LBMA

Alchemist

The London Bullion Market Association ISSUE 33 December 2003

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Panorama – One man travelled the length and breadth of Scotland, panning every viable river for gold. He sold his trove to a jeweller in Edinburgh. Their story can be found on page 16.

No Olympic Gold for Greece?

by Mark Rachovides, Principal Banker – Natural Resources, European Bank for Reconstruction and Development

Minted in Babylon during 336-323 B.C., a stater showing Alexander the Great

The land that produced the gold to support the campaigns of Alexander the Great – and then went on to help finance half of the Roman Empire for over a thousand years – is not easily convinced of the benefits to be gained from developing its mineral resources. Especially gold.

Though they could easily be, it is very likely that the gold medals at the 2004 Olympics will not be made from Greek gold.

For despite a developed industrial and financial sector and a long history of mining, there is no significant gold production today – this in a country that is by far the leading economy in the Balkan region, one that enjoys a degree of prosperity and development far in advance of its neighbours.

Some may shrug at this and conclude that such is now simply the status quo in an EU that is hardly friendly to the extractive industries. Others may conclude that, given its heritage and dependence on tourism, environmental concerns in Greece figure higher in the national agenda than in other potential mining districts.

Sustainable development of the country's mining industry certainly depends in part on how well it deals with environmental issues. And in Greece, as elsewhere, local communities are vocal. Add multiple interest groups and competing land uses to the mix, and mining companies have their work cut out for them well before they begin carving gold from rock.

Oddly, based upon other minerals, it should be possible. Though much of the country's considerable mineral resources have yet to be exploited, the overall picture for the Greek mining industry remains fair for bauxite, nickel, magnesite, lignite and industrial minerals.

Not so for gold. Since the mid 1980s, exploration has determined significant gold resources in the north of the country, but all the subsequent gold projects and all the western gold companies that have come to Greece have not succeeded. Why not?

An Investment Problem? Or a Gold Problem?

After more than seven years of attempts by Canada's TVX Gold (now Kinross Gold) to develop the existing Olympias and Skouries deposits at its Kassandra mines complex on the eastern coast of the Chalkidiki Peninsula, environmental and other issues remain unresolved and today the entire project is at a standstill.

The state still plays a major, often defining, role in business in Greece, and the active engagement of both Kinross and the Ministry of Development is a positive step towards the implementation of the project. But it will need to be dramatically changed and refreshed if it is to succeed.

During 2003, mining by TVX Hellas SA extended to a small and largely marginal lead-zinc mine. TVX has been accused of many mistakes in this project – alienating local interests, distorting the local labour markets and just making a bad deal in the first place – but I for one remember the frissance that the initial development of the project brought, not least to the London banking scene.

Similarly, Thracian Gold Mining SA, a joint venture between Newmont (80%) and Silver and Baryte Ore Mining Co., had completed a feasibility study for the Perama gold project in northeastern Greece. But as insufficient progress was made to meet Newmont's normal investment criteria, the property is in the process of being sold. This is telling: there is nothing wrong with the Perama deposit – in many ways it is very attractive indeed, as buyer interest obviously evidences – but it does not compare to direct alternatives for an industry leader that, conspicuously, is developing the Ovacik project in neighbouring Turkey.

Political risk is clearly perceived as greater in Turkey, but multi-layered interference is sadly more prevalent in Greece, as foreign investors in many industries can confirm. This in part reflects the oversized role of the state compared with other EU countries, and the fact that local investors are much more conversant with the nuances and intricacies of taxation, approval systems and decision making as a whole. But the level of direct foreign investment in Greece is alarmingly low today in comparison with other economies with, for example, a similar per capita level of GDP. The problem therefore may not be gold.

Alexander Would Weep Once More

Approval by the authorities is still pending on an application by Thrace Minerals SA (a subsidiary of Greenwich Resources plc) to develop two gold deposits located near the town of Sappes in Thrace. They are an underground gold mine on the high-grade Viper deposit and an open pit at St. Demetrios.

Mineral reserve estimates prove 1,300,000 tonnes of ore at a gold grade of 16.3 g/tonne. Such untouched deposits would be enough to cause Alexander to weep once more – this time, not over unconquered lands, but over the gold his countrymen have left unmined.

A Roman aureus depicting M. Aurelius, dating from 177-178 A.D.

Interestingly, cyanidation has now been excluded from the project, and instead gold will be recovered by gravity and flotation techniques. Although the project would clearly represent a significant investment in one of the poorest areas of the EU and is expected to provide long-term employment, local groups and environmentalists have objected to its development. A final decision is now understood to be expected in 2004.

Exploration for gold in the island of Milos ceased when permitting was not granted on the grounds that further exploration and, ultimately, mine development in an area where industrial minerals are already extracted could have unacceptable consequences for the environment. Again, local groups of activists focused on the question of cyanidation and proved very effective in removing support for the project.

Some observers question whether environmentalists have merely capitalised upon the Greek political tradition of protest rather than actually considering the views of local communities and their needs for employment – a bit surprising in the land that fathered democracy.

Competing land-use, notably in Chalidiki, may well have been a significant factor in undercutting the development of the gold mining industry. A Council of State ruling on Olympias was publicly praised by one group of activists as, apart from the proposed use of cyanide, it had also taken into account "...the inevitable devastation of forests, water pollution and the risk of a severe accident."

In other words the risks outweighed the benefits. By contrast, the views of this group, Hellenic Mining Watch, on the approval given to TVX to mine under a village, Stratoniki, were different. "The Government has shown beyond doubt that it places the company's profit against the protection of the environment, of our lives and property," Hellenic said.

Investors Wanted. Greeks Preferred.

Is there a future for gold mining in Greece?

Arguably yes, simply because Greece remains a significant mining country with the established and competitive extraction capabilities for other metals and minerals. Clearly the expertise, interest and financial support do exist, and no other mines have faced the level of opposition that the foreign-owned gold projects have had to endure.

Perhaps this reflects the simple view that gold is a low-volume, high-value product, the mining of which, compared to, for example, bauxite or nickel, does engender much higher degrees of waste and toxicity. But that view ignores the fact that, by comparison, gold mining and processing technology and practices are of a much higher standard – and that foreign operators by definition have to perform to standards set not by the Greek state but by the world market as a whole.

So I am left to wonder therefore if a Greek investor in gold mining might not have a better chance of producing gold, at least in time for the Olympics in Beijing? ■

Mark Rachovid currently working on a variety of oil and gas and mining projects in the Former Soviet Union (FSU), Eastern Europe and the Balkans. He leads the EBRD's financing of two major FSU gold projects, both syndicated to commercial banks: the Kubaka Project in Russia and the Zarafshan-Newmont project in Uzbekistan. He has also written articles and made presentations on Russian gold mining. He has over nineteen years' experience in commercial banking, including seven years with EBRD.

TOCOM and the Big Bang

by Bob H Takai General Manager, Commodity Business Dept, Sumitomo Corporation

In March of 1982, I was 24 years old, a junior gold trader in the Precious Metals Department of Sumitomo Corporation, when my boss told me that the first official gold futures market had been created locally and he thought I should give it a try. To me, futures markets were like COMEX and CBOT – located on the other side of the globe, places where I could only check the previous day's prices, but never trade on them myself.

I still remember my first trade – a 50-lot (50-kilo) selling order at 2,630 yen, just a test to see how this market worked. The session started at around 2,620 yen. Buyers outnumbered sellers, and the price soon reached and then surpassed my level.

I shouted to my broker on the phone, "How is my sell order? Is it done?" He replied "No sir, Mr Takai, not yet." I shouted back angrily, "Why not? My price is 2,630 and we are now trading at 2,635!"

The broker sounded confused but kept repeating the same answer, like a broken tape-recorder. Then suddenly a hammer was struck at a price of 2,641 yen. My broker said, "Mr Takai, your order has now been filled at 2,641 yen –11 yen better. Good fill, wasn't it?" I was thus introduced to the traditional fixing style in Japan called Ita-yose, literally meaning board matching, where all buying and selling orders are matched at a single price.

Since those early days, Japan's first industrial commodities futures exchange has grown exponentially to become the dominant price maker in the Asian time zone.

TOCOM Today

At the time I placed my first order, the market was called the Tokyo Gold Futures Exchange. Two years later, it merged with the Rubber Exchange and the Textile Exchange to become the Tokyo Commodity Exchange for Industry (TOCOM). Textiles are no longer traded, but, as it is an important commodity for the industry in Asia, natural rubber still is.

Today a total of ten commodities are now traded: five metals, four energy products and natural rubber. There are plans to add gold options in May 2004, probably followed by crude oil options later in the year.

Hibakari, Multi-Armed Deities, and the Evolution of TOCOM

During its early days, I could hardly have imagined today's TOCOM. Why has the Exchange grown so much over the last 20 years? What makes it so special? I would attribute its success to the following factors:

1 – Early introduction of screen-based trading

2 – Active day-trading, encouraged by the use of electronic trading

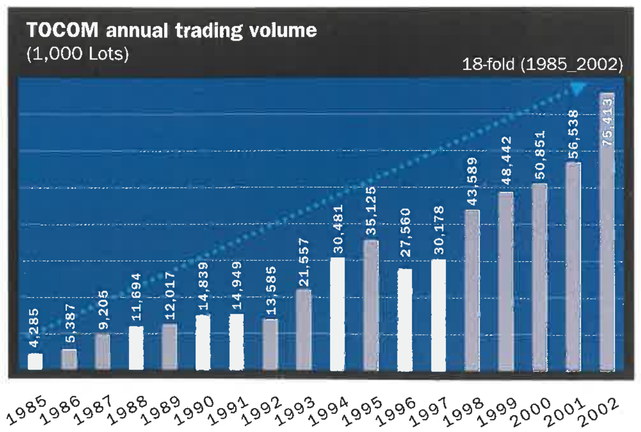
3 – A good selection of listed commodities.

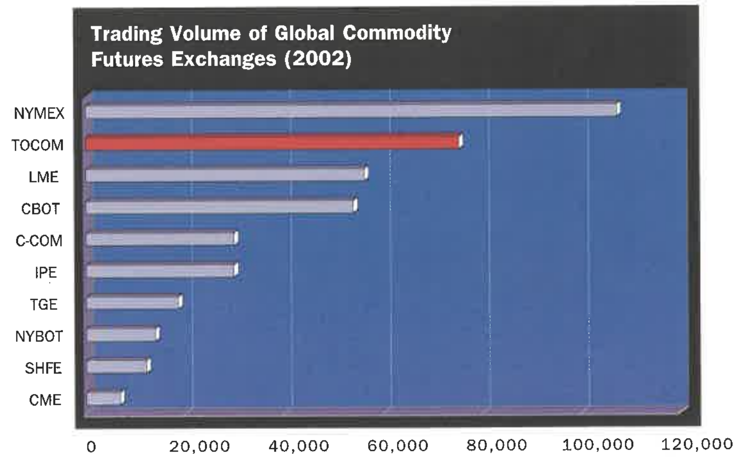
In April 1991 a screen-based, continuous trading method was introduced to TOCOM's Precious Metals Market. The shift from ring dealing to electronic trading went smoothly, in large part made possible by the Japanese employment system (job losses were minimal). The fact that the Natural Rubber Market preserved traditional trading methods also helped.

Screen trading changed the life-style of traders in the dealing room, with the greatest impact being that they had to remain in front of their keyboards throughout the trading sessions. For two hours in the morning and three in the afternoon they were then as they are now continuously typing orders – entering, cancelling or amending – while closely monitoring loco London/Zurich gold prices and the USD/JPY markets.

A bullion dealer on TOCOM resembles a multi-armed deity in a Buddhist temple in Kyoto, needing to keep eye and ready hand on six to eight different screens simultaneously – two or three TOCOM screens, one Reuters spread-sheet, one or two Reuters Dealers and one EBS screen.

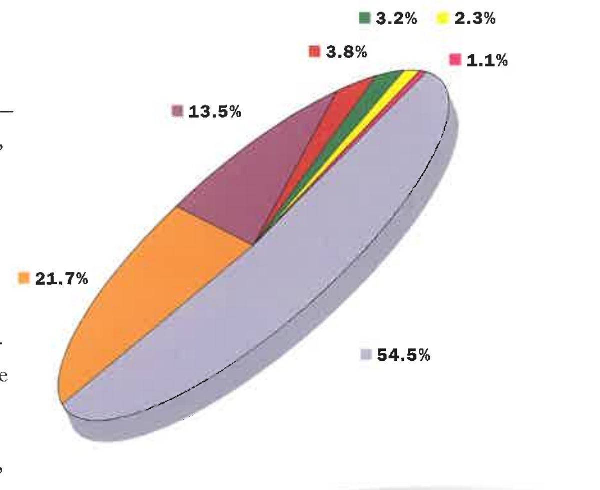
The second reason for the market's success was a tremendous expansion of volume in day trading, or Hibakari. Imagine your kids playing Sony's Playstation or Nintendo TV games, and think of the speed at which their fingers press the buttons of the remote to attack monsters on the screen. This gives a good idea of what Hibakari trading is like. Professional day-traders – or Hibakarers – check other players' positions* second-by-second to decide what to do next. As they prefer to square their book by the end of the day, Hibakari resembles a daytime game requiring players to get monsters by 3:30 pm.





TOCOM's share in domestic exchanges (2002_Unit_Lot)

	Total Traded Volume	Share
Tokyo Commodity Exchange	75,413,190	54.5%
Chubu Commodity Exchange	30,011,863	21.7%
Tokyo Grain Exchange	18,670,931	13.5%
Osaka Mercantile Exchange	5,207,652	3.8%
Kansai Commodity Exchange	4,488,914	3.2%
Fukuoka Commodity Exchange	3,170,985	2.3%
Yokohama Commodity Exchange	1,507,210	1.1%
	138,470,745	**100.0%**



TOCOM is by far the largest of Japan's seven commodity exchanges. And even by international standards, TOCOM is well placed within the upper reached of the major league.

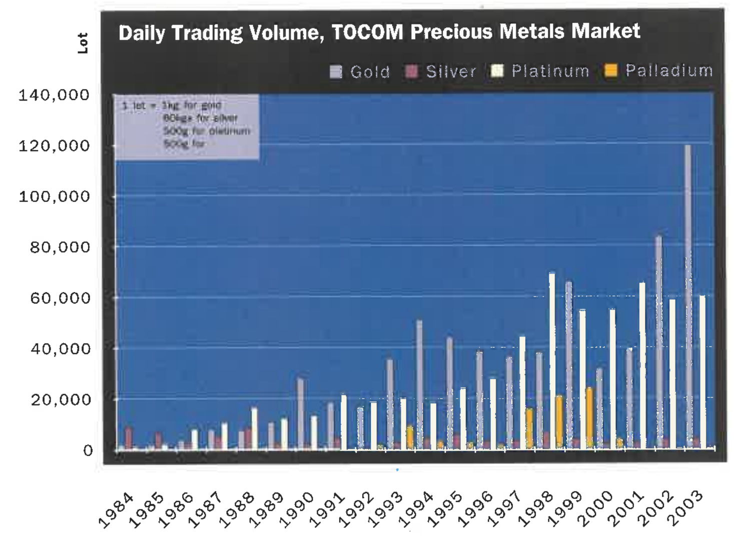
The emergence of Hibakarers contributed very much to the market's growth in trading volume and liquidity. Because most Hibakarers don't like to carry positions overnight, they don't mind trading size during the day – otherwise, with razor-thin margins, they couldn't possibly make enough profit. Selling over a lac of gold can be a lot of work in the loco London market during the Asian time zone. Having the price move a dollar or two against you is quite easy – but on an active day on TOCOM, you could accomplish this in a second with only one yen (25 cents per ounce) slippage per gram in price.

TOCOM's selection of listed commodities was another factor contributing to its success. When it opened in 1982, gold was the only product. Other metals soon followed – silver and platinum came two years later, followed by palladium in early 90s. Gold and platinum have grown much larger than anyone imagined. Palladium has as well, but the suspension of trading in March 2000 to avoid default by several members damaged its reliability and reputation, and subsequently the market has not recovered the volume it had in its prime.

The first – and probably the last – base metals contract, aluminium, was listed in 1997. But it never caught on, possibly due to two factors: the dominance of the LME in Asian markets and the fact that aluminium never really came into favour with Japanese speculators, who prefer commodities with which they are more familiar.

In 1999 the first energy contracts, gasoline and kerosene, were listed. Unlike aluminium, these products proved tremendously successful with the local trading community, probably the biggest after gold and platinum. They are domestic commodities and don't have any equivalent or mirror markets overseas.

Local commodities are of great interest to local speculators and proprietary traders of broking firms. Their trading style is to forcefully push a market, a technique that is less successful with international commodities, where arbitragers quickly move the markets back to equilibrium. Domestic energy contracts, however, opened the door for so-



* *TOCOM currently discloses all members' outstanding positions, as well as order details with actual members' names, on real-time basis. However, it is considering ceasing the disclosure, following in the footsteps of the Tokyo Stock Exchange, which stopped disclosing the information in June this year.*

called Shite-suji, or privately run speculative groups, which entered the gasoline market and traded volume. Hibakarers also found the new energy contracts an interesting battlefield where quick and easy gains could be found. Wet guys (the term for physical oil traders in Japan) also joined in to speculate and/or hedge.

Post-Palladium Fiasco

TOCOM's clearing system underwent some changes in the wake of the palladium fiasco. In June this year, the settlement gap of two working days was reduced to just one in MTM (mark-to-market) exchange margins for all members – in TOCOM terminology, T+2 became T+1 in order to minimise the credit exposure caused by members' default.

The settlement method was also changed. Previously, the Exchange acted as an intermediary, therefore, MTM margins had to be received before they could be paid. The Exchange has now made itself a settlement entity, allowing payment of margins before receipt – a major step forward for the outdated Japanese futures business. In future, the sudden suspension of trading in the case of members' failure will be avoided.

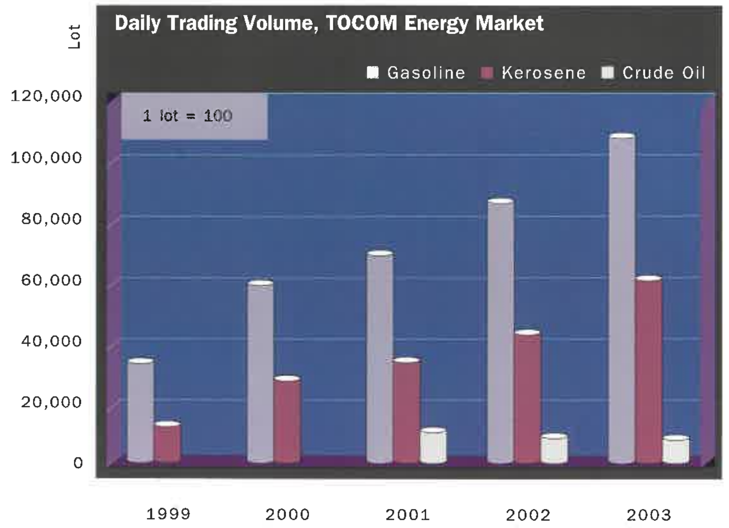
The clearing system will be further modified after expected legislative changes are enacted next year, which call for the creation of one clearinghouse to cover all seven of the country's commodity exchanges.

Access to TOCOM for traders from overseas has been greatly facilitated. In July this year, the TOCOM board approved the entrance of ISVs, or Independent Software Vendors, such as GL TRADE or Pats-systems. Users around the world can now access TOCOM's electronic trading floor from their home or office PC keyboards. Once they open an account with a TOCOM broker, they can monitor the price range on the order matching board from New York or London with the same ease as TOCOM Exchange Members in their dealing rooms in Tokyo. The speed of access is less than a second – from pressing a button overseas to execution of an order in Tokyo. Amazing!

The Big Bang – in Japan

The Ministry of Economy, Trade and Industry (METI) and the Ministry of Agriculture, Forestry and Fisheries (MAFF), the regulators of the seven commodity exchanges in Japan, are serious about reforming the markets and the industry.

In May, they formed the Commodity Futures Exchange Committee to reform the present futures exchange system. Led by Prof. Katsuro Kanzaki of Kansei Gakuin University, the 17-member Committee has met several



times. Their suggestions will be complied and submitted to the upper body of both Ministries by the end of this year and amendments to the current law, the Commodity Exchange Act, will be approved in next year's parliament, with the new law implemented from April 2005. Summaries of the Committee's findings are contained in the sidebar.

January 2005 will also see changes to the structure of brokerage commissions. Under the new law free competition will be introduced, and brokers will have to deposit entire margins with the exchange, whereas currently they retain 35% of margins received. By law, this must be kept segregated from brokers' own money at all times. However, some brokers have not strictly followed this rule.

These changes will undoubtedly transform the old-fashioned futures industry of this country to a much more competitive western-style one. The 80-odd commodity futures brokers here will face quite a challenge, and drastic restructuring of the whole community is unavoidable.

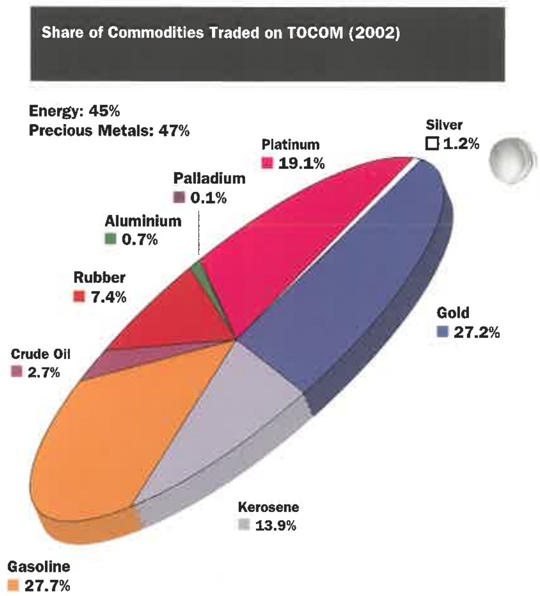
Internet brokers will become more dominant on the retail level and the traditional trading method of Mukai-gyoku will become much more difficult. Under this method, the house takes the opposite position to its customers, allowing the house to offset MTM margins so that its cash flow is square with the exchange at all times. Relatively high brokerage commissions help absorb price fluctuations – but with upcoming changes to the commission structure, there will be little incentive for brokers to trade against their customers.

In October this year, Tokyo General Corporation, one of the largest commodity brokers here, was subjected to administrative punishment by METI and MAFF for not having segregated customer funds from its own money as well as for having cheated the ministries' investigators. The company received an official order to suspend taking new business until April 2004 – which almost amounts to an official order to exit the market.

The punishment given to Tokyo General clearly shows the regulators' determination, and I wouldn't be surprised to see many more poorly managed brokers exit the market in the near future. Next year will be the toughest yet for the commodity futures broking industry.

Small exchanges will also face a challenge soon. As mentioned, over 50 % of all domestic commodity futures trading volume is done by TOCOM alone, and three exchanges – TOCOM, C-COM (Nagoya) and TGE (Tokyo Grain Exchange) – account for 90% of all the volume. With only 110,000 futures accounts in this country, seven futures exchanges are too many.

The Japanese Big Bang of the futures industry will, as ever and everywhere, create winners and losers. But, unless we face the changes ahead, we cannot survive the competition we may soon face from other Asian countries. The success of TOCOM is vital to the liquidity of precious metals markets trading within the Asian time zone. And readers of the *Alchemist* throughout the world may want to watch its progress over the next couple of years. ■



***Bob Takai** is General Manager of the Commodity Business Department at Sumitomo Corporation. He joined the company in 1980 after graduating from Kobe University, and started work in the precious metals department, where he helped pioneer the professional inter-bank bullion market in Japan. From 1988 to 1995 he worked in London, where he ran the metals department at Sumitomo Corp (UK) Plc. Bob was a member of the LBMA Management Committee from January 1994 until his return to Tokyo in October 1995. Upon his return his responsibilities were expanded to include other commodity derivative areas, such as energy, financial markets, agriculture, weather and emissions.*

Bob has been on the TOCOM board since 1998 and serves as vice-chairman of the precious metals market control committee of the Exchange. He is also a member of the Commodity Futures Exchange Committee organised by METI and MAFF.

Primary Recommendations From the Commodity Futures Exchange Committee

The following recommendations were made in response to questions asked in May this year by the Ministers of METI and MAFF as to what the best commodity futures exchange system would be in light of all the external changes surrounding our economy. The committee believes commodity futures exchanges are vital industrial infrastructures for hedging price risk and for fair pricing of primary products. It also believes that convenience and reliability must be improved in order to accommodate the globalised need of all market participants for risk management.

These recommendations may look all too obvious from European/American standards, and some may be surprised to learn that these measures do not yet exist in Japan. This shows to what degree the industry has remained unchanged during the last 50 years.

1. Improve market mechanisms through the commodity futures exchanges

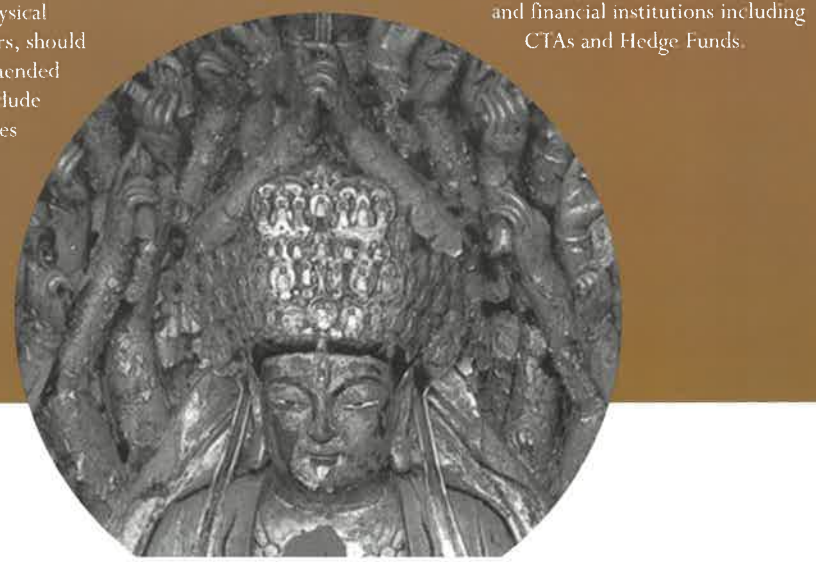
- Margins are to be deposited fully and directly with exchanges
- Segregation of clients' funds at brokers must be reinforced
- All brokers must participate in Mutual Compensation Scheme without exception
- Stricter surveillance of brokers' fund management is to be implemented
- Clients can transfer positions to another broker in case of brokers' failure
- A centralised clearing system is to be made possible
- If that is realised, clearing members must have a strong financial base
- Margin calculation must be rationalised, reflecting real time market risk
- Listings should permit intangible commodities, e.g. electricity, CO2 emission allowances, weather derivatives, etc.
- It should be easy to de-list commodities that have lost eligibility
- The definition of Togyo-sha, or physical traders, should be amended to include utilities and financial institutions (under current law, Togyo-sha can only be members of exchanges)
- Demutualisation (membership organisation of a joint stock company) of exchanges should be made possible
- The convenience of market participants should be improved, e.g. through introduction of EFPs
- Excessive transparency of members' position should be reviewed.

2. The role of brokers must be clearly defined

- Regulatory approval of brokers should be reviewed and rationalised
- Financial criteria of brokers should be reviewed to become more stringent
- Control over sales behaviour of brokers should be strengthened
- Discretionary trading by brokers should be allowed for foreign investors
- Retail sales by commodity fund managers should be permitted
- Margin based FX trade by commodity brokers should be monitored
- Regulatory punishment for brokers should be reviewed to be more flexible
- Regulators and self-regulatory bodies i.e. exchanges, CFAJ (Commodity Futures Association of Japan), ACF (Association of Compensation Fund for Consigned Liabilities in Commodity Futures) must be closely work together to share roles and responsibilities.

3. The role of non-exchange (OTC) markets must be clearly defined

- OTC markets are currently banned from trading listed commodities, but this should be allowed under certain conditions
- Proper rules and surveillance on such markets should be organised
- OTC derivatives products based on listed commodity prices should be open to utilities and financial institutions including CTAs and Hedge Funds.



Refereeing the Good Delivery System

by Stewart Murray, Chief Executive, The London Bullion Market Association

The Good Delivery List lies at the heart of the London bullion market. Not only a vital element in the efficient operation of the London market, it also confers additional credibility on the refiners listed on it. As a result, in recent years precious metals markets and exchanges have increasingly made reference to the LBMA Good Delivery List in their own documentation.

In April 2002 the LBMA announced plans to introduce proactive monitoring of the Good Delivery List, with the intention of introducing this scheme towards the end of that year. The method of monitoring that was chosen involved the testing by the LBMA's referees of a dip sample provided by the refiner being tested.

As refiners on the List are aware, the introduction of the new monitoring scheme has been significantly delayed. There were two main reasons for this. Firstly, at a meeting with a representative group of Good Delivery refiners in June 2002, it was agreed that the proposed method of monitoring required further investigation, especially with respect to the pass/fail assay criteria that were to be used.

More importantly, the introduction of the monitoring scheme required the appointment of additional referees by the LBMA. The need for the additional referees is, in part, because of the number of dip samples that will have to be tested. But in addition, it has been agreed that "four-nines" gold refiners will be monitored using a different approach – namely the assaying by their laboratories of a set of reference samples that will be provided by the referees.

Referee Accreditation

The accreditation of the new referees has proved to be an extremely time-consuming process, but that process has now been concluded and the LBMA will shortly be announcing the names of the new referees.

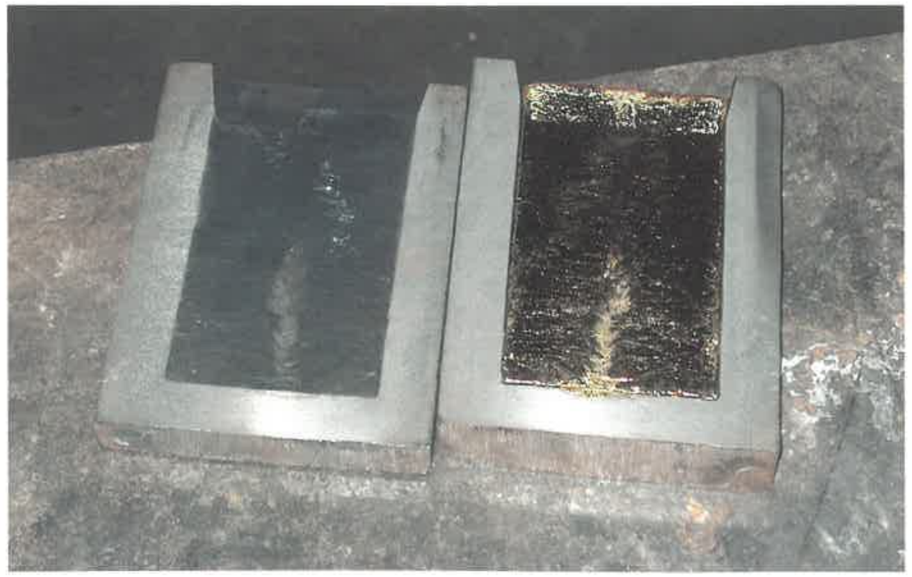
Early in 2002 the LBMA invited a number of Good Delivery List refiners to apply for accreditation as referees. Only companies that were listed for both gold and silver – and that had long histories of refining and that were LBMA Associates – were invited to apply.

From the start, the accreditation process had two main goals: to establish that each referee had the ability:

- To carry out assays and chemical analysis of gold and silver to the highest possible levels of consistency, precision and accuracy
- To manufacture gold and silver reference samples. These samples had to be free from detectable inhomogeneity and had to be assayed to very high levels of accuracy.

The LBMA has insisted that the applicant referees must be able to demonstrate standards of assaying that are significantly above those required for other refiners on the Good Delivery List. Only in this way is it possible for them to manufacture the required reference samples and to test with sufficient reliability the samples provided by the refiners being monitored.

Trialling the dip sample mould – a two-part cast iron mould – which produces a casting 60mm in length, 100 mm in height and 6 mm thick.



The Art and Science of the Assay

During the initial phase of the work with the applicant referees, it became apparent that the level of precision that they were achieving varied between different laboratories and for different methods of assaying. For gold, the LBMA's preferred method of assaying continues to be fire assay, also known as cupellation or gravimetric assaying.

For silver, the direct method of chemical analysis, based on potentiometric titration is used in a number of laboratories and countries, whereas in others, instrumental (i.e., spectrographic) methods are preferred. A notable by-product of the work carried out by the LBMA and the applicant referees over the past two years is that, in the case of silver, spectrographic testing has now replaced potentiometric titration as the preferred method of assaying.

In the first stage of the accreditation process, each referee was required to produce and assay 16 gold samples and 8 silver samples, with each sample bar having a weight of at least one-kilogram. The referees were left to decide on the sample preparation methodology and the method of homogeneity checking. Small test pieces were then cut from each of the samples and then sent to the LBMA, which then redistributed them for cross-checking to the same group of referees and, in some cases, to the LBMA's existing referees.

These cross-checking assays were carried out on a double-blind basis. In other words, none of the applicant referees knew the identity of the samples that they were cross-checking. An analysis of the results of this work indicated that, particularly for gold, the variation in the precision of assaying and the apparent inhomogeneity of some of the sample bars meant that further improvement in both areas was required.

But progress was being made. In particular, the LBMA had gained an in-depth understanding of what was achievable in terms of sample homogeneity and assaying standards. In the second phase of the work, new sample bars were produced. This time, the LBMA specified not only the methods for sample preparation, but also the standard of precision that had to be achieved during the fire assaying of gold.

The manufacture of a one-kilogram sample that has exactly the same assay throughout its whole volume is in fact a very demanding task. In the first place, the melt from which the starting bar is cast must be totally homogenised before the casting operation. Contamination from the mould material must be avoided, as must contamination during any subsequent mechanical working.

For instance, if the rolling mill used for reduction of a cast sample is not scrupulously clean, it is all too easy for foreign particles to be rolled into the surface – or for other precious metals to be transferred to the sample surface. For these reasons, homogeneity checking (that is, assaying all parts of the final sample produced) was a vital element in ensuring the quality of the reference samples.

But ultimately the proof of the samples' acceptability for Good Delivery purposes came from the double-blind cross-checking of each sample by two different referees. The assay testing involved a total of (typically) 50 or 60 trials being performed on each complete sample (including the homogeneity checking and cross-checking by other referees).

In order to ensure the integrity of the system, the LBMA alone was provided with full details of these trials. (This assay data has not been disseminated, either to the participating referees or the LBMA Physical Committee. Only the LBMA chief executive and its independent technical consultant have access to the complete data set.)

13 January: The Expanded Panel

Over the past two years the testing of the applicant referees and the samples that they have produced has been exhaustive (and, at times, exhausting). In the case of gold alone, 7,319 fire assay trials (plus additional instrumental analyses) have been carried out. But it is a source of satisfaction to all concerned that, at the conclusion of this work, the group of applicant referees as a whole is now able to demonstrate the kind of precision and accuracy in assaying required for their appointment as Good Delivery referees.

The LBMA will announce the identity of the expanded panel of referees on 13 January, to coincide with the official launch of the proactive monitoring scheme. ■

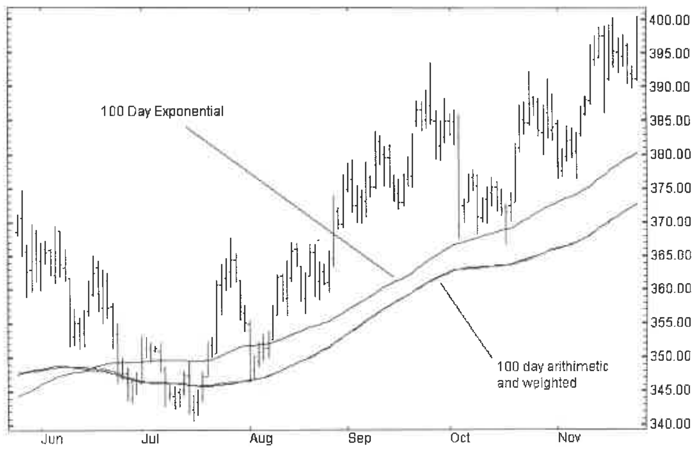
A batch of samples arrive in tamper-proof tubs at a cross-checking laboratory for assay.

Moving Averages

The Heart of Trend Analysis

By Phil Roberts, FX Technical Analyst, Barclays Capital

The analysis of trend is at the core of technical analysis, and moving averages are one technique that directly addresses the issue of how to define trend in an objective manner. In the financial markets, a moving average is an average of price that changes as price action develops over time. Moving averages are easy to understand, simple to use and are an extremely consistent and reliable means of defining trend.



Gold:
Exponential average hugs price most closely

(Figure 2)

A Weighty Matter

There are many different types of average that a technician can choose. The deciding factor will be the weight they wish to attach to the data: should the most recent price action carry more weight in an average or should all prices be regarded as the same? The three most commonly used types of average are simple, weighted and exponential averages. The simple moving average attaches equal importance to all prices in the average, whereas weighted and exponential averages give more weight to most recent prices (Figures 1 and 2).

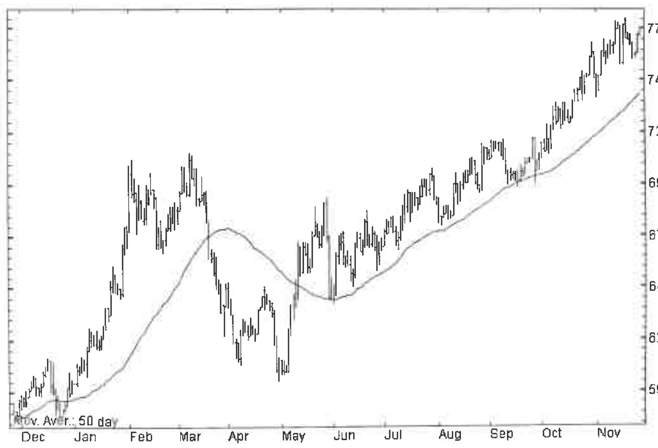
The simple or arithmetic average is constructed by summing regular price readings over a given time period (n) and then dividing the answer by n. For example, to construct a ten-day average, take the last ten days' closing prices, add them up and divide by ten; the answer gives your average for today. Tomorrow you would recalculate the average leaving out the price eleven days ago. All prices are treated equally, so a large change in price can have a disproportionate effect on the average not only on the day it occurs, but also on the day it drops out of the average.

A weighted average is calculated by allocating different weights to the prices averaged. The vast majority, though not all, of weighted averages are front-loaded, i.e., the most recent price is given the greatest weight. In a linearly weighted average, each price will be multiplied by regularly decreasing amounts going back in time; once multiplied by its weight, the adjusted prices are summed and then divided by the sum of the multipliers. For example, for a ten-day weighted average, multiply today's price by ten, yesterday's by nine...and the price ten days ago by one. The ten readings are then added together and divided by 55 (the sum of ten plus nine plus eight...plus one), to get the average for today. As time passes, prices drop out of the average to be replaced by new readings. One of the perceived advantages of a weighted average it that it reacts more quickly than a simple average to price moves.

An exponentially smoothed moving average is a little more complicated. It is based not a sequential average of individual time periods but on the price today and the average yesterday adjusted by a smoothing coefficient. The formula for the smoothing coefficient X is X= 1/ (n/2)-1, where n is the number of days to be averaged.

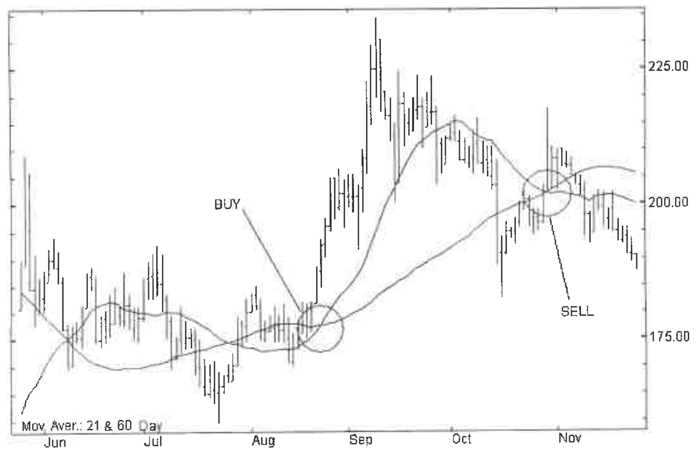
Platinum
50-day moving average defines the recent uptrend

(Figure 1)



The formula for calculating the new average is [(1-X)*old average] + [X*new price value]

For example, to calculate a ten-day exponential average for copper, the smoothing coefficient is 0.25. If the average yesterday was $1,990 and the price today is $2,010, then the ten-day exponential average for today would be $1,995. The average accounts for all prices, but the most importance is attached to the most recent price: it is a front-loaded average.



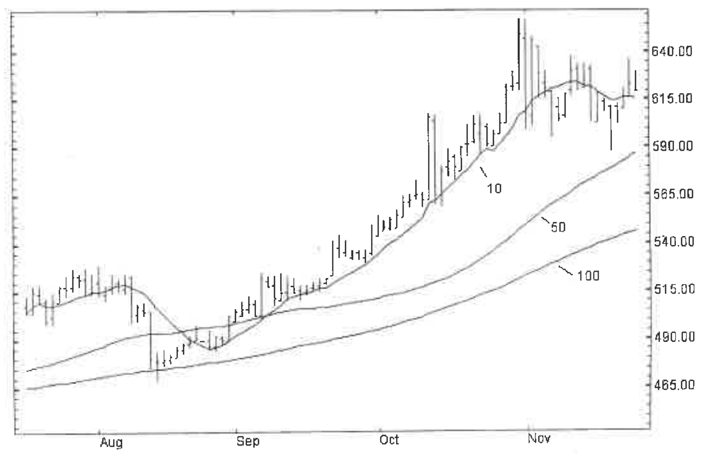
Palladium
21- and 60-day moving average crossovers; fewer bad signals during ranges

(Figure 4)

Characteristics of Moving Averages

Averages can be based on any price throughout a time period, or even an average of prices, but the most widely used price is that at the end of a period – the close. To determine the trend of a market, the most recent price is compared to the average: if the price is above the average, then the market is trending higher; if the price is below the average, the market is trending lower. No matter which type of average is used, the characteristics of these trend-following tools are broadly the same.

Moving averages are lagging indicators: when a market trends they will follow the trend at a distance, when a market is directionless all averages will eventually move into the middle of the range. Shorter-term averages lag the price most closely: fewer data points or higher smoothing coefficients mean that they are more responsive to price changes, and visa-versa (Figure 3).



Lead
Shorter-term averages are more responsive to price changes

(Figure 3)

Perspective poses one of the major problems of technical analysis. A market can be going up, down and sideways all at the same moment in time: the short-term trend can be positive, the medium-term trend negative and the long-term trend neutral. There are trends on all time horizons and this means that there is never a single best average to employ. Any average chosen should ultimately reflect the time horizon that most interests the individual investor – chose an average that adequately explains the trend with the most personal relevance.

The main drawback to using moving averages is that broadly speaking markets spend more time locked in ranges than actually trending. During these ranges moving averages produce many buy signals close to the range high and produce sell signals close to the range low – the ratio of losing signals to profitable signals over an extended period of time could be as much as 3:1. However, during trending periods profits typically outstrip losses. Invoking the hoary "the trend is your friend" cliché, it is assumed that the trend highlighted by the average will continue until it actually reverses – unless the price flips from one side of a moving average to the other, the trend is expected to continue. Moving averages are the classic good money management tool: profits are left to run, whereas losses are quickly cut.

Avoiding the Small Losses

A 3:1 ratio of losing to profitable trades is not an attractive proposition for many investors and therefore techniques have been developed to reduce this ratio. But increased comfort comes at a price, and even though the number of losses can be reduced, the flipside will be that the signal to enter and exit a trend will come much later – and therefore the profitability of the trending phase will also be reduced.

There are two main techniques for reducing small losses – these are:

Moving Average Crossovers – Instead of looking at the relationship between price and one moving average, compare two or more moving averages of differing time horizons. When the shorter-term average crosses the longer-term average, a trending signal is generated irrespective of what the price is doing at the time. Perspective dictates that the best combination of averages to use will be determined by personal circumstances (Figure 4).

Filters – To generate a new trending signal, the price has not only to break a single moving average, it also has to fulfil other criteria, e.g., close above the average for two or more successive days. Alternatively the price might have to breach the average by a predetermined amount – either a set price amount or a percentage (the latter are known as envelopes: a moving average displaced by a set percentage).

Pattern Recognition – Relating the slope of a moving average to price, or another moving average, when a signal is generated can also determine which trading response to adopt. For example, when a short-term average rallies above a flat or slightly rising longer-term average after a prolonged decline, this is known as a Golden Cross and is regarded as a strong buy signal, as opposed to a short-term average rallying above a falling longer-term average, which would be regarded as a sell signal under Joe Granville's eight rules for Moving Averages.

How Good Are Moving Averages?

Even at their most complex, moving averages are a very simple forecasting tool relative to many other statistical techniques – but they do have a strong pedigree. Academic research by Armstrong in 1984 and Makridakis in 1995 has shown that moving averages outperform other, more complex forecasting techniques, such as multiple regressions. Financial markets studies, notably Hochheimer in 1978, have discovered that simple moving averages generally outperform weighted or exponential averages.

Most charting packages nowadays offer the opportunity to back test combinations of averages with trading rules and can produce a track record for a given combination of factors. Although these tools are useful, I would strongly caution against constantly optimising moving averages to obtain the perfect fit. Curve fitting is little more than trading with the benefit of hindsight and is rarely profitable in the long run. Instead choose averages that best explain the world as you see it and then stick with those through thick and thin.

Moving averages are a simple effective tool for objectively defining trend and as such they are invaluable to a technician. In trending markets they will perform well but in ranging markets they can disappoint. Nevertheless, although they lack the complexity of other forecasting techniques they have a good academic pedigree. At the heart of many trend following systems and models you will find a moving average. ■

***Phil Roberts** is Global FX Technical Analyst for Barclays Capital, which he joined six years ago. He produces technical research on the FX and commodities markets and is part of the strategy team that works closely with the bank's traders, sales professionals and clients to produce technical information and strategies. Phil has been a technical analyst for eighteen years, and has worked at three other major city firms prior to moving to Barclays.*

The Art of Precious Metals . . .

Holiday Style

They are bought and sold. Traded and hedged. Mined and refined. And sometimes they are treated as art.

'Tis the season for shine to shine.

Here are two artists who work beautiful metals into designs that are ever more beautiful, and always unique. Seeking to create new textures, new patterns, new styles that dress up a holiday outfit or table.

John Donald

Uncut precious stones. Natural crystals. Textured artwork that echoes the striations of the stone's natural form – like the melted, pierced and nugget-effect sculptural pieces pictured here.

John Donald's approach is as fresh as it was when he first began working in the 60s. Today, he is a Master Goldsmith whose City studio will realise clients' designs, or adapt one of theirs using a full range of precious metals and tapping a trove of precious and semi-precious stones.

His rings feature rough-cut stones and unusual finishes and settings – such as his delicate, pincer-like crown design. Or you can add sparkle to your holiday table – and do it every day – with his one-of-a-kind tableware and flatware. You'll never use chopsticks again.

His studio is in Cheapside, the traditional home of London's jewellers, and customers are welcome to visit and see their work in the works.

www.johndonald.com

Theo Fennell

The Whisper Collection

Looking for something for a sober after the New Year? A gumball-sized amethyst ring should straighten you right out.

The abstemious amethyst is just one of the stones featured in Theo Fennell's Whisper Collection, bold, splashy rings with stones long believed to promote well being in spirit, mind and body.

Match your need – happiness, love, money – to a stone like blue topaz, pink tourmaline, blue chalcedony, green chrysoprase. You can even conjure a ring of truth.

Like John Donald (with whom he once worked), the studio produces a broad range of unique designs, including watches, silverware, trophies and awards.

www.theofennell.com

Making it all Pan Out

Midstream in the Scottish Gold Rush

by Susanne M Capano, Editor

If you want to take part in the annual Gold Panning Championships in Wanlockhead, Scotland, you won't need much equipment. A pair of Wellington boots, a rake, a Henderson pump and a dark blue plastic pan – a sturdier version of the kind that you'd throw away after a picnic.

Alistir Tait takes a closer look at the treasure.

But this is no picnic. In addition to a pair of the thickest socks you can find, you'll also need a considerable amount of stubbornness and determination. "It's hard. It's cold. It's wet and miserable work," says Alistir Tait, who runs a specialist gem and jewellery store on Rose Street in Edinburgh. He should know. He's tried it himself.

Scottish gold has been recovered from rivers and streams for centuries, and there is evidence of its having been found during the reign of King James IV. It was used to make much of the gold coinage minted during the reigns of King James the V and Mary Queen of Scots during the 16th century.

But such free-range gold is a rare occurrence today – nuggets are never ever snared on a salmon fly and those that are found generally manifest themselves these days in small bits. Although some rivers have been known to yield nuggets, one of the largest ever found weighed only 6.8 grams – about a quarter ounce. "You could spend all day standing in freezing water up to your knees and be lucky to end up with 20 or 30 specks the size of a pen point – not even enough to cover your little fingernail," comments Alistir. But despite the odds, there are a number of participants dedicated to the pursuit of Scottish gold, ranging from those who try their hand during a summer holiday to those for whom it is a full-time pursuit.

So This Guy Walks into a Jeweller . . .

Some months ago, a respectable-enough looking man walked down Edinburgh's Rose Street and turned into Alistir's shop. He then handed him a jar – it looked like a preserves jar – filled with bits of gold that ranged in size from dust to flakes to pea-sized nuggets.

Though it wasn't the first time that Alistir had been offered some panned gold for sale, the amount involved was unusual. For while most are lucky to find enough to constitute a ring, the contents of this jar amounted to approximately 13 ounces – about $5000, basis the market price. Not bad for panhandling.

The gold represented ten years of backbreaking work. But despite the hours he had put in, the man had no real desire to keep the gold – for him, the adventure was finding it. And not only did he claim to have panned every gold-bearing river and burn in Scotland – he had also recorded every find in a detailed logbook.

For Alistir, this was a treasure. Because of its rarity, Scottish gold can command a premium of four or five times the normal price, putting the value of Alistir's preserves jar nearer to $25,000. In most cases, panned Scottish gold is 18 to 23 carats. But though part of this consignment was lower quality, in this case that was actually even more good news: it contains silver, which is even more difficult to find in Scotland than gold.

Jewellery fabricated from pure Scottish gold is highly prized, and Alistir is not alone in taking increasing commissions for jewellery made from such gold. Alistir plans to start working on it in the New Year, and hopes to be able to make up to 250 pieces with the consignment.

The Golden Notebook

While on that morning the gold was the item ostensibly for sale, the man clearly considered his logbook to be even more precious – it was not on offer at any price.

"Gold panners do tend to be a very secretive and competitive lot," Alistir says. "They don't like anyone else to know where they go and what they find. I went out myself with one man over the summer. From time to time, as we were driving along, he would pull over into a farmstead, have a cup of tea and wait a while before continuing, just to make sure we weren't being followed."

What does the future hold for the man who may be Scotland's most successful panner?

"He said he wanted to try something different now," says Alistir. "I think he's gone on to metal detecting." ■

A Beginner's Guide to Panning for Gold

You, too, can sift alluvial gold from a crystal-clear mountain stream in Scotland. Or you can stay home and put another log on the fire.

In the case of the former, choose a river or stream where gold has been found (though this may be difficult to ascertain; see above).

Many Scottish panners recommend first visiting a river in winter, when it is at its raging worst, in order to watch the currents flow. Then return to the river in the tranquillity of summer and get to work in the dry beds. Using your rake, comb through the grave. Then use the Henderson pump to vacuum up some of the gravel and grit from deep beneath the surface into the pan.

The Henderson Pump is a simple but effective tool for lifting sand, gravel and gold up from the bed of a river and into the gold pan or sluice box. It will also reach areas where a spade cannot, such as the gravel trapped in crevices between bedrock.

Step One

Scrub and rinse the stones in the pan in the running river. Keep swirling the material, which will enable the mud and silt to float off, while the gold, which is heavier, will sink.

Step Two

Keep breaking up and swirling the bits in the pan to enable more and more of it to float off. The material must be continually swirled in the pan so that the lighter elements float off. Pluck out any rocks and repeat the swirling action.

Step Three

Eventually the tiny bits and flecks of gold will stick to the pan, where they will show up nicely against the dark blue. Pick them out, put them in your preserves jar, and repeat.

Are Investors Poised to Drive Gold Higher in 2004?

by GFMS Limited

According to GFMS third-quarter supply/demand data, investment took over from de-hedging as the principal demand-side factor contributing to higher gold prices during the period. Furthermore, we expect this pattern to be confirmed when the numbers for the fourth quarter become available in January. There is much anecdotal evidence to support this hypothesis, and it is also borne out by the trend in non-commercial open interest on Comex.

The graph illustrates that non-commercials' net long position in futures translated into dollar terms has risen to a value well in excess of the net short recorded at the bottom of the bear market in the third quarter of 1999 (in retrospect, a key turning point). Looking ahead, the pertinent question is: does this massive long position represents an overhang –or is it the initial phase of what may turn out to be a broader commitment to gold on the part of funds and private investors?

Given that funds' net long position on Comex is currently not too far from its record high, it is probably correct to assume that a further substantial investment-led rise in the gold price in 2004 would require a broadening of investor interest. This is because demand until now has chiefly (although by no means entirely) consisted of funds and Commodity Trading Advisors taking long positions in futures based on trend-following or momentum-driven strategies. To a lesser extent, funds have also sought exposure via the spot and forward gold markets and through over-the-counter options. Here too, one suspects that the main reason for the increase in demand is the rise in the price itself, even if wider economic concerns provide an underlying rationale for some of the more fundamentally driven investors.

However, higher prices – and, in particular, what seems to be a successful breach of the $400 level – are at least ensuring that gold is getting noticed by a wider group of potential investors. Most importantly, there are signs that this is beginning to translate into a broader-based demand for gold, including from those seeking asset diversification as opposed to a speculative punt on the metal. (In this regard, gold is benefiting from the more general renewed interest in commodities as an asset class.)

For example, among high-net-worth private investors in Europe there has been a fairly significant growth in activity during the course of 2003. This demand has partly come from contrarians worried at, for example, financial imbalances affecting several of the major economies. In other cases though, shorter-term speculative considerations have been more important in motivating high-net-worth investors, as shown by the rising demand for exchange listed-warrants. GFMS has calculated that at mid-October this had resulted in some 380 warrants being traded on several bourses across the region.

This development illustrates the importance of the right instruments being made available in order to enable a wider group of investors to participate in the market. New products are important because today's investors are generally far less interested in purchasing physical metal in the form of bullion bars and coins. (Indeed, with the occasional exception, sales of these traditional products have remained disappointing throughout the current rally.)

In this regard, the recent launch of a new Exchange Traded Fund on the London Stock Exchange could turn out to be significant, particularly if it enfranchises a wider group of investors. Nevertheless, growth in investment demand will not be sustained unless there is an underlying economic rationale to support it. Simply relying on a rising price to suck in new money would otherwise merely represent a speculative bubble destined to burst sooner or later.

The American Factor

Fortunately for those long the metal, the economic (and political) backdrop for gold looks as if it will remain positive in 2004. Above all, there is, firstly, a high probability that short-term interest rates in all three major currencies will remain low, if not negative in real terms, and, secondly, a strong case for a further depreciation in the US dollar. In spite of the tremendous rebound in US GDP growth in the third quarter, many investors are still unconvinced that America's recovery will be sustained (the same observation applies to the associated rally in stock prices).

It would appear as if policymakers are also concerned, as they are showing no appetite for raising interest rates aggressively in spite of the very good headline growth numbers. Perhaps this is because they are fully aware of the extent to which the US economic recovery has been based on credit creation and deficit spending (resulting, one might say, in an unsustainable growth in debt, both government and consumer, and in certain financial asset and house price bubbles). Meanwhile, both the Japanese and EU economies are only slowly recovering from a prolonged slowdown. So here too, short-term interest rates are set to remain very low for the foreseeable future. (On the other hand, there is a good chance that high budget deficits and emerging inflation fears will result in a further slide in bond prices, something that would also tend to benefit alternative investments, including gold.)

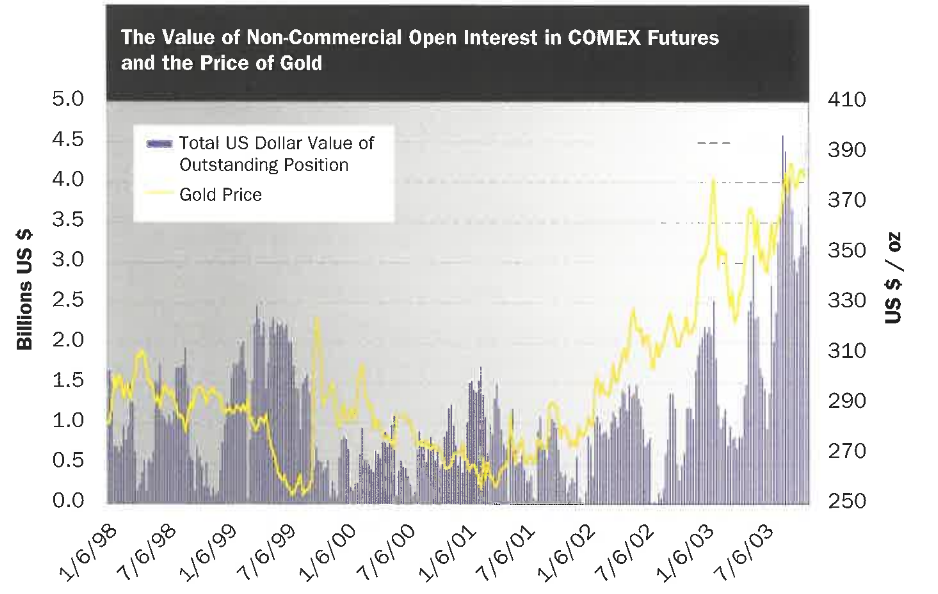
America's growth performance to a large extent has relied upon the continued willingness of foreigners to hold dollar IOUs. With a current account deficit set to reach $500 billion in 2003, it is legitimate to ask how much longer this game can continue. A recent front-page article in the Financial Times stated (curiously, with relief) that the amount of US Treasury and government agency debt held by foreign investors had reached $1.4 trillion. Arguably, this is a far more serious overhang for the dollar than those non-commercial positions on Comex referred to above are for gold. It may therefore turn out to be significant that in September net portfolio inflows into the United States slumped to just $4.2 billion (back in June, for instance, the comparable figure had been $90.6 billion).

The implication is that foreign investors' thirst for dollar-denominated assets has been quenched – at least at prevailing exchange rates. Through to end-November, the US dollar had already fallen 15% against the euro over the course of 2003. Yet, although it may seem that after such a decline there is a little room for much further depreciation, history suggests otherwise. Back in 1985, against the deutschemark the American currency reached the equivalent of 1.50 in euro terms. It would seem that a growing band of investors is wondering if a similar level could be attained in 2004, gold (in dollar terms at least) obviously being a beneficiary of such a slide in the dollar. Their confidence may be justified given the scale of foreign central bank support for the dollar this year – Japan, for example, intervening in the markets to the tune of $150 billion – and the recent apparent shift in US policy favouring a weaker exchange rate.

The lack of confidence that at least some investors have in the dollar, stocks and bonds is leading to a growing interest in alternative investments, and gold slots nicely into this category. In our view, there is therefore a strong probability that investment demand for the metal will continue to strengthen. And, because the gold market is comparatively so small – GFMS estimate that the value of demand from all sources in 2002 came to less than $40 billion – the growing inflow of funds should itself lift the price (this rise, in turn, tending to suck in more new money). To illustrate the scope for such a positive evolution, compare our estimate for global net gold investment in 2002 of less than $5 billion with the net inflow over the first ten months of this year into long-term funds (stocks, bonds and hybrids) in the United States alone of no less than $186 billion.

Bull Markets, Bear Facts

There are good prospects therefore for a widening of investment demand and with it higher gold prices in 2004. Looking over the longer term, however, a cautionary note is advisable. Unless financial conditions worsen considerably or the decline in the dollar continues for an extended period or inflation returns with a vengeance, the current bull market in gold will most likely come to an end within a few years.



In large measure, this is because mainstream investments, such as stocks, will eventually become good value (the S&P 500 is still very expensive on a historical basis), allowing room for a secular upswing in their prices to take place. Such a recovery requires current financial imbalances to be ironed out and for the rate of world GDP growth to pick up from the comparatively low levels recorded in recent years. The recovery in economic growth would not only lift equities on a sustainable basis but also result in short-term interest rates moving back into positive territory. This would be an important development as zero real rates are currently helping gold a great deal.

Gold's eventual decline will also partly be self-inflicted. In the next couple of years, the gold price may well rise to a level that is simply not supported by the metal's own supply/demand fundamentals. For example, at some point gold producers may (cautiously) resume hedging future production as opposed to running down their hedge books, as they are currently doing. After a lag of several years, mine production will also start to rise again. Exploration expenditure and new financings are now growing after slumping tremendously during the long bear market in gold.

Furthermore, a significant slice of demand is highly price sensitive. Jewellery consumption in key Asian countries, for instance, is already suffering from higher prices (even if the level at which demand kicks in has undoubtedly risen). Nevertheless, these negative economic/financial and supply/demand factors are unlikely to come into play for at least another year, meaning that there is still plenty of scope in the meantime for a further significant advance in the dollar gold price based largely on a widening of investor interest in the metal. ■

GFMS is a precious metals consultancy specialising in research into the global gold, silver, platinum and palladium markets. Based in London, the company has representation in Australia, India and Russia, and a network of contacts and associates throughout the world.

GFMS is perhaps best known for its annual Gold Survey and World Silver Survey. It also produces a broad range of other publications dealing with the precious metals markets. The company also provides consultancy services, such as research into selected areas of the precious metals markets, provided by a research team of seven full-time analysts.

Taking Stock

Gold Bullion Shares Launched on the LSE

by Susanne M Capano, Editor

Why is it so difficult to invest in gold?

Posed by one of the hundreds of callers who contact the LBMA in an effort to purchase gold, this question would doubtless be echoed by many more. Investors – especially those in the UK – have not traditionally had many options for investing gold outside of the purchase of physical metal or equity shares.

But the need to create new products was clearly recognised within the market itself. In his opening speech at the LBMA Conference in 2002, then-Chairman Martin Stokes said: "The current environment means that the baton of gold offtake has broadly been passed from the physical consumers to the investors. We haven't seen much of these guys in the last two decades, and we must encourage them with user-friendly, accessible products…As investor interest is broadened, this should lead to bullion prices that are more comfortable at higher levels."

He further recommended specifically targeting equity investors: "As you know, the precious metals equity market is very small in global terms and some larger equity investors are feeling very limited for choice. I am aware that some of them have restrictions as to investment mediums, but they should be offered a range of transparent products linked to purchases of the underlying metal."

Gold on the London Stock Exchange Gold Bullion Securities (GBS), launched on 9 December, should address some of these issues. An initiative of the World Gold Council, the product is designed to track the spot gold price – less fees – giving investors both exposure to the price and ease of trading in shares.

The securities represent a fractional, undivided interest in the assets of an open-ended Trust. Each share is valued at approximately 1/10 of an ounce of gold on inception – an amount that is gradually eroded by the monthly sales charge, which is equivalent to 30 basis points per annum. After three years, the entitlement will have been reduced by 0.90 basis points, to 99.1 per cent.

The shares are backed by allocated gold, the form preferred by most investors, according to the WGC's research. Shares are not issued until the gold has been deposited with the Custodian (HSBC Bank USA), and the bars cannot be lent or otherwise traded by the Custodian or sub-custodians (The Bank of England, The Bank of Nova Scotia (Scotia-Mocatta), Deutsche Bank AG, JP Morgan Chase Bank, NM Rothschild and Sons and UBS AG).

No one product can be everything to every investor, but GBS attempts to offer at least something for many investors, from the institutional to the individual. Only Approved Holders – defined as a securities house or bank that trades in OTC gold and has access to a loco London bullion account – can redeem shares as physical bullion. While this may not be to the liking of some investors, it greatly broadens the market for the product. Were the shares redeemable in bullion, UCITS-compliant funds would not be able to purchase the shares.

This stipulation was clearly appreciated by Graham Birch of Merrill Lynch Investment Managers, who said that his initial experience had gone very smoothly. "I would say this product is long overdue," he commented. "I couldn't be more positive for it. It gives us additional flexibility – we can use it as we would cash."

Summary of Gold Bullion Securities' First Week of UK Trading

	Issuance of shares (mn)	Gold Delivered to Trust (t)	Change in Market Cap (US$mn)	Total Shares on Issue (t)	Market Cap (US$mn)	Cumul. LSE Trading Volume (mn shares)	% of Issuances per Cumul. Trading Vol
9-Dec-03	2.05	6.38	83.85	2.05	83.85	4.90	42%
10-Dec-03	1.20	3.73	49.44	3.25	133.29	7.09	46%
11-Dec-03	1.00	3.11	40.70	4.25	173.99	7.35	58%
12-Dec-03	1.25	3.89	51.13	5.50	225.11	7.41	74%
15-Dec-03	0.82	2.54	33.45	6.32	258.56	7.51	84%

His sentiments were echoed by Canaccord's James Leahy, Managing Director at Canaccord Capital, who felt that it could help change the long-standing perception that gold was difficult to trade. "It will help increase turnover and liquidity in gold. And in addition to the product itself, I would expect a variety of options and warrants to be created."

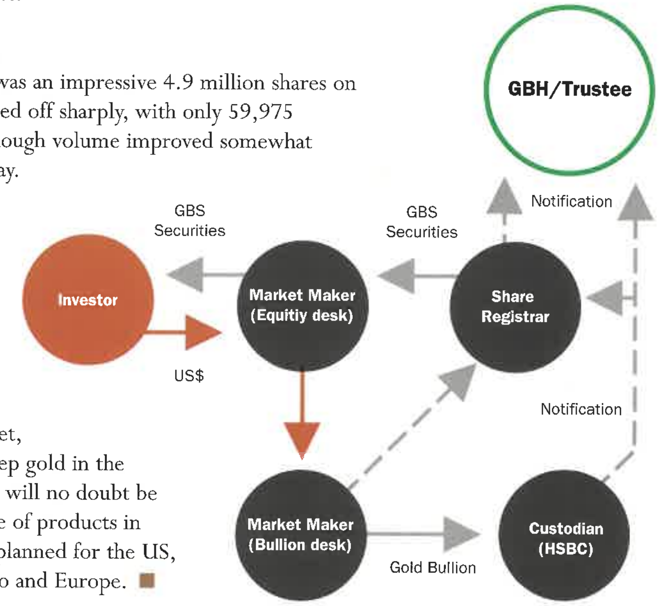
However, some reports noted the divergence between gold prices and gold equities in the days following the launch of the product – while the price remained steady, equities came under pressure. This led to speculation that some investors might abandon equities in favour of the new securities.

Evaluating the Future

While GBS trading volume was an impressive 4.9 million shares on the first day, levels soon trailed off sharply, with only 59,975 shares trading on Friday – though volume improved somewhat to 103, 683 shares on Monday.

Coverage was generally positive, both in the local media and amongst market participants, though there have been doubts raised as to how sustainable interest in the product will be going forward.

More widely for the market, however, is that efforts to keep gold in the forefront of investors' minds will no doubt be aided by the planned issuance of products in other major markets – now planned for the US, Toronto, Johannesburg, Tokyo and Europe. ■



Creating GBS Shares

To start the process, which may take up to two days, the Market Maker completes an application for new GBS, which is sent to the Share Registrar. The application is accompanied by the delivery of gold to the Trust.

Upon receipt of the gold, the Custodian then notifies the Share Registrar and the Trustee. The gold is then allocated into the account by the next morning. Once the allocation process is complete, the Custodian provides a bar weight list to the Trustee. No shares can be issued until that point.

The Share Registrar then requests the London Stock Exchange to admit the issuance of additional GBS. Once this has been approved, the Share Registrar issues a news release detailing the amount of GBS to be issued and the cumulative amount outstanding. The newly created GBS are then delivered to the Market Maker.

Comparative Economic Forecasts for 2004

Before looking at next year's predictions for precious metal prices for Forecast 2004, here's a look at some of the background factors. The table below summarises thoughts from several LBMA Market Makers on economic indicators and FX rates in the coming year that might have an impact on the metals.

	AIG	Barclays	HSBC	JPM	SocGen	UBS
Real GDP (%) (year avg)						
World	3.30	4.50	3.90	3.80	4.50	4.00
OECD			3.00	3.40	3.20	3.10
US	3.50	4.80	3.70	4.40	3.75	4.40
UK	2.50	2.70	2.40	3.50	3.00	2.50
Eurozone	1.30	2.00	1.70	1.50	1.60	1.90
Japan	1.10	2.30	2.70	1.40	1.80	1.40
China	7.50	7.50	7.50	8.00	9.80	9.60
India			6.60	6.00	6.00	6.00
Consumer Prices (%)						
US	1.70	1.60	1.20	2.10	2.25	1.90
UK	1.90	2.60	2.00	2.50	3.00	2.60
Eurozone	1.40	1.60	1.50	1.90	2.50	1.30
Japan		-0.40	-0.20	-0.10	-0.30	-0.20
China			2.20	2.80	2.30	4.00
Interest Rates (%)						
US – Fed Funds	1.25		1.00	2.00	2.00	1.75
Canada – O/N Funding Rate	2.25	2.00	2.50	3.00	3.50	2.50
Eurozone – Refi Rate	1.50		1.50	2.50	2.25	2.00
UK – Repo Rate	3.75	2.00	4.50	4.75	4.25	4.50
Japan – O/N Call Rate	0.00	4.75	0.10	0.00	0.00	0.10
Australia – Cash Rate	5.00	0.00	5.75	5.50	5.75	5.50
S Africa – Repo Rate	5.50		8.50	7.00	8.50	9.00
Exchange Rates						
USD/JPY	107.00	103.00	98.00	95.00	116.00	100.00
USD/ZAR	7.00	7.40	7.65	7.00	8.00	7.50
USD/AUD	0.78	0.71	0.76	0.78	0.67	0.74
USD/CAD	1.25	1.30	1.30	1.25	1.44	1.32
EUR/USD	1.30	1.18	1.35	1.30	1.12	1.32
EUR/JPY	139.00	121.50	132.00	124.00	128.80	132.00
Equities						
DJIA	9500		9895			11700
Nikkei	8800		11755			12500
FTSE	4200		4700			5200

MARKET MOVES

Marc Booker to Barclays London

On 10 November Marc Booker joined Barclays London, where he will be responsible primarily for gold and silver spot market making during the London and New York trading sessions.

Marc joins Barclays after 11 years at NM Rothschild, where he was responsible for market making spot gold, silver and platinum group metals.

David Holmes to NM Rothschild

David Holmes has joined NM Rothschild and Sons as Director responsible for metals marketing and sales with the Treasury department. He started his career in precious metals in 1980, and has spent the last 17 years in New York.

David comes to Rothschild from Société Générale NY, where he was Managing Director responsible for metals marketing in the Americas.

John King to Fortis Bank London

John King has joined Fortis Commodity Brokerage, a division of Fortis Bank SA/NV, as head of their LME and Precious metals derivative activities.

John started his career at Pechiney Trading Company in 1986. He moved to Prudential-Bache International Limited – LME dept. in 1989 and worked in various base metals sales/marketing roles over nine years. During the period 1998-2000 John focused on the Chinese metals market while working in Hong Kong. In 2001 he joined WestLB – Global Financial Markets and worked alongside Gerry Schubert as a director of sales/trading for their Gold, Energy and Commodities division.

Kamal Naqvi to Barclays Capital

Kamal Naqvi has joined Barclays Capital as Precious Metals Analyst, effective 4 December 2003. He will be responsible for research for the gold, silver and platinum group metals markets, and will be based in London.

Kamal joins the firm after six years at Macquarie Bank where he was responsible for precious metals research. He was a member of the LBMA's Management Committee from July 2002 to November 2003 and is chairman of the LBMA's Public Affairs Committee.

Gerry Schubert to Fortis Bank London

On 2nd January 2004 Gerry Schubert will join Fortis Commodity Brokerage, a division of Fortis Bank SA/NV, where he will be responsible for expanding the bank's bullion activities. He will join his former colleague from WestLB, John King, who has overall responsibility for the Base Metal and Precious Metal Brokerage activities.

Gerry's career in precious metals spans 25 years with various houses, most recently with WestLB and Mitsui.

Matthew Schwab to Barclays Bank Plc New York

Effective 1 December, Matthew Schwab has transferred from Barclays Capital London to Barclays Bank New York, where he will focus on marketing and expanding the range of the bank's investor products, primarily to North American clients.

Prior to this move, Matthew was for three years Head of Precious Metals Trading at Barclays London. Before coming to Barclays, he worked for AIG in London, Connecticut and the Far East as a forward and options trader. ■

LBMA News

By Stewart Murray, Chief Executive, LBMA

MEMBERSHIP

Members

Koch Metals Trading Ltd was admitted as a Member on 1 December 2003.

Associates

At its meeting on 17 December, the Management Committee agreed to admit BSI Inspectorate Limited with effect from 1 January, 2004.

Gold Fields Minerals Services Limited changed its name to GFMS Ltd in December, 2003.

COMMITTEES

Management

At its meeting in November, the Management Committee reviewed the work of the ad hoc Statistics Working Party which has worked with the Monetary and Financial Statistics Division of the Bank of England and the Office for National Statistics in drawing up a new reporting form. This will allow the Bank to collect information from LBMA members for use in compiling figures for the impact of gold transactions on the UK's balance of payments statistics.

Members were informed about the outcome of this work in an email from the Chief Executive on 4 December, including details of a presentation on the new reporting procedures that will be given at the Bank on 26 January. The Committee will subsequently discuss the possibility of the LBMA instituting a separate statistical collection among its members and covering trading volume in gold and silver.

At the same meeting, the Committee decided to prepare a Russian version of the *Guide to the London Bullion Market* with a view to launching it at a bullion market forum to be held in Moscow in mid-2004.

The Committee has also discussed the arrangements for the LBMA bursary in 2004, which has been awarded annually to support post-graduate students taking mineral economics courses.

A most important discussion point (for many of the staff in Member companies!) was the finalisation of the arrangements for the not-to-be-missed LBMA Annual Party. This will be held in the Brewery, Chiswell Street, in the form of a St Patrick's night celebration on 18 March. Details and a registration form will be circulated to all Members and Associates in January.

Ordinary Members were informed about two vacancies in the Ordinary Member section of the Management Committee on 28 November and were invited to put forward nominations. At its meeting in December, the Committee agreed to invite Kevin Crisp and Anton Down to be co-opted onto the Committee until the AGM in June, 2004 (when, as usual, all members of the Committee resign).

Physical

In the last quarter of the year, the Physical Committee met five times, two of these meetings being devoted to the final arrangements for the introduction of proactive monitoring, which will commence in January 2004. The other main focus of the Committee's work has been on the applications for Good Delivery accreditation. In 2003 to date, two applications have been successful, two have been rejected at the assay stage and six are still being processed.
The documentation describing the introduction of proactive monitoring has been prepared and sent to all Good Delivery refiners. A detailed Good Delivery procedures manual has also been drafted. This will be sent to all vaults, referees and supervisors that will be involved in processing Good Delivery applications and proactive monitoring. Most importantly, the Committee has completed the accreditation process for the expansion of the LBMA's panel of Good Delivery Referees and has made a recommendation to the Management Committee concerning the candidates that should be appointed. The Committee's other work in recent months has included discussions on various matters relating to the vaulting and weighing of gold and silver in the London market.

Public Affairs

The Public Affairs Committee has met once in the final quarter of the year. This was the first of the new open format meetings, to which all LBMA Members and Associates are invited. These open meetings will alternate with the normal meetings of the Committee. The meeting in October concentrated on two areas: the future form and content of the website and the structure and speakers' programme for the Shanghai Conference to be held from 5 to 7 September 2004. Following the resignations of Roy McPherson and Anton Down from the Committee, Daniel Pittack of AIG and John Reade of UBS have been appointed in their place.

Finance

The Committee met in November to prepare the Budget for 2004, which was subsequently put to, and approved by the Management Committee. For the sixth year in succession, the Budget envisages no change in Membership subscriptions for 2004.

Following the resignation of Nick Frappell as Chairman of the Finance Committee, Philip Aubertin of UBS agreed to take over this role. The vacancy on the Committee has been filled by Jeremy East of Commerzbank. Our thanks to the other candidates who put their names forward. ■

The LBMA Members' Party

St Patrick's Celebration

Thursday, 18 March 2004

The Brewery,

Chiswell Street

79 Gold Au 196.9665 | 47 Silver Ag 107.868 | 78 Platinum Pt 195.09 | 46 Palladium Pd 106.4

The LBMA Precious Metals Conference 2004

LBMA

6 & 7 September 2004
Shangri-La Hotel
Shanghai

The Conference by the industry, for the industry

Preparations for next year's Conference - on 6 and 7 September at The Shangri-La Hotel in Shanghai - are underway, and we look forward to welcoming all delegates.

The Conference will kick off with a welcome reception on Sunday 5 September, with a full programme to follow on Monday and Tuesday.

Timely suggestions for topics and speakers are most welcome.
Send them via email to conference@lbma.org.uk
or call the Association on +44 (0)20 7796 3067.

DIARY OF EVENTS

January 2004

11 – 18
Vicenzaoro 1
Vicenza, Italy
Tel: +39 0444 969 111
Fax: +39 0444 969 000
Info@vicenzafiera.it
www.vicenzafiera.it

15
GFMS Gold Survey2003 – Update 2
Toronto
Tel: +44 (0)20 7478 1777
Fax: +44 (0)20 7478 1779
laurette.perrard@gfms.co.uk
www.gfms.co.uk

February

4 – 6
106th National Western Mining Conference and Exhibition
Denver, CO
Tel: +1 303 575 9199
Fax: +1 303 575 9194
colomine@coloradomining.org

10 – 12
Investing in African Mining – Indaba 2004
Cape Town, South Africa
Tel +1 305 669 1963
Fax +1 305 669 7350
iiconf@iiconf.com

23 – 25
2004 International Zinc and Silver Conferences
Phoenix, AZ
Tel: +1 202 835 0185
Fax: +1 202 835 0155
www.silverinstitute.org

23 – 25
SME Annual Meeting & Exhibit
Denver, CO
Tel: +1 303 973 9550
Fax: +1 303 979 3461

March 2004

7 – 10
Prospectors and Developers Association of Canada International Convention
Toronto, Canada
Tel: +1 416 362 1969
Fax: +1 416 362 0101
info@pdac.ca

April 2004

15
GFMS Gold Survey 2004
London, Johannesburg, Toronto
Tel: +44 (0)20 7478 1777
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laurette.perrard@gfms.co.uk
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18 – 24
Gold Week 2004
Australia
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