LBMA

Alchemist

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New Year, New Peaks for gold and the London Bullion Market Association.
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200th Anniversary of the 1810 Bullion Committee

A landmark in the history of the London market

By Timothy Green

This year marks a unique anniversary in the history of the London Bullion Market. Precisely 200 years ago, in February 1810, the House of Commons set up a Select Committee on the High Price of Gold Bullion to investigate why it had risen during the Napoleonic Wars.

Since the Bank of England ceased to redeem its bank notes in gold in 1797, as its reserves were eroded by the war, the price was up 20% – extraordinary because it had been fixed at £4.25 per ounce in 1717 by Sir Isaac Newton, Master of the Mint, and this 'gold standard' had been stable for decades ever since. Now it was £4.65. What had caused the escalation? "The debate," J. K. Galbraith declared, "was the most famous in all history on money and its management." It also put the spotlight on the London Gold Market. Not just the Governor of the Bank of England and the Clerk of its Bullion Office gave evidence, but also brokers, refiners, fabricators, merchants and exchange dealers. Every word of their testimony is in the Minutes of Evidence, which provide an account of the market from price-fixing, the role of the Bank's Bullion Office as the crossroads, to refiners and their sources of gold. Such a hands-on account has never been repeated.

During the 18th century, London had, according to one Bullion Committee member, "become the trading metropolis of Europe", not least in precious metals. Brazil had been the major gold producer since 1700. Most of the metal came to London, where the Bank of England built the first real 'official' reserves, to back its note issue, sending gold to be minted into guineas, which had become the daily currency. Silver from Mexico also poured in, but was swiftly shipped to India, which offered a higher price, by the East India Company (virtually no silver was coined). The silver was marshalled through contracts with its broker, Mocatta & Goldsmid (now ScotiaMocatta), which was also the exclusive broker in gold to the Bank of England, a role it had already played for almost one hundred years. So both Bank and broker were privy to virtually every deal.

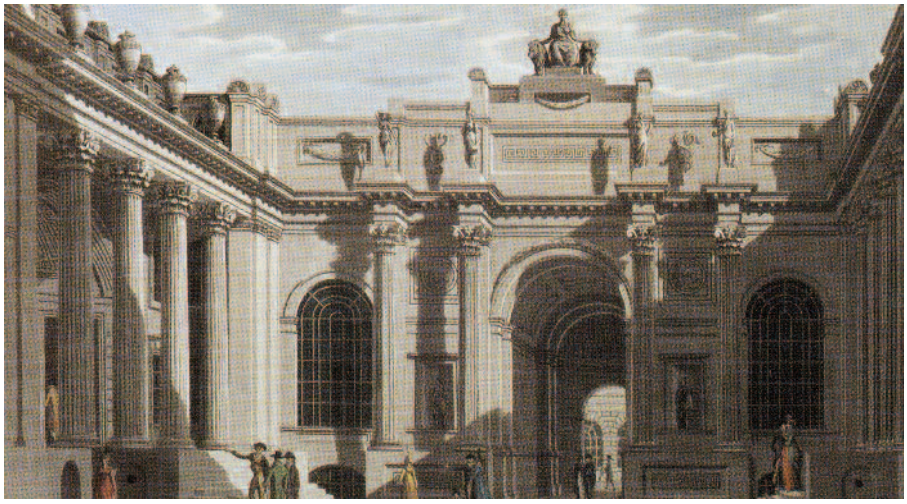
The Bullion Office was almost as old as the Bank, though it began as the Bullion Warehouse, its Clerk, John Humble, told the Committee. Humble was a venerable figure, who worked there from the 1770s until the 1830s. "It has been established upwards of 100 years," he said. "I understand it to have been instituted merely for the purpose of accommodation and safety between merchant and merchant as a place of deposit." The name had changed from Warehouse to Bullion Office around 1770. It was both minder of the Bank's own gold reserves and the crossroads of gold and silver entering or leaving the country.

"The business of the office is divided into two branches," John Humble explained. "The first is for the purpose of weighing and ascertaining the value of the bullion in which the Bank is concerned; the other, in which individuals only are concerned."

The Committee wanted more explanation. "What do you mean by ascertaining the value?" – "By weighing, calculating the fineness according to the Assayer's reports, and casting up the value according to the prices."
"Where do you get the prices?" – "From the Broker's reports made to the office, either on account of the Bank or individuals."

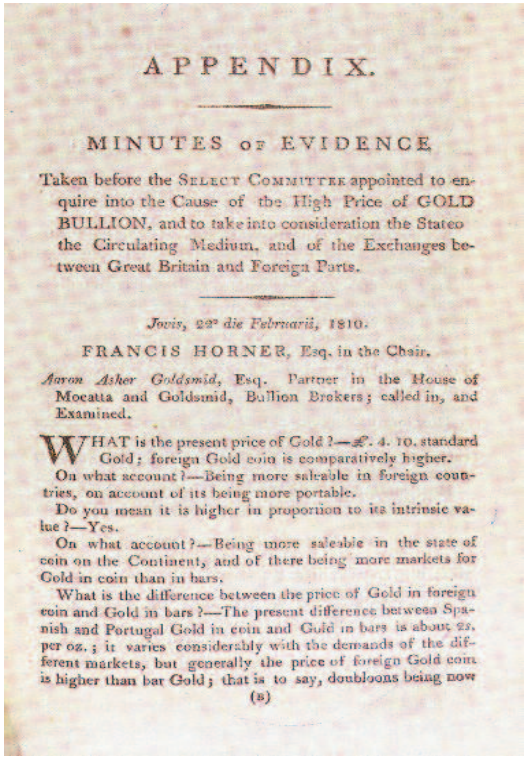
"Does the broker give you a general price, or the price of every transaction?" – "The price of every transaction."

"Is there more than one broker?" – "Only one house, there are several partners in the firm, the house of Mocatta & Goldsmid." Humble went on: "The bullion is deposited…by ship-masters, and lies…for the owners to whom it is consigned; we keep separate books for entering these deposits, one of which we call the packet-book, and the other the man-of-war book…We enter a manifest of deposit, the name of the ship-master and the consignee…the number of packages and what those packages are said to contain, for we receive them only as packages. When a sale takes place, that is transacted by the Broker between the seller and buyer, he giving a contract to each; the parties come to the office, and in their presence the package is opened, the bullion weighed, we deliver the



The Lothbury Court in the Bank of England, with the Bullion Office just through the archway (painted by Thomas Malton in 1801).

Credit: Reproduced by permission of The Bank of England



APPENDIX.

MINUTES OF EVIDENCE

Taken before the SELECT COMMITTEE appointed to enquire into the Cause of the High Price of GOLD BULLION, and to take into consideration the State of the Circulating Medium, and of the Exchanges between Great Britain and Foreign Parts.

Jovis, 22° die Februarii, 1810.

FRANCIS HORNER, Esq. in the Chair.

Aaron Asher Goldsmid, Esq. Partner in the House of Mocatta and Goldsmid, Bullion Brokers; called in, and Examined.

WHAT is the present price of Gold?—£. 4. 10. standard Gold; foreign Gold coin is comparatively higher.

On what account?—Being more saleable in foreign countries, on account of its being more portable.

Do you mean it is higher in proportion to its intrinsic value?—Yes.

On what account?—Being more saleable in the state of coin on the Continent, and of there being more markets for Gold in coin than in bars.

What is the difference between the price of Gold in foreign coin and Gold in bars?—The present difference between Spanish and Portugal Gold in coin and Gold in bars is about 2s. per oz.; it varies considerably with the demands of the different markets, but generally the price of foreign Gold coin is higher than bar Gold; that is to say, doubloons being now

(B)

The testimony of Aaron Asher Goldsmid, the first witness before the 1810 Bullion Committee.
Credit: Courtesy of The London Library

quantity to the seller…the whole of this is done by the Bank gratuitously."

The Committee had a final question. If there was only one broker, "have they, in your opinion, any power of control over the price?" – "None in the world, I believe."

This was confirmed by Aaron Asher Goldsmid, the 25-year-old partner, who was fielded by Mocatta & Goldsmid to face the investigation (the firm was founded by Moses Mocatta in 1671 and became a partnership with the powerful Goldsmid family in 1779). Asked initially, "Are there any other dealers in Gold but yours?", he replied curtly: "I apprehend none of considerable amount."

The key question was how the price was determined. Goldsmid replied: "By ascertaining the general disposition of the buyer and seller and stating the medium."

"Have you any reference in fixing the price, to the prices in the foreign market?- "Certainly."

"How do you ascertain that?" - "By enquiring the last price of various merchants and generally the disposition of the market concurs with the prices abroad…there is seldom any great fluctuation unless some great influx or rise…and any considerable repression of the exchange would tend to raise the price, which might arise from many causes…such as a particular demand for Gold on the Continent…of money going out of the country for the payment of troops abroad."

This was a practical comment. Although the Bullion Committee ultimately decided the prime cause of the high gold price was over-issuing of bank notes by the Bank since it no longer redeemed them in gold; the short-term demands on the market for gold and silver coin came from the British, French and other armies on campaigns to meet their expenses. Moreover, Goldsmid explained, since the pound sterling was weak, gold flowed out to Amsterdam, "the greatest market on the continent" to pay for grain imports. Gold was often in short supply. Twice, the demand was met only by the arrival of East India ships laden with Indian coin lured back by the high price (early dishoarding), which Mocatta snapped up at the dock for the Bank to dispatch to the Mint for new coin for Wellington's armies.

The crucial intermediary for delivery was then Nathan Mayer Rothschild, newly arrived in London, whose courier network across Europe, through his brother James in Paris, became indispensable. Each courier carried up to 20 kilos of coin in special jackets or saddle bags. However, to his annoyance, Rothschild was not accepted as an official broker by the Bank (that did not come until 1842). Another small dealer, James Sharp, also applied, but had to wait decades for Bank approval, though the firm, as Sharps Pixley, eventually became a leading market member until taken over by Deutsche Bank in 1993. So, in 1810, the modern market was emerging, but exclusivity was the watchword.

Only one refinery, Browne & Brind, had its bars of 200 ounces at 916 fine accepted at the Bullion Office. Curiously, it did not give evidence to the Committee, but two other refiners spoke up. Samuel Binns of William and Jacob Wood (a refinery possibly dating from Elizabethan times) reported he bought up foreign coin, 'light' coin (it was illegal to melt guineas) and bar gold "from people who came to our house". He sold foreign coin through Mocatta, "whose price rules our price completely". The rest went to jewellery manufacturers (total hallmarking of gold jewellery by the Assay Office at Goldsmiths Hall in 1809 was 34,000 troy ounces).

William Merle of Cox and Merle, who called himself a "banker and gold refiner", took in foreign coin and "a great deal of Gold dust from Africa…4,000 ounces recently…near 3,000 ounces coming now". The African gold, he added, was made into bars and sold through Mocatta, who charged commission. Most of the bars went to Amsterdam.

Around this nucleus of the Bullion Office, Mocatta & Goldsmid and refiners were some 20 merchants and exchange houses, which did international business in gold and silver. Several names are familiar – Baring Brothers, Coutts & Co., C.T. Cazenove and, the newcomer, N. M. Rothschild. The most significant, however, was Goldsmid & Eliason, which had close links with Hamburg and Amsterdam. The firm had earlier been involved in an unsuccessful attempt to round up gold in Hamburg in 1797 and ship it to the Bank of England in an effort to stave off the suspension of payments in gold against bank notes. Moreover, the senior partner, George Goldsmid, was the father of young Aaron Asher Goldsmid, himself partner in the brokers Mocatta & Goldsmid and the first witness before the Bullion Committee. To add to the Goldsmid contribution to the 1810 Committee, yet another family member, Abraham Goldsmid, a partner in Goldsmid & Eliason, was called in to give evidence. He proved perhaps the most knowledgeable on the market, rattling off gold prices and exchange rates across Europe. For the Goldsmids, the 1810 Bullion Committee was very much a family affair, with their testimony, along with that of John Humble of the Bullion Office, offering us a fascinating account of the market 200 years ago. ■

The full story of the l8l0 Bullion Committee is in *The Ages of Gold* by Timothy Green, published by GFMS Ltd
http://shop.gfms.co.uk

Timothy Green *has been writing about gold for over 40 years; his first book, The World of Gold, came out in 1968. He was a consultant on the annual gold survey started by Consolidated Goldfields in 1968 and now continued by GFMS Ltd for three decades. His latest book, The Ages of Gold, is published by GFMS Ltd.*

A Day in the Life of an Analyst

By Tom Kendall, Precious Metals Strategist, Mitsubishi Corporation

06:40

On the train. Log in to Bloomberg via Blackberry and check levels for metals, energy commodities and major FX pairs. Skim through the overnight reports from colleagues in Asia. Gold pushed up to yet another new high in Tokyo this morning, with spot hitting $1,226.50, but has since slipped back below $1,220. Platinum has been a bit whippy so far, unable to hold the $1,500 level. Gold has been on a phenomenal run since the end of October and yesterday closed above our target high of $1,200, passing €800 in the process. We are now increasingly wary of a more sustained correction than we have seen to date. There is plenty of risk today in the form of the ECB's latest interest rate meeting plus US Federal Reserve Chairman Bernanke in front of the Senate Banking Committee for his renomination hearing. It could be a choppy day.

07.30

Exchange views with traders and marketers on the day ahead. Start deleting the first dozen of the day's unwanted emails, including the now customary update from the LinkedIn networking website offering "unlimited quantities of gold dust" from obscure sources.

08:30

Update my platinum group metal supply and demand model with the latest vehicle production forecasts. The most recent vehicle sales numbers in Japan and North America have been encouraging, but automakers are increasingly talking down expectations for 2010. We are also rather cautious about the prospects for meaningful growth in vehicle sales in Europe and North America.

09:15

Apply for a Chinese visa for a forthcoming visit – six days, five cities, five flights and a train ride should make for an interesting trip. In terms of understanding markets and building relationships, there is still no substitute to visiting a country and customers first-hand.

09.35

Indian contact calls up on instant messenger, asking for view on the direction of gold today. The combination of a soggy start in London and bearish-looking hourly chart suggests the market is likely to head lower through the day, at least until ECB President Trichet speaks this afternoon.

10:30

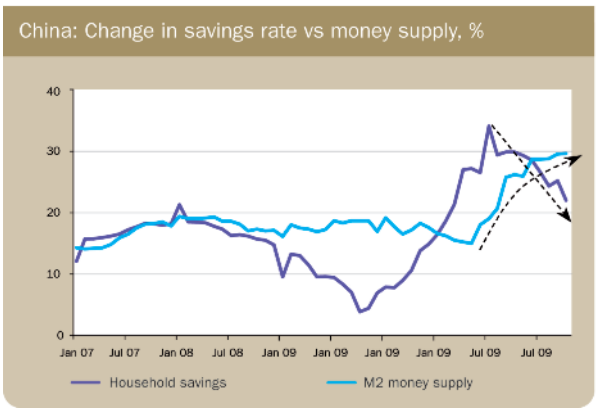
Meeting with a precious metals producer. Very interesting discussion about all manner of macro and micro trends, production costs as well as metal price expectations for the next 12 months and possible future hedging strategies.

12:45

ECB keeps core financing rate at 1.00% to nobody's surprise. Markets are waiting for Trichet's statement.

13:00

One of the US sales team wants a three-month view on the direction of the silver price to take to a prospective North American customer. When does he want it? Ah, tomorrow, of course.



The expectations of many investors rest heavily on China, from gold bugs who foresee the People's Bank of China stepping in to buy 100s (or even 1000s) of tonnes of gold, to palladium bulls who look forward to rapid growth in use of the metal in Chinese autocatalysts. All must hope that the government does not withdraw liquidity too sharply and that Chinese consumers keep spending rather than saving."

13:30

Trichet's press conference starts and US initial jobless claims are released. Euro initially ticks higher against the dollar, nosing above $1,220 again, but as it becomes clear that the ECB has delayed any major move on withdrawing liquidity, the single currency is sold off. Gold follows EURUSD lower, dropping to the $1,205 area before finding support.

14:00

Start mapping out keynote presentation on platinum group metals for the Mining Indaba conference, which will be held in South Africa in February 2010. There is a lot going on in PGMs right now and it is important to regularly take a step back from the day-to-day noise of the market and consider the longer-term drivers of demand, particularly with respect to autocatalyst use.

15:20

Bernanke seems to be putting up a pretty good defence of his record so far in front of the Senate Banking Committee. FX markets and gold are quiet for the time being.

16:00

Update my spreadsheet of precious metal ETF holdings. Investors continue to pour cash into precious metal ETFs, with palladium notably continuing to attract a lot of investment. There are now well over one million ounces of metal backing the London and Swiss listed ETFs – one day the exits from the long palladium trade will get very crowded, but not yet it seems.

17:00

Gold has steadied around $1,210 but still feels heavy. Do not recommend anyone establishes fresh long positions here. I make a final attack on the plague of emails.

17:20

That's it. The end of another mixed-up, varied day. My 'to do' list doesn't seem to have shrunk much, but there's a couple of small children at home who quite rightly do not care where three-month gold volatility is heading and who deserve a bed-time story. ■

Tom Kendall

joined the Precious Metals Division of Mitsubishi Corporation in 2007, Japan's largest trading company, where he is responsible for market analysis, supply/demand modelling and price forecasting for gold, silver and platinum group metals.

Tom holds a BSc in geology from Southampton University.

If you are interested in taking part in the "Day in the Life of..." series, please contact: amy.berman@lbma.org.uk

Will China Overtake India to Become the World's Largest Manufacturer of Gold?

By Philip Klapwijk, Chairman, GFMS

Since 1995, when India took over from Italy as the world's largest manufacturer of gold (here defined as the fabrication of jewellery, industrial products and investment bars and coins – standard large bars are excluded from this analysis), the country has accounted over the period for around 23% of such global fabrication demand.

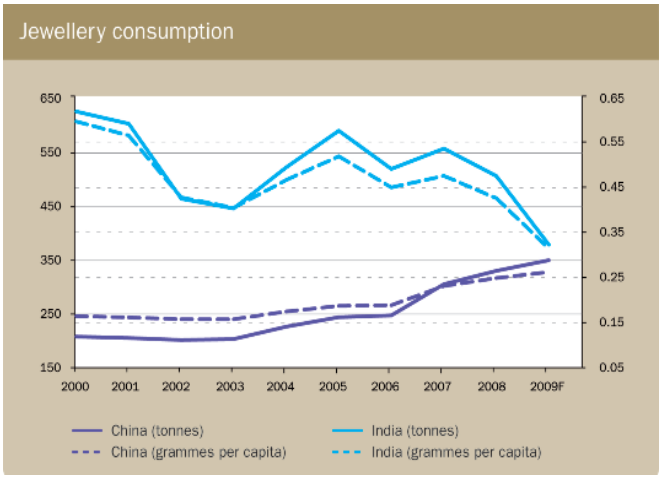
In recent years, though, a combination of falling off-take in India and rising Chinese demand has seen the gap between the incumbent and the challenger narrow significantly. Indeed, we argue in this article that, in 2009, it is probable the gold medal spot will be taken by the East Asian giant, although depending on future trends in the gold price, South Asia's loss may only be temporary.

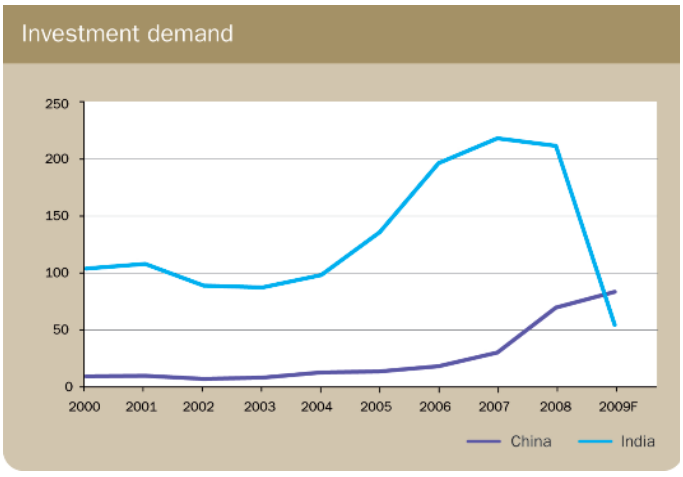
The table below shows GFMS's latest estimates for gold demand in China and India. It reveals that in 2009 – basis data for the first three quarters plus forecasts for the fourth quarter – total demand in China is expected to exceed by a small margin that in India. Although the fourth quarter outcome will be critical to the final result, we doubt there will be a change in the leadership once these numbers have been gathered. This is because high prices in the last two months and in early December have tended to hit demand in India rather more than they have in China.

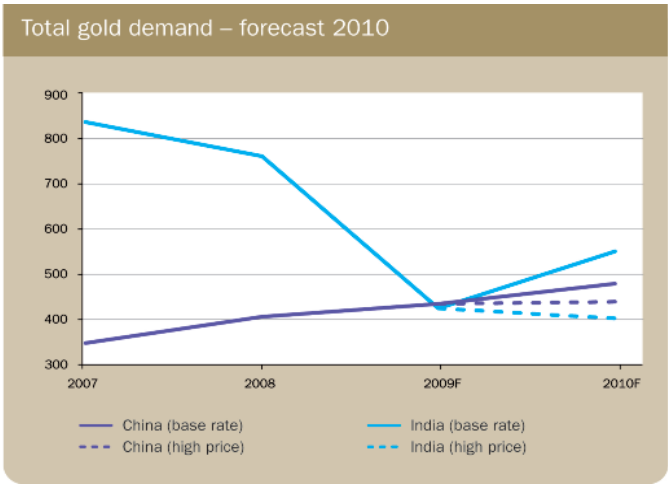
Greater Indian price sensitivity, in fact, is one of the main reasons behind the convergence in the country's demand and that of China. The Indian market has been under pressure for several years from volatile and rising local gold prices, particularly its key 22-carat jewellery component. Meanwhile, Chinese demand, both in terms of jewellery and investment, has climbed higher and higher, not just in spite of local price strength but, arguably, also to some extent because of it. This is particularly true when it comes to the growing thirst of local investors for bullion bars, which has seen China comfortably overtake India in this category of demand.

Chinese demand, both in terms of jewellery and investment, has climbed higher and higher, not just in spite of local price strength, but arguably, also to some extent because of it.

Besides the influence of price, other factors have helped to narrow the gap between off-take in India and in China. An important one has been the faster rise in consumer spending in the latter than in the former. The more rapid growth in Chinese consumer spending has been particularly marked this year, with for instance around a 9% year-on-year rise recorded in China (for urban households only) in the first half, compared to an increase of less than 3% in India, where economic growth has been more severely affected by the global economic downturn. In addition, one should bear in mind the influence of China's better overall economic performance in terms of GDP growth and the level of increase in its GDP per capita over many years. Moreover, China's higher savings rate combined with a less open economy (meaning fewer investment







alternatives to gold) have also helped to stimulate a stronger trend in investment demand in the country than in India, particularly in the last few years.

Jewellery demand in China has also grown faster than in India in recent years because the retail market in the former is far less developed than in the latter. What this has meant in China's case is a continued massive expansion in the number of retail outlets, with these shops having to be stocked with product, and the greater availability of gold jewellery in a wider part of the country helping to stimulate additional consumption. In contrast, the retail structure in India is by now already fairly mature, at least in terms of the number of points of sale.

Finally, we would argue that social change has been more helpful to demand in China than in India. In the former, a growing moneyed middle class has been eager to establish its status and safeguard its wealth in the form of gold, both in terms of jewellery and, lately, in bullion too. Meanwhile, in India, the rising middle class has, at the margin, de-emphasised the traditional affinity for gold and instead embraced other forms of consumption. The decline in India's per capita jewellery demand partly reflects this, although the shift away from jewellery towards bullion products has admittedly been of greater importance.

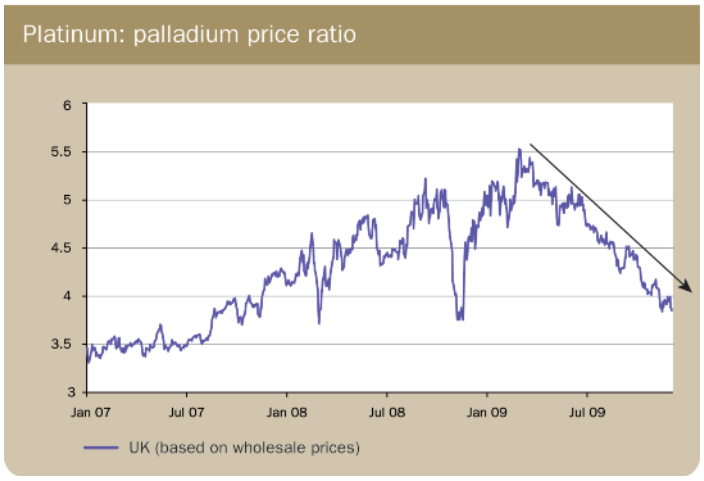
Turning to the future, even though there are secular trends at work that we believe will tend to dampen Indian off-take in the future, especially for jewellery, we would be the first to recognise that there is huge pent-up demand at present in the country, which is mainly being held back by very high local prices. Thus, in spite of the stronger underlying growth in Chinese demand for both jewellery and investment, it could be that if prices moderate sufficiently, off-take in the South Asian giant will rebound tremendously in 2010, or if not then, in the not too distant future, allowing India to seize back the number one spot. In the next year or so, gold prices will therefore be decisive in terms of the answer to the question posed in the title of this article. For instance, were dollar prices to drop back in 2010 to an annual average of below $1,000 per ounce (and assuming more or less stable yuan and rupee exchange rates to the dollar), we would be fairly confident of India regaining its mantle. On the other hand, a 'high price scenario' with an annual average exceeding $1,200 would likely see China's lead over India increase, due to the latter's greater short-term price sensitivity. ■

We would argue that social change has been more helpful to demand in China than in India.

Forecast Gold demand in 2009

(tonnes)	China	India
Jewellery	331	356
Investment	83	53
Other fabrication	18	13
Total demand	432	422

Source: GFMS Ltd. (October 2009, 3-Year Gold Forecast)



Philip Klapwijk *has over 20 years' experience analysing the gold, silver and PGMs markets, most of this time working for GFMS, which is the world's leading specialist research consultancy on the precious metals markets. (GFMS, for example, is the prime source of statistics on gold and silver markets worldwide.) GFMS became independent of former owner Gold Fields of South Africa via a management buyout in August 1998 and Philip was the company's first Managing Director. Since January 2004, he has been the Executive Chairman of GFMS. Philip is co-responsible for the strategic direction of GFMS and heads up its market research on the official sector, investment and fabrication demand in the Americas, Europe and China. Philip has also helped to oversee GFMS's expansion in recent years into other areas, including base metals and steel research and, most recently, mining consulting and costs. (For more information see: www.gfms.co.uk.) Philip is a frequent speaker at conferences on precious metals and commodities, and the print and electronic media regularly quote his views on the gold, silver and PGMs markets.*

The Eternal Question of Gold in the Official Sector

By Paul Mercier, Deputy Director General of Market Operations, European Central Bank

The following is an edited version of a speech made at the LBMA Precious Metals Conference in Edinburgh on 3rd November, 2009

As a central banker, I am not necessarily the most qualified person to speak about the public sector holdings of gold, for two reasons. First of all, because gold as an asset has been used since well before central banks were invented. The second reason is that we should of course not limit the public sector to the central banks. There are many other public sector entities that are holding gold. I will try to share some thoughts with you. One theme I think will appear in my presentation: despite the gold sales of the past decade gold remains, and will remain, an important asset for the central banks and, particularly, for the Eurosystem.

In my remarks today, I will concentrate on the Eurosystem and adopt a very conventional perspective: let's talk about the past, then the present and, finally, the future. It is maybe a beaten track, but the topic does not really fit with audacious innovation.

Past

Central banks and official international institutions have been major holders of gold for more than 300 years and are expected to continue to hold large stocks in the future. They currently hold about 20% of above-ground stocks. As I told you, gold has been used as a currency and as an asset since well before central banks were invented. Contrary to popular ideas, gold was not the first form of money used to avoid the difficulties and inconveniences of a barter economy. Many other goods have been used as money and some are quite exotic. I remember when I joined a central bank many years ago, I discovered that there were other forms of money than the traditional ones. For example, the shells used by the native Americans or whale's teeth used in the Fiji Islands, or huge stone discs in the Pacific, or even tobacco. In Virginia in the US, tobacco had been the currency for 200 years – for a much longer period than the gold and the gold exchange standard put together. There were many forms of money, but the introduction of metallic money quite early contributed to overcoming some of the disadvantages associated with these forms of money: some were prone to decay, some were too heavy for transport, others were too easy to produce or reproduce. Among the metallic money, two forms were dominant: silver and gold. One remark aside: silver has probably been used on a much larger scale than gold as money.

The use of gold as money is reported before 1000 BC in China and around 700 BC in Lydia, introduced by the now forgotten king Gyges who was ruling the country, while one of his successors is better known: a certain Croesus. I don't need to recall that the European exploration, to use a politically correct word, of the Americas was partly fuelled by the stories of the gold ornaments displayed by Native American peoples.

You will notice, 'en passant', that gold played a role as money well before central banks where invented. But let's not dwell too much on the history of money and allow me to come back to the central banks as gold holders.

It was only very late in history, in the last quarter of the 19th century, that central banks really started to accumulate gold as a reserve. This building-up of gold reserve was particularly important during the two world wars because of all the uncertainties in the world. It reached a peak in the 1960s and, at that moment, the official gold stocks reached a level of 38,000 tonnes, which accounted for about half of the above-ground stocks at that time. At that time, because of the fixed official price expressed in US dollars and its convertibility into dollars, gold was still considered to be the foundation of the international monetary system. Gold provided the 'anchor' to which all currencies of member countries in the system were linked, either directly, or via the dollar.

However, in contrast to the classical gold standard, at that moment, actually since the introduction of the gold exchange standard at the Bretton Woods conference, there was no longer a direct link between gold and the national money supplies. And as some central banks created more money than was consistent with stable prices, after several years of moderate but persistent inflation, the fixed official gold price became more and more unrealistic. Finally, in August 1971, US President Nixon suspended the convertibility of the US dollar into gold. The gold window was closed, and gold became one of the important reserve assets instead of being the centre of the system. That was the past.

Present

So what do we do in the central banks with gold? As I said, it is no longer important from a pure monetary perspective, but it is important as an asset. Let me say a few words about the role of gold within the Eurosystem. The Eurosystem holds 10,800 tonnes of gold, while according to the World Gold Council, the total of official gold holdings amounts to a little bit less than 30,000. So the Eurosystem alone holds roughly one-third of all official gold reserves in the world. But this has evolved over the past 10 years. The share of gold in the Eurosystem balance sheet has decreased during the past 10 years, while the value of this investment actually increased due to the favourable price developments in the gold market.

When we started the ECB and the euro in 1999, the total balance sheet of the Eurosystem was €700 billion. In 11 years, it has increased three-fold. It reached a peak of €2.1 trillion at the end of 2008. During the same period of time, the share of gold in our portfolio diminished, although gold in our reserve doubled in value.

It has now reached €220 billion. As the balance sheet increased even more quickly, the share of gold decreased from about 14-15% of the total balance sheet to 10%. This increase of the balance sheet of the Eurosystem has different sources. One is the evolution of banknotes in circulation. When we started with the euro, there were 370 billion banknotes in circulation. Now we have around 750-770 billion, more than double in 11 years, so automatically of course the balance sheet is bigger. A second element is that the reserve requirements we impose on banks have increased. Banks are obliged to maintain some deposits with the central banks and this is based on their short-term liabilities. As the balance sheets of the banks have increased quite dramatically over that period, automatically their deposits with the central banks have increased as well. The third reason for this big increase in the balance sheet of the Eurosystem of course has to do with those non-standard or non-conventional measures we have introduced in order to cope with the crisis that started on the 9th August 2007 and reached its peak immediately after the collapse of Lehmann Brothers.

Just to give you an order of magnitude, before the crisis, say around June 2007, the

outstanding amount of lending we were providing the banking sector with was approximately €450 billion. We have reached, following the collapse of Lehmann, just less than €900 billion. The idea was to ensure that the banking sector didn't collapse because of the absence of liquidity in the market simply because banks were reluctant to lend to each other. All these three elements, bank notes, reserve requirements and the non-standard measures explain this huge increase of the balance sheet of the Eurosystem from €700 billion in total to €2.1 trillion at the end of 2008. During 2009, it shrank slightly and now our balance sheet amounts to approximately €1,800 billion. This is because those exceptional measures are still present, but the total volume has been slightly reduced. Gold now represents again about 13-14% of our balance sheet. So we are back to the proportions we had in the past, although I repeat that the gold we have has doubled in value over the period. We now have €220 billion of gold in our portfolio.

Why do we have gold? There are voices that regularly say that it is not efficient, so why have it? Central banks, to justify their gold holdings, use different arguments and they don't all emphasise the same points of view. There are four ideas behind those gold holdings: the economic security; the capacity to face unexpected needs; the question of confidence; and the risk diversification issue.

Economic security

Gold is a unique asset in many respects. In terms of physical and chemical properties, it is almost immune to decay, it has a very high density so that small volumes can represent large value, and it is a rather soft metal and can be easily manufactured. Also it is no one else's liability. Therefore its value is not affected by potentially negative behaviour of the issuer. So this is a unique characteristic that is quite reassuring. In fact, gold has maintained its value in terms of real purchasing power in the long run, over history. Although, as regards the real purchasing power of gold, I hasten to add that, of course, past performance is no guarantee for future performance. We may see this next year in Berlin whether this is still true.

Unexpected needs

The second factor that is often used as an argument is the necessity to face unexpected needs. There are some circumstances that are extremely improbable and rare, but if they occur, they can be highly damaging. Those circumstances are, for example, wars or an unexpected surge of inflation (there are some countries that could witness this), or a generalised crisis that leads to the repudiation of foreign debts or even the international isolation of a country. Of course, those situations are rare, but we cannot say that they will never happen, and they are extremely difficult to anticipate or predict. In those circumstances, gold remains the ultimate and global means of payment that is still accepted and it is one of the reasons used by some central banks to justify gold holdings.

Gold can also be used as collateral for borrowing. For example, in 1974, the Banca d'Italia secured a loan that was granted by the Deutsche Bundesbank by providing gold as collateral. In 1991, India received a loan from the Bank of Japan that was also based on gold collateral.

Confidence.

The third element of justification is confidence. Of course, gold is no longer backing the currency in circulation. It was the case under the gold standard when gold holdings maintained the confidence in the otherwise worthless paper money, which was used for practical reasons only. Since the break-down of this system, gold lost its formal supporting role. However, people still instinctively trust gold, which is held for non-monetary purposes in both retail and institutional portfolios.

Under the gold standard, paper money had no value in itself but it was fully backed by gold, so its value was represented by the gold held by the central banks. This is no longer the case in modern central banking, but still one can argue that this notion of confidence is still there. What makes the value of money today is faith. You believe that the money you have is good. There is nothing else. Of course, this faith will be justified or not by the behaviour of the authorities and the central banks, but if there was a little bit of gold behind it, it could contribute to increase this faith in the currency. We are far away from the classic gold standard, but some argue that gold still plays a role and, for example, the IMF itself said recently that the gold holdings gave a fundamental strength to its balance sheet. We know that, for example, some rating agencies are taking comfort due to the presence of gold in the portfolio of either governments and/or central banks.

I recognise immediately that there is a great dose of psychology behind this. As I am neither a psychologist nor a psychiatrist, I will not elaborate further. Although, since the start of the crisis more than three years ago, I think we definitely need more psychologists and psychiatrists in the market, but that's another story.

Risks diversification.

The fourth reason for having gold in the portfolio of central banks has to do with risk diversification. Gold presents very good diversification properties in this respect. It is clear that risk diversification is important for any investor, but it is probably even more valued in central banks. Central banks are usually quite conservative when they invest, and risk diversification is surely something extremely important in their choices. There are several studies that show that when you have gold in a portfolio, you have no systematic and no non-diversifiable risk.

There are a certain number of conditions, for example, a sufficiently long time horizon for the investment and so on, but this is accepted now.

My colleagues who are dealing with gold, or trading in gold, have also conducted some studies. We have three families of assets in terms of foreign exchange reserves. We have assets in US dollars, in Japanese yen and gold. The studies compared several portfolios with different compositions. All portfolios without gold systematically had a higher volatility than any portfolio where there was some gold, and this was statistically significant. It is also true, of course, that there are several optimum portfolios in this respect, but all those that did have good characteristics had at least some gold in their composition. These studies, which are based on a statistical and economical method that is called Standard Mean Variance Portfolio Optimisation, provided similar results to others conducted in other central banks, which reached the same conclusion. Of course, these statistical and econometric studies are not sufficient to determine how much gold we should have in our portfolio in the long term. We also need a more fundamental approach to determine exactly what we should have, but still there is this idea that gold contributes to a good risk diversification of the portfolio.

So those four factors, the economic security, unexpected needs, the notion of confidence and, finally, risk diversification explain why gold is important in the portfolio of the central banks.

A big thank you to all who took part in the impromptu photo session in the Leather Room of The Sumptuous Prestonfield House Hotel. As promised a sample of some of the portraits taken. For more information on getting prints go to www.ionriver.com/lbma

Mark Pickthall is a designer, art director and photographer with a long association with the LBMA having created the LBMA logo The Alchemist and all the Conference material since Dubai.

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Future

I would like to look at the future and address two issues. The first one is the so-called CBGA (Central Bank Gold Agreement) and the second one is what will be the place of gold for central banks and authorities in general in the future.

First of all, the new CBGA was announced in August 2009 and is the third agreement of its type. In 1999, the signatories of the first Agreement (15 central banks: the Eurosystem, the Bank of England, the Swiss National Bank and Riksbank in Sweden) wanted to minimise the adverse impact of their own sales of gold. Therefore they decided to set up a formal and transparent agreement, and because the terms of the agreement were published, the market was well aware of the intention. Among many things, they communicated first the idea that gold would remain an important element of global monetary reserves. They said that they would sell gold, but it wasn't their intention to dismiss gold.

The Agreement also stated that central banks would not enter into the market as sellers except for those sales already decided and, for these, there was an agreement not to exceed more than 400 tonnes per year, which was a total of 2,000 tonnes over the whole life of the Agreement, which was five years. At that time, the gold production was running at around 2,500 tonnes per year, so this additional supply via the sales of the central banks meant an increase of roughly 16%. One could have expected a negative reaction on the prices, but in the first three trading days after the Agreement had been announced, the spot price increased by 14%. So the perception was bullish rather than bearish, and the idea was simply that the market was better informed. Therefore there was suddenly much less uncertainty related to possible sales by central banks, and that contributed to the standardisation of the market.

During the five-year period, the signatories indeed sold those 2,000 tonnes. What was important also was the way these sales had been organised. The big sellers under the first Agreement were the central banks of Austria, Portugal, Switzerland and England. As an example, between 2002 and 2004, the Bank of England sold half of its stock of gold, roughly 300 tonnes. The others, for example, the Swiss National Bank, waited until the Bank of England had sold the lion's share of this amount before entering itself very actively in the market. The Banco de Portugal waited until the very end of the Agreement before starting to sell. All this was co-ordinated and contributed to avoiding any shock on the market. In total, the reduction of gold held by those 15 central banks during those five years was approximately 2.5-3% per year. In 2004, the Agreement reached its end and it was decided to enter into a new Agreement, not exactly with the same central banks – there were a few changes – but the Agreement was reconducted. There was a difference. It was announced that the self-imposed ceiling would no longer be 400 tonnes but 500 tonnes, and therefore the total would be 2,500 instead of 2,000 tonnes over the five years. This could have led to some bearish reaction, but it was not the case, simply because the market now was reassured that those sales could be well organised and should not have a negative impact on the market.

I should say that the signatories sold only 1,875 tonnes at the end of this second Agreement, much less than was initially agreed. Over the five years of the second Agreement, the price of gold has doubled, which is not bad for the gold holders. It is amazing to observe this, because according to the statistics provided by the World Gold Council, in 1998, there were 33,500 tonnes of gold in the public sector holdings. At the end of 2008, there were 29,800 tonnes. So a reduction of 3,700 tonnes is the fastest and biggest decline ever observed in gold holdings. I think the CBGA contributed to that; in spite of this, the price of gold increased instead of declining.

In September 2009, the CBGA No. 2 reached its end. It has been decided to enter into a new Agreement – again for a five-year period – which will end in September 2014, again with a ceiling of 400 tonnes per year – 2,000 tonnes in total. Since the ceiling of the former Agreement was not used, it wouldn't have made sense to maintain such a high ceiling. Another change is that the IMF has also announced that it will sell approximately 400 tonnes in the coming year. It has been stated in the Agreement that those sales can be accommodated within the ceiling decided by the signatories of the CBGA. Therefore, even if the IMF is not a signatory of this Agreement it will be treated similarly. This is surely an element that contributes to stabilising the gold market.

So what about all the central banks in the world? Will the amount of gold held by the official sectors globally continue to decline or not? It is very hard to make any forecast in this respect. Forecasts are always difficult, especially when they concern the future of gold, but there are some elements that can help us to make up our mind. First, it is clear that risk diversification is more and more an issue nowadays, and we have seen public sector authorities, mainly sovereign wealth funds, that have quite seriously changed their approach and diversified their investment, buying real estate or commodities. We have even seen some of them buying raw materials to secure the needs of their own country and so on. So, it is not excluded that gold can also benefit from that diversification. The CBGA signatories as a group have around 50-55% of their foreign reserves in gold. This ratio has increased in the past seven to eight years with the increase in gold price (which more than offset the effect of gold sales). In terms of volume, the Eurosystem, with 10,800 tonnes, holds a third of all gold held by the public sector. The top five European central banks in terms of gold holdings are the Deutsche Bundesbank with around 65% of its reserves in gold (based on World Gold Council and IMF statistics and end of month spot gold prices). Banca D'Italia and Banque de France are above 60%, the Nederlandsche Bank around 50% and the SNB around 30%. What those central banks will do throughout the duration of this CBGA is known, so there will probably be a small reduction in volume, but not in value.

So what about other reserve-holders in the world? Periodically, the biggest reserve-holders do not really have gold. China and Japan, for example, have only 2% of their foreign exchange reserves invested in gold. For Russia or Taiwan, the proportion is slightly higher but still well below the figures I mentioned for the signatories of the CBGA. So, I don't think I take a huge risk if I anticipate that those countries are very unlikely to appear on the sales side of the market. We might observe a stabilisation, if not an increase of gold in the official reserve.

This leads to my conclusion. There are three elements that I wanted to make very clear. The first one is that the Eurosystem holds more gold in value now than 10 years ago, even if it has sold quite a lot of gold. The second is that even if gold prices can be volatile, gold really contributes to the diversification of risk in the portfolio, particularly that held by the official sector – even if some central banks will continue to sell gold and even if a new potential seller, the IMF, has emerged. I will not conclude with any kind of certainty that gold holdings will continue to decline in the coming years. Thank you for your attention. ■

Paul Mercier *is currently Principal Adviser in Market Operations at the European Central Bank after having served as Deputy Director General for 11 years. He was previously Head of Financial Markets of the European Monetary Institute (EMI). In this capacity, Paul Mercier participated in the design of the monetary policy and foreign exchange policy instruments of the European Central Bank.*

2009 LBMA Precious Metals Conference

By Ruth Crowell, Commercial Director, LBMA

In 2008, delegates predicted the price would be $956.50 and were $105 off the actual price of $1,061.00. This year LBMA delegates predicted that the gold price will be $1182.50 by the time of the next LBMA Conference. Let's hope they were sufficiently bullish this time round.

The 2009 LBMA Precious Metals Conference was held in Edinburgh, Scotland during the period 1st -3rd November, 2009. The Conference had originally been planned for Lima, Peru, but the venue was changed in early 2009 due to the financial crisis. The dates were however kept the same and delegates enjoyed 'typical' Scottish weather, which was much improved by drams of whisky by the fire. The Conference attracted a total of 368 delegates, from over 35 countries, which far exceeded the Public Affairs Committee's and LBMA Executive's original predications in early 2009.

The Conference opened with the Welcome Reception, sponsored by the Wold Gold Council which was held in the Balmoral Hotel. After the first evening of networking, the Conference speeches began with the Opening Session featuring keynote speaker Paul Mercier of the European Central Bank as well as Michael Cross from the Bank of England. Paul Mercier consequently won the prize for Best Speaker; followed closely by Jessica Cross of VM Group (these speeches are reproduced on pages 8 and 14 respectively).

The Conference Dinner was held at Prestonfield House, a stately home just outside of Edinburgh. Here delegates enjoyed networking at the Cocktail Reception sponsored by the Silver Institute and the LPPM as well as award winning Highland Dancers and a pipe band.

The Tuesday afternoon saw the most popular session, The Future of the London Precious Metals Market. Phil Clewes-Garner of HSBC, Raymond Key of Deutsche Bank and Neil Clift of JPMorgan participated in a US Presidential style debate moderated by Steve Branton-Speak of Goldman Sachs. Topics for debate included the future role of the LBMA and Cleared Forwards amongst others. The Silver Session and the PGM Sessions also proved very popular.

Our congratulations and thanks to all the speakers involved in the Conference.

The next LBMA Precious Metals Conference will take place in Berlin, Germany during the period 26th-28th September 2010.

Hope to see you there!

Prospects for Silver Supply and Demand

By Jessica Cross, CEO, VM Group

The following is an edited version of a speech made at the LBMA Precious Metals Conference in Edinburgh on 3rd November, 2009

Preamble

Thank you to Stewart and the LBMA for the invitation to talk. I'm delighted to talk about silver. I've always been concerned that with my history as a gold analyst, I've been slightly typecast. Really, the VM Group now does not only base metals, precious metals, but we also do energy, renewable, carbon trading and soft commodities. So we are not Virtual Metals any more, we really are the VM Group, and it's nice to talk to an audience like this about something other than gold.

If we are talking about typecasting, I think silver has been a classic. It has always historically played second fiddle to gold in absolute price level terms and really how it is perceived as an investment vehicle. It has been seen as poor man's gold. There have been a number of reasons for this in the supply/demand balance and I'm going to address that today. But what I'm going to talk about today is that, in fact, the silver market is showing structural improvement. The state of affairs in the long term is going from strength to strength.

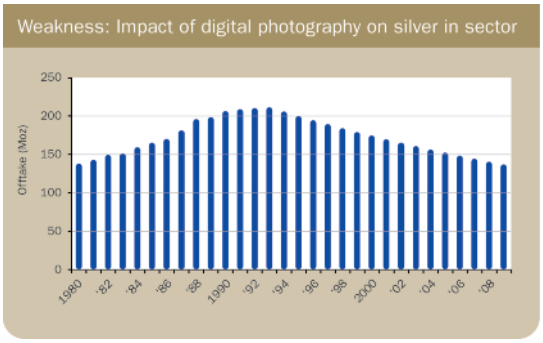
Before I show you where I think these strengths are coming from (and I think they are going to change the market irrevocably), let's just take a look at the historical structure of the silver market to see where these weaknesses have come about.

Weakness

This is our line item of the silver supply/demand balance. In our research, we've identified three areas of chronic weakness. It's on the primary supply side, on the recycling, particularly photographic, and it's on the photographic and the demand side of the equation, and I'm going to talk a little bit more about this. We also think the strengths are coming from industrial and investment. I'm going to return to this because this is really where the interest lies.

Our first weakness as we see it in the silver market is that 65% of my supply is either co- or bi-product production as a natural consequence of the mining of copper, lead, zinc and of course gold. This really means two things. Silver gets mined irrespective of the silver price. When the world wants base metals as it has done in the last five years, with copper, lead, zinc, and when the world wants gold, and it always seems to want gold, the silver output just happens. Secondly, as a consequence of this, you cannot construct a meaningful cost curve of primary silver production. It implies that it is not possible then to hone in on the marginal costs at producer level, which will give you an indication of the silver price, beyond which it is unlikely to fall, before mine production contracts in logical response.

The second weakness is the traditional end users of silver and the smoke-stacked industries. Over time, they have been responsible for the generation of a lot of recycling, which comes back into the market. The most obvious sector is the photographic. This slide shows photographic since 1980, which we've modelled in a database. This sector has been relentlessly undermined by the technical substitution in the form of digital. This has been going on now for almost two decades. Originally, there were doubters who swore blind that this would have no impact on the demand for silver in this sector. But like waves undercutting the base of a sand dune, the consequences were inevitable, and this chart here shows what's been going on. Less and less silver has been consumed by this sector, and the chart shows our estimates for off-take here. You will agree that this has not been a growth industry.



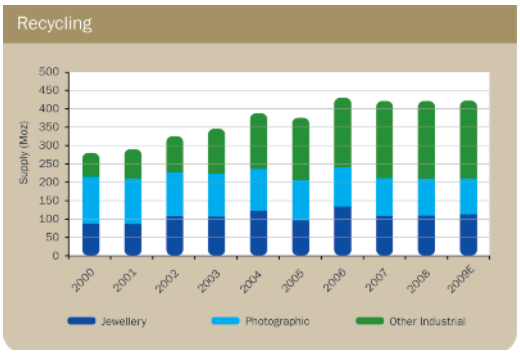
Digital Photography

As I said, the photographic industry is also a very efficient recycler of metal, with the exception of medical x-rays, which have to stay on record for a certain number of years. Silver was and still is washed out of the film during the manufacturing and the processing of the film, and this can actually occur quite swiftly after the film has been manufactured. As this chart shows you, it's not only the photographic industry that is an effective recycler of silver; there are other industrial applications such as batteries and electronics, which do exactly the same. And of course, don't forget the generation of silver jewellery wearers, who tend to buy the stuff, wear it, recycle it, rebuy it, and you've got this circle going around and around of recycled metal in the industry.

Recycling

So, on balance, we reckon that, annually, you're looking at probably 400 million ounces of silver returned from the recycling to the industry. Such are these levels of recycling that we have to accept that these sectors are not smoke-stack. The silver embedded in these sectors is readily available. It's liquid, and it's available for secondary return to the market. This has all weighed heavily on the price and countered against the metal over the years.

Note this market is adjusting, and while the current supply/demand balance has yet to reveal this evolution, there is a sea change which is detectable, and it's going to become more and more apparent in the next five to 10 years. The adjustment is not coming from the



traditional producers and consuming sectors as we've discussed here. Much of that is ops normal, silver will remain a current, a co- and bi-product of other mining of metals. Silver demand in the photographic industry will continue to shrink, although the good news here is that, for every ounce silver has less going into photographic, you've got less available for recycling from that sector. That really is very cold comfort.

Times are a-changin'

So where are these changes coming from? They are coming from silver's unique properties as a biocide as well as superior conductivity of electricity current. The interesting thing is that there are many worries and woes in the world today; in fact, they are playing directly into the hands of silver. The metal seems to be in the right place at the right time. You take a look at it post-9/11, there are heightened security issues. World, particularly Western world, obesity is a major problem, as well as general healthcare issues. There is a drive to perfect cleaner sources of power and heating. There is a call for energy efficiencies and sources of cleaner water, and there is a general call to clean up the world as a whole. You look at these worries and you name them. Silver is there with a potential solution.

Projected demand

So let's take a quick look. I'm going to give you a final picture of where we think the projected demand is coming from, by first building up the demand in each sector. Watch the left hand axis of all these charts in millions of ounces.

Radio frequency devices

The first thing you have is on security and stock control. You have got silver used in what is called radio frequency identification tags. These are tiny little gizmos that are taking over from bar codes. Apart from controlling stock of goods and the movement of those stocks, they are used now to track human beings.

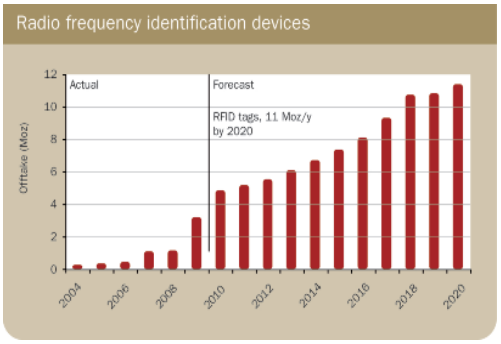
The Chinese have just committed $6.0 billion to a massive programme to invest in these tags, not only in the ID for every single Chinese citizen, but also for the issuing annually of billions of transport tickets, to name a few of the applications in this huge programme.

China isn't the only country. You get a new passport from any of the EU countries today, you take a look, there's a little tag in it and all these contain a bit of silver.

We reckon that at current growth rates, these tags manufacture will exceed 30 billion units by 2020, up from approximately 7 billion units today.

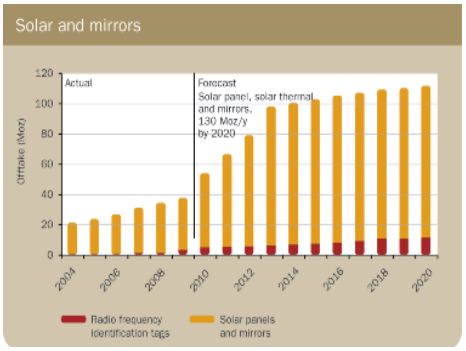
With the average loading of about 10 milligrams of silver per tag, this means more than 9 million ounces of silver committed, up from about 2.3 million ounces currently. Looking further beyond 2030, the use of these tags is likely to become universal, perhaps running into the hundreds of billions of units manufactured every year. So we're saying you're looking at minute amounts of silver going into each unit, but a huge amount of these units being manufactured.

The interesting thing is that there are many worries and woes in the world today; in fact, they are playing directly into the hands of silver. The metal seems to be in the right place at the right time.



Solar and Mirrors

Let's add to this another really big one. This is solar and mirrors. The solar panel industry recently has been showing exponential growth. With the drive to find clean sources of heat and energy, solar is without doubt in the running. Yes, we agree, the capital costs are still very high relative to traditional sources but the longer-term benefits are coming to the fore, and each crystalline silicon solar cell contains approximately 1.2 grams of silver per watt of energy. This sector, like all sectors, took a big hit in the recession, but since then, there have been announcements by the US, India and China to raise their respective solar energy capacity, and it seems to be lifting the market. This is where we are seeing this phenomenal growth.



India has announced plans to increase its solar output to 20 gigawatts per annum by 2020 from virtually zero at the moment. The Chinese have announced plans to up capacity from 5.5 gigawatts to 30 gigawatts by 2020 and, in fact, the US has announced the same.

So global projections of solar generating capacity by 2020 are currently between 20 and 40 times that of today's 13 gigawatt capacity installed. We see some very optimistic forecasts saying that the solar power industry could account for as much as 20% of global generation by 2050.

We can't offer an opinion about this, we think the jury is out. But what we have done is adopt a much more conservative approach to looking at the forecasts. We nevertheless do forecast that we're going to see an average compound growth rate of at least 15% per annum between 2010 and 2020, meaning that installed capacity in solar is going to quadruple at the very least.

This will require, after taking into account increasing market share of non-silver usage in solar, which there is, and the gradual improvement of silver loading efficiencies in these panels, we're looking at about 50 million ounces of silver per annum by 2020, up from currently about 18 million ounces. It is a big one.

Wood preservatives

Let's add to this another one. It's wood preservative. Plans to replace arsenic in wood preservatives have been afoot since 2004. This is not new. Back then, almost 10 years ago, the industry recognised in conjunction with the US Environmental Protection Agency, the need to phase out copper chromide arsenate (CCA). There were growing health concerns about the use of this product, because its primary constituents are chromium and arsenic. Silver is a leading contestant to offer a non-carcinogenic product, but one that still inhibits the growth of mold and fungi, and also kills termites that munch away at wooden constructions. This product has already been ready for commercial roll-out for some time now, and it has been in for licensing with the US authorities. For some reason, the launch appears to be delayed. We are watching this very closely. There is little news forthcoming about this end use, and the market is

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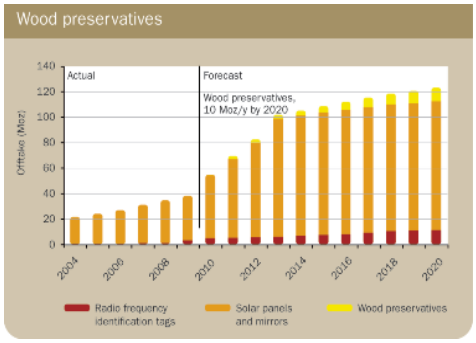
There's a place for all market players at the LBMA Conference - registration opens June

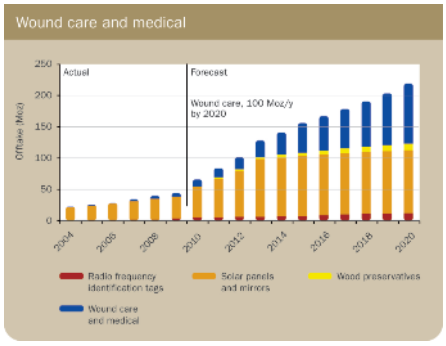


incredibly tight-lipped about it. It is at the licensing stage and so no one really wants to talk about it. If it is successful, it could be a really big market for silver, especially as regards to North America and Europe. In addition, we are also aware that there has been a lot of R&D work in trying to reduce the amount of silver that goes into this solution; the original solution took about 1% silver and there's been a lot of work done trying to get it to 0.5% or 0.1% silver in solution, with the same effectiveness as a wood preservative.

So our forecasts here for silver are extremely conservative. We have seen other people calling for at least 100 million ounces of silver into this sector annually, and as you can see from what we've done here – we've included it in yellow – we're a lot more conservative, but we are watching very closely to see what happens.

Wound Care and Medical

This is another huge potential market. Obesity makes headlines every day. It's not pretty, and as people in the Western world tend to live on average for longer years, these populations are also getting fatter and, as a consequence, more sedentary. This is obviously a major problem throughout North America and increasingly throughout Europe. What is happening is the sedentary lifestyle of very obese people is causing chronic skin problems, which need to be treated on a long-term basis. Silver as a healing biocide is proving very effective for these band-aids and care products, but also for bandages over large surface skin area. Reports confirm that skin lesions of this nature heal much faster and cleaner under silver bandages. Of course, the application was very swiftly moved into the realm of not just the sedentary and the obese. If you go to your local pharmacy, you will find a range of silver-based healing products, which, in fact, are not that much more expensive than your traditional products.

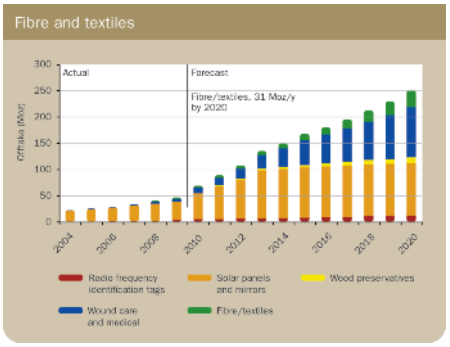


Fibre and Textiles

Apart from wound care, silver is finding medical applications in a whole host of other equipment. It's astonishing. It's in catheters, pacemakers, heart valves, suture rings, feeding tubes, orthopaedic implants, even through to silver-impregnated surgical clothes and hospital bed linen. This sector is becoming a massive consumer of the metal and we think this is really going to begin coming into its own from about 2014 onwards.

While we're talking about things like silver-impregnated bed linen, you go automatically into the textile industry. Silver-impregnated textiles were originally introduced into the foot sector. Silver inhibits the bacteria that causes body odour generated by heat and sweat. Sorry to be so basic this morning, but you know, it's a fact of life. The benefits of this were soon introduced into the much wider leisure wear sector and consumer demand for these products has been enormous recently. So you can now get non smell-generating shoes, socks, insoles, boots, gloves, sleeping bags, back packs – you name it. More recently, the textile industry has been producing advanced fibres as thermal insulators, and therefore opening up a whole wide new potential market in commercial and domestic protective clothing, particularly in cooler climates.

Here again, our forecast for silver

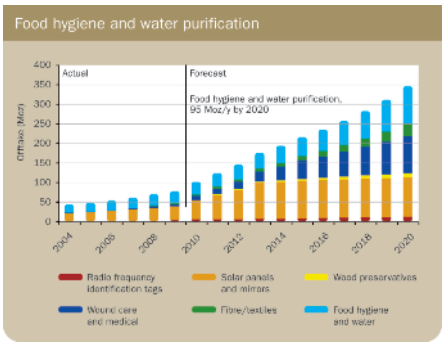


demand, which we show in this slide in green, in the textile industries is very conservative. We just don't know yet what the potential is, but the applications are there and they are starting to come through now.

If you take a look now at the figure, we are almost up to accumulatively 350 million ounces of silver per year, by the year 2020.

Food Hygiene

The next one is food hygiene, which is becoming a very important consumer of the metal. Again, silver is acting as a very effective biocide, through the slow release of silver ions supplied to the exposed surfaces. Silver coatings, as they control the spread of bacteria, are being applied not only to kitchen surfaces but also to vending machines, mass-market food production packaging units, and the technology is now being applied to the inside of food containers and storage. So, you've got it now in paper cardboard cartons,



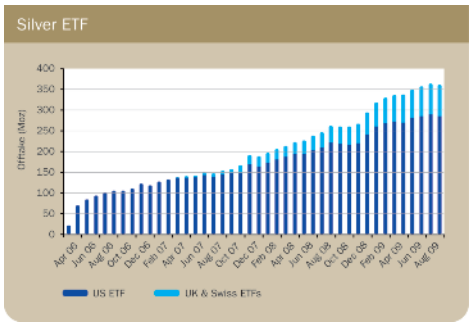
plastic and paper food wrappers, and even the inside of milk cartons. Again, the amount of silver going into each of these industrial products is absolutely minute – it's measured in microns on a surface area – but your potential surface area is absolutely enormous, and the mass roll-out of this sort of equipment in goods implies a good deal of silver every year destined into these sectors.

Finally, as part of the food hygiene, I have to refer to water purification. In a sense, it isn't a new one, but it has been used for a long time in the purification of drinking water as well as swimming pool water, particularly in the US. The market is big and there are millions of semi-portable water purifiers sold in the US annually, and what these things do is just remove the bacteria, the chlorine, the lead and the particulates to render it potable.

We have actually maintained that potable water in the right place at the right time is going to become probably one of the world's next big issues, and the global need for quality water in the right quantities is going to become an increasingly pressing concern. Could silver be better placed in this situation? No, it is ideally placed.

So there you have it, there's our demand coming through on our forecast with these end users. In fact, what I've done is left the best until last. The strongest argument for a better silver market and a stronger price is that these end users are set to pick up the demand slack left by the shrinking photographic industry. But unlike photography, these end users will not generate vast amounts of recycled metal. If you take a look at them, it's just impractical to try and recycle these things. Hospital waste is

incinerated, it is not recycled. Wood preservative can't be scraped off the wood and recycled. The same applies for fibres and textiles. Clothes tend to be trashed and not recycled, and so on. So what we're saying is we've got smoke-stack industries evolving here, and this means that the metal is going to be taken off the market for good.



The Future

You superimpose this good news onto the tonnages that have gone into the ETFs and you can see from this slide the underlying strength of the market that is now being emoted, and why this is now justifying higher prices and prices that could be sustained.

This price chart is probably very familiar to all in this room. Yes, it took a cold shower during the financial crisis as all commodities did, but the important thing about this chart is how the silver price has subsequently recovered.

What is the upshot? What is VM Group saying about the whole silver supply/demand balance? We say it is showing structural improvement. Yes we still have a problem with mine supply, which is not price elastic, and there's still a lot of recycling – there's no doubt about that – but what we're seeing is a broad range of new end users coming in, which do not add to levels of recycling and they also begin to start looking like they are going to take large volumes of silver off the market. We expect, therefore, that the gold/silver price ratio is going to contract and narrow. Most importantly, we actually maintain that the higher silver prices that we're seeing are indeed sustainable in the long run.

Thank you. ■

Jessica Cross *is the CEO of VM Group, formerly Virtual Metals, the successor company to Crosswords Research and Consulting, which she formed in 1994 to provide gold research to the international metal and mining industry. In 2000 with mining company underwriting, Jessica expanded Virtual Metals to provide research and insights for 30 corporate clients.*

Prior to Virtual Metals, Jessica was employed by RTZ Corporation Plc, Consolidated Gold Fields Plc, Gold Fields of South Africa, and Anglo American Corporation as a precious metals analyst in positions of increasing importance; a career spanning twenty five years. At Goldfields she was responsible for the market analysis and forecasting of market conditions for the Company's Northam Platinum Mine. At Consolidated Goldfields she co-authored the authoritative annual Gold Survey.

DIARY OF EVENTS

FEBRUARY

9-12
Mining Indaba
Cape Town
T: +1 314 824 5515
www.iiconf.com

10
Precious Metals Investment Summit
London
www.objectivecapitalconferences.com
Tel: +44 (0)207 073 2691
Fax: +44 (0)203 137 0076
Email : events@objectivecapitalconferences.com

25
LBMA Annual Party
London
T: +44 20 7796 3067
www.lbma.org.uk

MARCH

18
Rare Earths, Speciality & Minor Metals Investment Summit
London
www.objectivecapitalconferences.com
Tel: +44 (0)207 073 2691
Email : events@objectivecapitalconferences.com

23-27
Asian Mining Congress
Singapore
www.terrapin.com
T: +65 6322 2700

29-31
Mines and Money
Hong Kong
http://www.minesandmoney.com/asia/

APRIL

26-28
The MMTA's International Minor Metals Conference
London
Email : sales@metalevents.com
Phone : +44 20 7840 014

MAY

4-5
Adu Dhabi Global Mining Investment Conference
Millenium Hotel, Abu Dhabi
Email : gabriel@objectivecapital.com

18-20
International Gold Symposium
Peru
mjaramillo@snmpe.org.pe
T: +51-1 460 1600
F: +51-1 460 1616

26-27
Shanghai Global Mining Investment Conference
Shanghai, Shanghai

28-29
London Global Mining Investment Conference
Stationers' Hall, City of London
Email : gabriel@objectivecapital.com

JUNE

12-15
IPMI Precious Metals Conference
Arizona
www.ipma.org.uk

23
LBMA AGM
London
Armourers Hall
T: +44 20 7796 3067
www.lbma.org.uk

LBMA Certified Reference Materials

Silver Project - Final Update

By Stewart Murray, Chief Executive, LBMA

Gold

The LBMA Gold Certified Reference Materials (CRMs) have been distributed to all those companies which ordered them. Additional sets can be ordered from the LBMA Executive at a price of US$4,500* per set (plus the shipping cost and the value of the contained gold at the time of order).

Silver

The silver side of the project is now in its final phase. The materials have been subjected to homogeneity analysis by the manufacturer (Krastsvetmet of Russia) and the Rand Refinery. Analysis of the results using ANOVA software has proved to the satisfaction of the Steering Committee that the materials meet the criteria for homogeneity. Shavings from the materials were sent to eleven refiner laboratories in seven countries in early November with a request that they analyse the two materials for the 21 impurity elements contained in them and submit their results to the Executive by the end of December. The results will then be sent (identified only by code letters) to the Steering Committee which will scrutinise them to determine which data should be included in the calculation of the reference values which will appear on the final certificate.

Good Delivery Refiners which placed orders in advance will be invoiced for the cost of the RMs in January and it is expected that shipment will take place in February.

The LBMA silver CRMs consist of a set of two rectangular blocks – AgRM1 and AgRM2 – weighing approximately 50 grams and containing different levels of 21 elements.

Ordering LBMA Silver CRMs

The cost for these materials is in two parts: firstly, a fixed cost (unlike the case of the gold RMs, this includes the cost of the contained metal) and secondly the cost of shipping and insurance. In view of the relatively insignificant cost of the contained silver, shipping costs will be much cheaper to most destinations as it will not be necessary to use security carriers.

Fixed cost per set (one unit of AgRM1 plus one unit of AgRM2)

LBMA Good Delivery Refiners, Members and Associates: US$3,750*

Other purchasers: US$4,500*

* Plus VAT where appropriate

Additional cost for a set reference materials in the form of shavings: US$600

The LBMA - New Years Resolutions

Editorial Comment by Kevin Crisp, Chairman, LBMA

Firstly, may I wish all LBMA members and readers of the Alchemist a very happy, healthy and successful New Year. We all anticipated that 2009 would be a challenging year and we were not disappointed!

Yet amongst the continuing problems in the global economy, came opportunities and a further increase in interest and activity in the precious metals markets. Our Conference held in Edinburgh in early November was a great forum to discuss many of these issues and gave many market participants a chance to address some of the forces that are driving our industry. We were overwhelmed by delegates and our next venue will be larger, be assured. It is very much to the future and some of our current initiatives that I would like to mention in this Editorial as I believe that 2010 is going to be a very important one for our markets, not least for the LBMA and for the other companies and Associations that comprise the totality of our market.

Nothing would happen at the LBMA without the efforts of the Executive and my thanks also to the members of the team for their exhaustive efforts this past year. Also to the LBMA Management Committee, and to the Committee Chairmen, and members for all their hard work over the past year. I would point out that in today's mobile labour markets there are inevitably resignations from Committees and we always welcome those interested in supporting the LBMA by sitting on one of our standing Committees. If you want to find out more, please contact the Executive.

At this mid-point in my tenure as Chairman of the LBMA I would like to briefly discuss what has been achieved to-date since our June AGM, but more importantly, to talk about our plans for the future. As everyone in the market is aware there has been, and continues to be, a great deal of discussion about the

future structure of the precious metals market. In particular, that discussion is focusing on the most. appropriate and efficient manner for us to manage an ever growing range of issues in the best interest of the entire bullion market and its users.

As Stewart Murray elaborated in the October *Alchemist*, ten years ago the LBMA had a part-time Chief Executive and one full-time staff member. Today we have five full-time employees and following a review instigated by my predecessor, the LBMA is now in the process of hiring an Operations Director bringing the total to six. He or she will take responsibility for much of the LBMA's day-to-day administration and we hope to make the appointment early in the New Year.

At the same time Ruth Crowell has been appointed as the LBMA's new Commercial Director. This new distribution of responsibility will enable our Chief Executive to focus on key market issues for 2010 including the commercialisation of the Good Delivery List and the expansion in membership by encouraging suitably qualified institutes in other countries to join. All of this puts the LBMA in a much stronger position to service the needs of the market and maintain the high standards that are expected of our industry.

Communication is a key part of the LBMA's responsibility to its members. The annual Conference is central to that effort and planning is now well advanced for the next, which will be in Berlin at the end of September. We have already tentatively fixed a date for the 2011 Conference to help coordination of our event with other events in the market.

Given our increasingly global membership it is very important that the LBMA considers the needs of our international members. We continue to receive foreign visitors and delegations at the LBMA offices in London. However, we are also reaching out and our Chief Executive will attend events around the globe in 2010 to help communicate the LBMA's role, the importance of the Good Delivery List and the benefits of LBMA membership.

We would also like to encourage regional groups of bullion dealers and market users to form and meet regularly to discuss regional market issues and are looking at ways of supporting this process, possibly through the creation of regional 'LBMA Ambassadors'.

Our website has improved substantially but there is a great deal more that can be done and we intend in particular in 2010 to develop the Membership Area of the website. Again, we welcome suggestions on this subject.

By now I think that everyone in the bullion market is fully aware that we are now well advanced in a process to commercialise some of the data produced by the LBMA's market makers as a way of ensuring data ownership remains with the market. The Data Committee received submissions from nine organisations and will make a decision on this early in the New Year.

In summary, 2010 looks set to be another exciting year that will bring plenty of challenges along the way. There are many critical projects still being worked on by the Association embracing regulatory, environmental and taxation issues. The Gold Reference materials project has been a great success and the Silver Reference materials will be available shortly and a further extension of the project is being considered. For the LBMA, we anticipate a very busy time and are investing the Association's improved financial resources for the future of the membership. We believe we have a very solid platform but there is no complacency as the world is moving fast around us. We will keep our members fully apprised as things develop, through the Alchemist, the LBMA website and hopefully by meetings with members of our expanded Executive. ■

LBMA News

By Stewart Murray, Chief Executive, LBMA

MEMBERSHIP

Members

• Bayerische Hypo- und VereinsBank resigned with effect from 31st December 2009.
• Investec Bank plc resigned its membership with effect from 31st December 2009.
• Mann Financial Ltd changed its name (some time ago!) to MF Global UK Ltd.

Associates

• Oriental Expressions DMCC of Dubai was admitted as an Associate on 20th November 2009.
• Sovereign Bank resigned with effect from 31st December 2009.
• Noble Jewellery resigned with effect from 31st December 2009.
• Alex Stewart Assayers changed its name to Stewart Inspection and Analysis Ltd with effect from January, 2010.

The total of all membership categories at the end of 2009 was 127 companies, just one less than the corresponding figure at the end of 2008.

GOOD DELIVERY LIST

The gold refinery of Korea Zinc, located in Onsan, Republic of Korea, was transferred to the Former List on 20th November 2009. The company's silver refinery, however, continues to be listed.

There were no additions to the Good Delivery List during the past quarter although a number of refiners have submitted revised bar marks, details of which have been circulated to the London vaults.

COMMITTEES

Management

The Management Committee has continued to meet monthly during the past quarter. The Committee welcomed one new member, Simon Churchill of Brinks, who was co-opted onto the Committee in November, following the earlier resignation of Gerry Schubert.

The question of data commercialisation was again a major focus of the Committee's attention in recent months. Since mid-September, the LBMA Executive has been manually compiling a daily forward curve for gold based on contributions from all the forward market makers. This is essentially to demonstrate the viability of this approach. Once decisions are made about how this data will be distributed, it is expected that an automated system will be put in place. The Data Sub-Committee has received submissions from nine companies and will make a decision in early 2010.

Physical

The project to allow electronic weighing of gold as an alternative to the beam balance is approaching its successful conclusion. The prototype scale which has now been demonstrated to the satisfaction of the market is now undergoing type approval by the manufacturers in Germany. When this has been achieved, hopefully by the second quarter of 2010, a full description of the scale and indeed the whole project will be included in a future edition of the *Alchemist*.

The Executive has been kept busy processing six applications for Good Delivery Listing and there are a further eight companies which have expressed a serious interest in applying. In parallel, the proactive monitoring programme continues and we have almost reached the end of the second three-year cycle. At the request of a number of companies, the LBMA now issues a formal certificate to recognise a refiner's success in meeting the requirements of proactive monitoring.

The VAT Sub-Committee has met on more than one occasion and also with HM Revenue & Customs to discuss the implications for the market of the changes in place of supply rules that will be introduced across the EU in January 2010.

Reference Materials Project

The gold reference materials produced earlier in the year have now been distributed to all advance purchasers. The LBMA has a stock of these materials for sale. The silver part of the project is also now nearing its conclusion. See the article on page 19.

Public Affairs

During the PAC's recent meetings, the main topics have been the timing and venues for the conferences in 2010 and 2011. The 2010 conference will take place in the Hotel Adlon, Berlin from 26th-28th September.

For 2011, the plan is to hold the conference in Canada and the Executive is currently looking at a number of alternative venues. The date has been tentatively established as 18th-20th September 2011, though this may change. Again, confirmation of the details will appear on the website in due course.

The Committee has welcomed a new member – Chris Thomson of Sumitomo Corporation but there is now another vacancy on the Committee following the resignation of John Reade. Anyone interested in applying should send a brief statement of their market experience to stewart.murray@lbma.org.uk.

Membership

The Membership Committee was pleased to note that following discussion between the Executive and HM Revenue & Customs, the LBMA has modified the requirements that need to be met by foreign banks applying to become Full Members. Whereas in the past, such banks were required to have a full branch in the UK, henceforth they will be able to apply for Membership if they have a subsidiary with an appropriate level of representation in the UK even if this is not a branch.

Finance

The Finance Committee met as usual in October to consider projections for the profit and loss in 2009 and 2010. It is clear that 2009 will show a very healthy surplus, partly because of the increase in subscriptions but mainly due to the success of the conference and the reference materials project.

The Finance Committee has also welcomed a new member, Alan Wallis of Comdaq Metals. This will mean that the Committee will have two qualified accountants amongst its members (the other being Terry Carroll of HSBC).

REACH

There are two separate strands to the LBMA's activity in respect of REACH (the EU legislation requiring manufacturers and importers of chemicals to register with the European Chemicals Agency).

The first concerns the question of the status of large gold bars which are held on behalf of investors in the London vaults. The LBMA has produced a position paper jointly with the European Precious Metals Consortium to argue that such bars should be excluded from the scope of REACH because they are articles rather than substances. Following legal review and any subsequent amendments, the final version of this paper will be submitted to the UK Competent Authority for REACH in January.

The second strand is the organisation of a seminar to allow LBMA Members to meet with

representatives of the Precious Metals Consortium in order to help them decide the best approach to obtaining the necessary registration dossier in respect of any precious metals which they import or produce. The first deadline will be in December 2010 when companies which manufacture or import 1,000 tonnes of silver per annum will have to register. The Consortium is currently carrying out the research to allow it to put together by that date the dossier which must accompany each registration. Companies which need to register will be able to obtain this either by joining the Consortium or by obtaining a Letter of Access and a license to use the dossier. The LBMA is organising a seminar at which Members will be able to meet representatives of the Consortium to explore which of these options is right for them. The seminar will take place in London in mid to late January. Watch the website for further details and an announcement of the date and venue.

Visits and Visitors

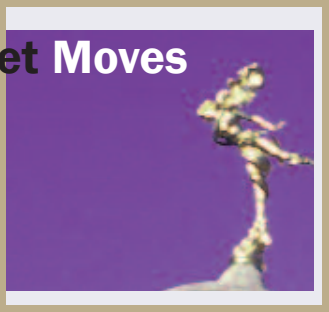
The Chief Executive took part in the 4th China Gold and Precious Metals Conference in Shanghai in early December. He chaired the first day of the Conference and presented a paper on "The Role of London in Precious Metals Investment". He also visited the Chairman of the Shanghai Gold Exchange, Mr Shen Xiang Rong and the Executive Vice President of the Shanghai Futures Exchange, Mr Huo Ruirong.

The continuing interest in China in the way the London Bullion Market works was amply demonstrated on 12th November, when the LBMA hosted a visit from a delegation of 25 representatives of the People's Bank of China. The Chairman and Chief Executive each gave presentations about different aspects of the London market. ■

Committee Vacancies

There is currently a vacancy on the Public Affairs Committee. Anyone interested in applying should send an email to the Chief Executive with a brief statement of their bullion market experience.

Market Moves



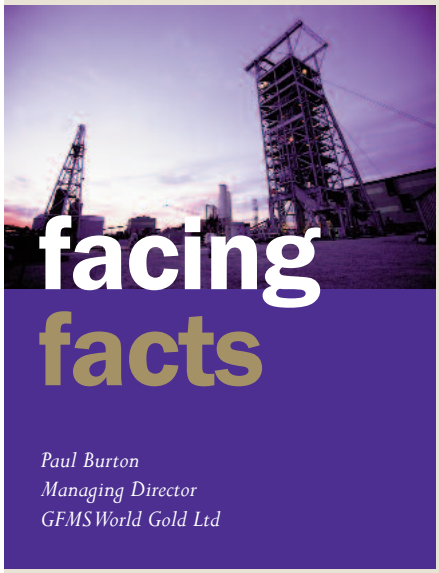
Richard Ringrose to **BNP Paribas, London**. Richard will be responsible for Precious Metals Sales. He previously worked for Wachovia/Wells Fargo, ANZ and CITI in Emerging Markets/FX Sales and Trading.

Gerhard Schubert from INTL Commodities to **Fortis Bank Nederland, UK Branch.** Gerry is heading up the new precious metals desk at Fortis Bank Nederland in Aldermanbury Square. Gerry`s involvement in precious metals goes back well over 30 years and the last few important career steps have been WestLB Cologne/London, Fortis Bank Belgium before joing INTL in May 2009. Gerry has served on the Management and the Membership Committee of the LBMA as well as on the Management Committee of the LPPM until leaving INTL at the end of September 2009.

John Reade to **Paulson & Co**. John was Head of Metals Strategy for UBS and will take up a similar role with Paulson & Co in mid-January.

Adam Cash from INTL Commodities to **Fortis Bank Nederland, UK Branch**. Adam is joining Fortis Bank Nederland as Precious Metals Trader. He gained experience in precious metals during his two year period at INTL after graduating from University of Southampton. He has very good knowledge of the physical business and that should provide a great building block for the derivative Trading as his new challenge.

Stephen Pender to **Calyon** from INTL Commodities Inc in November and will be responsible for precious metals spot and forward trading. Stephen previously worked at Fortis Bank S.A/N.V., where he covered market making in both precious and base metal derivatives, and before that at JP Morgan as a precious metals spot dealer.



Paul Burton
Managing Director
GFMS World Gold Ltd

Signs that gold production costs are starting to rise again.

In Q3, average cash costs for the 64 gold producers that World Gold Analyst covers on a regular basis were $476/oz, level with a year ago after just a 2% year-on-year increase in Q2 2009. In Q1, costs were $432/oz, 7% up from a year earlier. So the good news is that cash costs are showing little increase from 2008.

However, quarter-on-quarter costs are once again being forced upwards after a two-quarter downturn at the end of 2008 and the beginning of 2009. Cash costs increased again in both Q2 and Q3.

Meanwhile, Barrick Gold continues to be the world's largest gold producer with Q3

output of 1.9 Moz, some way ahead of Newmont Mining's 1.3 Moz.

However, the largest increase in production was posted by Freeport McMoRan, which saw its gold output almost triple to 708 koz. Freeport's production fluctuates widely on a quarterly and annual basis as the mining sequence at its Grasberg open pit and underground mining complex traverses through high and low-grade copper/gold zones. In Q3, not only did the average gold grade more than doubled to 1.33 g/t (with an associated improvement in recovery from 78% to 85%) but the mine also treated an extra 25% more ore by processing a massive 241 kt/d.

Another of the world's biggest gold mines, Yanacocha (owned by Newmont Mining and Buenaventura) in Peru, recorded a huge jump in tonnage dumped on the leach pad, from 19.7 Mt to 35.5 Mt, combined with an increase in grade (up from 2.98 g/t to 4.59 g/t) of the albeit relatively small amounts of ore to the mill, which saw gold production rise from 438 koz to 554 koz.

Canadian Agnico-Eagle Mines was another company posting an increase in output year-on-year. The company's production rose 73%, from 69 koz to 119 koz, owing to numerous new projects either coming on line or ramping up production.

Meanwhile, as we get to the end of 2009, gold shares have generally had a good year after the massive sell-off in the final quarter of 2008. One of the main global indices, the XAU, continued its general uptrend as the gold price rose throughout the year. Despite some volatility, the index traced an upward recovery line from 89 at the beginning of December 2008 to just over double that (193) on 1st December this year, before falling off with the $100/oz drop in the gold price from its new all-time high.

And what a ride it has been for gold investors in recent months with the gold price surging to new all-time highs almost, it seems, on a daily basis before the dramatic corrections in early December. I would be mischievous if I said that the pattern of a rapidly rising gold price in the final weeks of the year is worryingly reminiscent of the market exactly 30 years ago, when the gold price rocketed through the New Year to set what is still an all-time high in real terms in January 1980.

The gold price surged in a fast bull run Seventy dollars or more. The stock market then joined in the fun. Gold shares began to soar.

Fast forward 20 years to 1999 and the gold price staged a remarkable rally that proved to be a false dawn (two years early) for the weary gold bulls, but it did have some profound consequences for the gold mining industry. This was the rally that caught Ashanti Goldfields in a hedge trap that led to its demise. With the news in December 2009, that Barrick has closed out its forward sales, hedging (and dehedging) is now very much a thing of the past – except of course for one company, called AngloGold Ashanti!

1999 was also the year that the then Chancellor of the Exchequer, a certain Gordon Brown, announced that the Treasury would be selling a major portion of its gold reserves (the news damaged the market even though the sale of 395 t was carried out over a period of two years through a series of 17 auctions).

That same year, a consortium of 15 other banks formed the Central Bank Agreement on limiting official sector gold sales into the market. In 2009, the third such agreement came into force but hardly caused a stir as official sector sales have really ceased to be a major factor on the supply side of the market.

As it's the festive season, I thought I would leave you with some verses that I wrote when reviewing that fateful year of 1999 in the January 2000 issue of *World Gold Analyst*.

Ninety-nine was another tough year
For gold and miners alike.
With little good news to spark a cheer
But for one single spike.

The gold price plunged to twenty year lows,
With central bankers to blame.
Their conspiring, so the rumour goes,
Would help their bearish aim.

The biggest blow came from England's bank,
With plans to sell off some gold.
The net effect was, to be quite frank,
Worse through being told!

But then came some news that calmed all fears
And sentiment turned around.
Fifteen banks capping sales for five years.
The effect was quite profound.

The gold price surged in a fast bull run
Seventy dollars or more.
The stock market then joined in the fun.
Gold shares began to soar.

Investors smiled as the market moved,
Producers then lost their blues.
But for one or two the sharp rise proved
To be the worst of news.

The sudden rise broke the credit lines
Tied to their large gold hedges.
Margin calls against gold from their mines
Were part of their evil pledges.

Ashanti struggled to find the cash
While its shares halved in a trice.
Its future risked by being too rash
In gambling with the price. ■

Paul Burton *is Managing Director of GFMS World Gold, a company which undertakes equity research and publishes World Gold Analyst, a leading independent gold mining investment publication.*

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