participants - gold producers and speculators - take advantage of public institutions every day by selling forward borrowed public gold.

Any last requests? First, that other central banks will be British about their sales, lining up with us in an international firing squad so the market can take the hit and move on. Second, that public institutions do 'take advantage of private markets' and trade their way - behind closed doors, professionally - out of prison, a long gold position.

Andy Smith
Commodities Analyst
Mitsui & Company UK

The UK Treasury's announcement has done substantial damage to the gold market. The size of the gold sales is small but the Treasury appears to have misjudged the impact on an already depressed industry. In flagging the sales in advance the Bank of England wanted to keep matters open and above board but as a result also ensured maximum damage to prices. British taxpayers also have justifiable room for complaint since the fall in the gold price following the announcement has wiped more than £300 million from the value of the Bank's reserves. Until the bogeyman of central bank sales is cut down to size it will be extremely difficult for gold to regain its traditional role as a safe store of value.

Kevin Norrish
Minerals Economist, Barclays Capital Commodities Group

Clips and quotes since the previous edition of the *Alchemist*

Gold Quotes

Swiss Voters Clear Changes For Gold Sales,
The Wall Street Journal, 19 April 1999

Gold Slips on U.K. Push to Double IMF Sales,
The Wall Street Journal, 27 April 1999

Don't consign gold to the scrapheap, *The Times, 28 April 1999*

Who Needs Gold When We Have Greenspan?,
The New York Times, 4 May 1999

Treasury to halve gold reserves, *The Times, 8 May 1999*

The gold rush has started – but in reverse.
Emptying the vaults, *Financial Times, 8-9 May 1999*

It is hard to be entirely rational about the case for holding gold bullion...
Selling the family gold, *Financial Times, 10 May 1999*

Central Banks Hesitate to Copy U.K. Treasury's Sale of Gold,
The Wall Street Journal, 11 May 1999

Gold traders press Treasury to 'privatise' bullion stocks,
Daily Telegraph, 11 May 1999

G10 fails to halt gold's tumble, *The Times, 11 May 1999*

Religious wars kill value of gold, *The Times, 13 May 1999*

Markets find all the jitters are still in gold,
Financial Times, 21 May 1999

At the World Gold Council's party, the Bank of England is the pooper.
Catching the gold bug, *Daily Telegraph, 21 May 1999*

First-quarter gold purchases rise sharply,
Financial Times 21 May 1999

Low prices put the brake on production,
Financial Times, 26 May 1999

Gold ends week at 20-year low, *Financial Times, 29-30 May 1999*

Thus far, this exercise in modernisation has been catastrophic.
Gordon Brown's golden own goal, *The Times, 2 June 1999*

REGULATOR – NOT RAPTOR

The Financial Services Authority

By Howard Davies, Chairman, Financial Services Authority

Overmighty. Unaccountable. Monster bureaucracy. Policeman, prosecutor, judge, jury and executioner all in one. The Financial Services Authority has been called a number of unflattering things in its short lifetime. Such a characterisation was probably inevitable from the day, just over two years ago, when Gordon Brown announced that nine financial regulatory bodies were to be merged into one new FSA.

Certainly we are big compared to any of the individual predecessor regulators. But that is really the whole point. As financial markets become more complicated and intertwined, and as financial institutions increasingly compete in a whole range of businesses, it is vital to have a single regulator which can look at risk and other relevant factors across the whole financial front. All over the world countries are merging banking and securities regulators – though few have gone quite as far as we plan to do. In our unique British way we have jumped in one go from a very complex system to a very simple one. One of the beauties of an unwritten constitution!

But the number of supervisors and the cost of regulation are not rising. In fact we have a couple of hundred fewer people than were employed in the old regime. There are useful economies of scale to be had – one chairman, for example, and one HQ – and we have achieved them. Our costs in the last year have been about £10m (seven percent) lower than before. Many City firms are in line for a rebate on their fees as a result.
So we are not unreasonably big. But what about being too powerful? I don't think so, and the facts support the point.

The government's aim in the new legislation has been to consolidate the powers of the existing regulators, but not to add to them, except in the area of market abuse. And there, the key aim is to allow regulators in future to pursue those outside the City who try to exploit City markets for unlawful gain – and bullion market participants will understand the problems this causes, both in distorting the Market and in damaging the City's overall international reputation.
For the general run of financial business there will in fact be more protection for regulated firms and persons in the new regime. For example there will be a Tribunal, wholly independent of the FSA, to hear contested cases. At present, the Tribunals are part of the regulatory system. Over the last couple of months a Joint Committee of both Houses of Parliament has been reviewing the FSA and its proposed powers under the Financial Services and Markets Bill. The Committee heard many witnesses – some hostile – and has now reported.

It made a number of proposals for strengthening the accountability of the Authority, which we welcome – indeed we have already done some of them voluntarily. But the Committee concluded that the powers and duties, including some important new responsibilities in the Consumer Education area, we will have are generally appropriate. And on some of the issues which have generated the most heat – whether the FSA's regulators should have statutory immunity from civil suit for damages where they have acted in good faith, or whether we should receive income from fines – the Committee came down firmly on our side. There is still some unfinished business, mainly to do with ensuring that the legislation is compatible with the European Convention on Human Rights. But a resolution of that point is within sight.

So we move on, and the Bill is due to go into the Commons shortly. But when the legislation is through, and the new FSA is fully operational, what difference will it make? What will the new regime mean for City practitioners like yourselves operating in markets and exchanges within the City arena?

The FSA currently has an important regulatory role in the bullion market, both through the Financial Services Act recognition arrangements which govern the London Metal Exchange and in supervising each of the market making members of the LBMA. Trading off-exchange is subject to the London Code of Conduct, which sets out best practice standards for both OTC physical and derivative business. The FSA maintains regular contact with the LBMA directly by attending its Management Committee meetings as an observer and also undertakes periodic surveys of liquidity and market turnover. I believe this regulatory framework has been a significant contributing factor to London's deserved reputation as the world's leading international bullion trading centre.
Looking ahead to enactment of the new bill, the FSA will only have direct authority over investment business. Spot and forward commercial bullion dealing is outside the

Howard Davies became Chairman of the Securities and Investments Board on 1 August 1997. The Securities and Investments Board was renamed the Financial Services Authority on 28 October 1997, preparatory to taking on broader functions as the UK's single financial regulator in 1998.

Mr Davies had previously served for two years as Deputy Governor of the Bank of England. Prior to that he spent three years as Director General of the Confederation of British Industry. From 1987 to 1992 he was Controller (chief executive) of the Audit Commission. From 1982 to 1987 he worked for McKinsey & Company, the management consultants in London, and during 1985-1986 was seconded to the Treasury as Special Adviser to the then Chancellor of the Exchequer, Mr Nigel (now Lord) Lawson. He had previously worked at the Treasury from 1976 to 1982, latterly as the Principal handling monetary policy. He started his career in the Foreign and Commonwealth Office in 1973 and worked as Private Secretary to the British Ambassador in Paris 1974 to 1976.

scope of the new bill, and hence FSA's statutory powers, so it is proposed that participants in the markets should in future assume a greater role in administering their own code for non-investments. The FSA will nevertheless encourage and participate actively in such a market arrangement and continue to oversee those bullion products that are investments (e.g., options). The aim will be to maintain clean and safe markets respected by their users and by international finance generally, but to do so in an as unobtrusive and low cost way as possible.

Against that criterion the existing regime scores quite highly. Independent studies have shown that the cost of regulation in London compares well with that in other centres – only just over half the cost in New York, in relation to business volume, for example. That is a competitive advantage which we must at least maintain. I think, indeed, that by reducing the dysfunctional overlaps in the old system, we can build on it. And our new legislation pushes us in that direction, by requiring us to take account of the impact of our regulation on the competitiveness of London's markets as places for internationally mobile businesses.

The introduction of the FSA has been widely welcomed in the City. All the major institutions have supported the notion of a single regulator, and supported the objectives set for us. The Treasury Select Committee has given the green light. So, now, has the Joint Committee. Subject to the changes recommended to the bill by that Committee, we hope Parliament will now quickly set about the task of passing it into law. My sense is that the City would like to see the debate concluded, and to see a new system quickly put in place. Continued uncertainty will be bad for London and its markets ■

Editorial comment
by Susanne M. Capano, Public Relations Manager LBMA

"That's not a local accent I hear, is it? Where are you from?"

New callers to the LBMA seem intrigued by my nationality.

This is generally followed by another question: "Why is an American working for the London Bullion Market Association?" Or, as one caller put it, "How did you get there?"

There are easily a dozen flights a day between New York and London, so getting here isn't exactly a problem, though I assume that not many take the same route I did, via a Luxembourg detour. To me, the more interesting question isn't how I got here, it's why I stayed.

As I glance out the window at the grey June skies, the answer is clearly not the weather. Amazingly, for someone who has lived in London for the past three and a half years, I don't even own an umbrella. So if it's not the weather, the food, and certainly not the cost of living that keeps me here, the only possibility left is my job.

In the past I've worked for banks, a brokerage house and a refiner, but never had a job that was as diverse or challenging as working to represent the London market. In addition to writing, editing and web site programming, there are endless calls, questions and comments to field. These can range from "What is the best benchmark to use when valuing gold derivatives?" to "I'm writing an article about gold. How much can you teach me in an hour?"

No other single market matches the flexibility in products and services London offers its clients. It is the pre-eminent centre for global bullion trading. But that doesn't mean London can afford to be smug about its position. It cannot look inward. It must look outward to see what its customers need and adapt itself to meeting those needs, which continually evolve.

A lower price environment, consolidations among dealers, changes in regulators, new products and documentation, central bank gold auctions – the real challenge to stay a step ahead. It is a challenge I look forward to being part of. Since I started working here a year and a half ago, I can honestly say I've never had a boring day.

So I suppose I had better buy an umbrella. ■

LBMA News

By Chris Elston, Chief Executive, LBMA

Membership Changes

- GFI Brokers Limited became an Ordinary Member from 1 June 1999.
- The news in the last issue that Lehman Brothers International (Europe) had resigned their Ordinary Membership was, like Mark Twain's death when he read his obituary, greatly exaggerated. They are now firmly back on board.
- The address of Barclays Bank PLC has changed to:
Barclays Capital, Commodities
5 The North Colonnade
Canary Wharf
London E14 4BB
- On 10 May it was announced that HSBC Holdings, the holding Company of Midland Bank PLC, made an offer to acquire Republic New York, the holding company for Republic National Bank of New York. The offer is subject to regulatory approval in both the US and the UK.

Good Delivery List changes

Additions

Silver – Russia – State-Owned Enterprise Shyolkovsky Factory of Secondary Precious Metals joined JSC Ekaterinburg and FSE Novosibirsk on the silver list from 28 April 1999.

JSC Krasnoyarsk Non-Ferrous Metals Plant (Krastsvetmet) also joined the silver list as from 2 June.

Committees

Management Committee

Apart from the intricacies of revising the constitution (completion due in time for the AGM on 21 July, to be followed later by a new Rule Book), the Committee has recently been concerning itself with examining possible alternative means of raising revenue (e.g. Alchemist advertising), with refining the GOFO and SIFO pages on Reuters and with standardised documentation for Swaps and FRAs (see article on page 6).

One other major outside event to which the Committee have inevitably been paying attention has been the announcement by the Treasury and Bank of England of the auction of part of the UK's gold reserves (see article on page 8 and letters on pages 22-23).

Public Affairs Committee

Kevin Crisp (Morgan Guaranty Trust Company of New York) has joined the PAC following Bob Davis's (Chase) move to Sydney.

A successful Spring Seminar was held on 29 April at the Ironmongers' Hall when Kamal Naqvi (Macquarie) and Mehdi Barkhordar (PAMP) gave excellent presentations on the physical gold markets in the Middle East and Asia.

The web-site, at www.lbma.org.uk, is up and running. Additional work will be carried out during the summer. Susanne Capano, our PR Manager, welcomes information and ideas for inclusion, as well as general comments.

Physical Committee

Apart from processing a never-shrinking list of applicants to the Good Delivery List (currently 16), the Physical Committee has been involved with: the Automated Matching System, revised specifications for GD silver, drawing up a list of Approved LBMA Weighers, electronic weighing of gold, augmenting the list of Independent Referees for GD applicants and an Unallocated Accounts Agreement – a not insubstantial agenda.

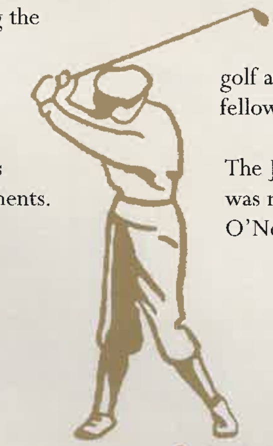
Membership Committee

The Membership Committee has begun to turn its attention towards defining the eligibility criteria for International Associates, once these are enshrined as a new category of membership following the AGM.

LBMA Golf Day

The 1999 LBMA Golf Day on 27 May will go down as the best so far. There were numerous reasons: fantastic weather, a good course in great condition, a considerable cross section of the market, a sprinkling of retired members and some welcome guests.

Brickendon Grange Golf and Country Club warmly received a record 44 players and thanks to the generous sponsorship of Mitsui and Co UK plc, Brambles Security Services UK Ltd, Via Mat International Ltd and the LBMA itself everyone enjoyed a thoroughly convivial day of golf and good fellowship.



The Jack Spall Trophy was retained by David O'Neill with 37 points who just pipped retired member Peter Govier into 2nd place. The Tradition Team Trophy was won by Grant Angwin, Ernie Watkins, Neil Johnson and Alan Baker.

John Coley and Stella Thompson, to whom our thanks are due, managed to keep some semblance of order to the running of the day. The notable exception was the temporary disappearance of the main trophy that was given to a member of the staff for safe keeping. When the time came to recover the trophy, the member of staff had gone home, where he was not available on the phone. Such was the efficiency of his concealment that it was not found until the following morning! ■

DIARY OF EVENTS

14-15 June 1999
The 22nd Annual Financial Times World Gold Conference, Hotel Inter-Continental, London.

15-18 June 1999
The 16th Mining Congress of Turkey, Ankara, Turkey. Tel 90 31 2 425 1080

17 June 1999
Understanding the 1992 ISDA Master Agreements, The New York Palace New York.

20-23 June 1999
The 23rd Annual Precious Metals Conference, The International Precious Metals Conference, Acapulco, Mexico.
Tel 001 850 476 1156

21 July 1999
LBMA Annual General Meeting, 4.30pm, City of London Club, 19 Old Broad Street, London EC2.

30-31 August 1999
The 3rd Annual RNA China Gold & Precious Metals Conference, The Financial Training Centre of People's Bank of China, Shenzen, China.

6-10 September 1999
The 24th Peruvian Mining Engineers Conference Arequipa, Peru. Tel 51 1 349 4262

14 September 1999
Gold Fields Mineral Services Ltd, Precious Metals Seminar, Plaisterers' Hall, London Wall, London EC2

16 September 1999
Gold Fields Mineral Services Ltd – Precious Metals Seminar – NYMEX, World Financial Centre, New York

17-20 October 1999
Mining Indonesia 99, Jakarta, Indonesia. Tel 44 171 862 2090

18-20 November 1999
Manitoba Mining and Minerals Convention, Winnepeg, Canada. Tel. 800 223 5215

28-29 November 1999
Western Investment in Mining Conference, San Francisco, CA. Tel 001 305 669 1963

5-6 December 1999
Society of Mining Engineers Arizona Conference, Tucson, Arizona. Tel 800 763 3132

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facing facts

By Paul Burton, Editor, World Gold

This column, giving an updated overview of developments in the mining community, will be a regular feature in upcoming Alchemists.

In recent weeks the behaviour of the gold price has been the main talking point in the gold market. The debate on the wrongs and rights of the UK Treasury's decision to sell over half its store of gold has raged, with even the daily press expressing opinions. The effect on the price of the imminent sales has been predictably damaging and has deepened the long bear market.

In these times of austerity the gold mining industry continues to focus on reducing operational costs at existing operations. Those companies with solid balance sheets are also utilising the opportunity to acquire quality assets that will enable them to continue to enhance their cost profiles.

In April, Canada's **Barrick Gold** completed the acquisition of Sutton Resources, and with it the impressive Bulyanhulu gold deposit in Tanzania, and followed this with the acquisition of 50% of the Golden Ridge mine, also in Tanzania.

Also in April, **Homestake Mining** acquired junior company Argentina Gold for its 60% share in the promising Veladora prospect, in Argentina. By the end of May giant Canadian gold miner **Placer Dome** had completed the purchase of two more-mature projects, the Western Areas mine (50%), in South Africa, and the operations of Getchell Gold, in Nevada. Placer has also decided to go ahead with construction of the Las Cristinas mine, in Venezuela.

The motivation behind the rationalisation moves of some of the South African companies is as much about the need to be of such a size to compete with the other global majors as it is about reducing costs.

In May, **Gold Fields** completed the reverse takeover of Driefontein and established the company as the fourth largest producer in the world.
The giant South African mining company **Anglo American** left the parochial scene of Johannesburg to take its place on London's global stage as one of the foremost resource companies in the world. It completed the merger with Minorco and on May 24 listed on the London Stock Exchange with a market capitalization of over £12 billion. Anglo American plc owns 54% of the world's biggest gold producer, AngloGold that now boasts operating assets in North and South America to go along with its African gold mines.

Another Southern Hemisphere miner, Australia's **Normandy Mining**, has featured prominently in the news in the past few months. As another company with firm global aspirations, Normandy secured gold assets in Europe and Africa by terminating its LaSource joint venture with the French geological agency BRGM, and is cementing its position as Australia's top gold producer with the consolidation (baring regulatory blocking) of 57% of Great Central Mines.

It has also initiated a foray into the American continent with a proposed partnership with Canadian **TVX Gold**. A new company, TVX Normandy Americas, will encompass interests in one Chilean, two Brazilian and two Canadian gold mines.

Up until the recent plunge in the gold price, and subsequent dramatic decline in gold shares, there were signs that the investor interest was returning to the market. The Canadian diverse minerals company, **Teck Corp**, was able to raise C$150 million and planned a further C$150 million through two separate share issues. Avgold raised R127 million prior to completing its US$130 million senior loan to develop the Target project, and Goldcorp, a Canadian miner, resurrected plans to raise US$50 million.

But such an opportunity came too late for some. In March **Australian Resources** called in the receivers, and the company was liquidated at the end of May with the loss of 280,000 annual oz of gold. **Royal Oak Mines**, which thought it had reached financial safety with the commissioning of its Kemess mine last year, finally succumbed to the weight of debt obligations and went into receivership. Another 400,000 oz/year lost.

Does all this mean that gold production is declining? It is a little early to say anything definite but there signs that the low gold price of the past three years may be starting to have an impact on industry output.

Total gold production from the fifty-five core gold mining companies covered by World Gold Analyst (representing almost 70% of world production) amounted to 12.30 million oz in the March 1999 quarter, representing a 7% decline from the December 1998 quarter. This reversal comes after production grew steadily by around 2% each quarter in 1998.

There were, however, a number of extraordinary factors that partly explain the decline in production in the March quarter and so the drop in production may just be temporary. In Australia, in particular, the mines were affected by bad weather, and many operations worldwide suffered interruptions to processing as a result of various technical problems.

Some reductions were planned like the 26%, or 210,000 oz, cut by 1998's largest gold producer **Freeport McMoRan Copper & Gold**, as lower-grade ore was treated in its newly-expanded plant.

In contrast, **Barrick Gold** boasted an excellent quarter that saw its production rise by 127,000 oz (14%) to over 1 million oz as its US$260 million Pierina mine, in Peru, made a maiden contribution of 315,000 oz ■

Top producers in March 1999 quarter

Company	*Gold Production (oz)*
1. AngloGold (1)	*1,728,000*
2. Barrick Gold (4)	*1,010,913*
3. Newmont Gold (2)	*956,100*
4. Gold Fields (6)	*901,000*
5. Rio Tinto (3)	*703,000*
6. Placer Dome (7)	*684,000*
7. Freeport McMoRan C&G (5)	*609,820*
8. Homestake (8)	*559,900*
9. Normandy Mining (9)	*396,456*
10. Ashanti Goldfields (11)	*385,093*

Numbers in brackets denote positions in December 1998 quarter.