Alchemist

The London Bullion Market Association ISSUE 32 October 2003

LBMA

In this Issue

photo courtesy The Industry Catalogue of Gold Bars Worldwide

This little piggy went to market as a:

- ❑ currency
- ❑ commodity
- ❑ symbol of wealth
- ❑ Korean model bar
- ❑ all of the above

For answer, see page 9.

The Fourth Annual LBMA Conference

Perhaps the world's investors have had such a succession of shocks over the last three years that they will keep some gold in their portfolios for extended periods of time. But while it's great to be the focus of attention now, we should – we must – build for the future.

Martin Stokes, JP Morgan Chase

LBMA Chief Executive Dr Stewart Murray welcomes almost 300 delegates to the conference.

Investment – its importance, potential and sustainability – was much more than the subject of the second session. It could well be considered the theme for this year's Conference. With the price having set seven-year highs in February, gold was once again beginning to attract media and investor interest. But just how broad-based, durable or even desirable this was proved the subject of some debate.

There were a total of seven sessions, with presentations covering a wide range of topics across industry sectors: the official sector, bullion banks, research, mining, technology, marketing, refining and jewellery manufacturing. The final session was a panel discussion that revisited some of the main subjects, with special focus on investment, the official sector and marketing.

Included in this edition of the *Alchemist* are articles based on two of the speeches named most useful by delegates on the feedback forms. In the opening session, Kamal Naqvi of Macquarie Bank began his review of the status and prospects for precious metals by suggesting an alternate career path for the former Iraqi information minister. His article, and more on Comical Ali, is on page 5.

As part of the investment session, Steve Mathews, a strategist for Tudor Investment Corporation, described his methods for analysing the potential for profitability across a wide range of commodities. His conclusions on where precious metals fit into the rest of the commodity universe begin on page 9.

With so many seasoned professionals speaking on such a wide variety of timely issues, selecting quotes meant facing up to an embarrassment of riches. Here follows a selection restricted only by space.

On Investment

The majority of the investors...are very much starting from a macro level, looking at alternative assets – commodity markets – and gold, for the majority of them, is a subset of that.

Kevin Crisp, Dresdner Kleinwort Wasserstein

Gold makes up only about 1% of the potential investable universe. Only a very small change by asset allocaters would have a profound impact on gold demand, and thus the price.

John Reade, UBS AG

The other people who we would like to become central banks are the new investors. We want them to buy and hold. To keep the stuff, like central banks did.

Andy Smith, Mitsui Global Precious Metals

Industry lobbyists – The lobby of the Four Seasons Hotel and its adjoining terrace proved popular with conference delegates.

Terry Smeeton, John Fairley and Ross Norman during the break between the first and second sessions.

Opening session speakers – clockwise from left: Stewart Murray, Teresa Maury, Grigori Marchenko, Jose de Matos, Simon Weeks, and Kamal Naqvi.

On Marketing
We have to build on the reasons why gold has been desired for thousands of years. We do not need to be sophisticated or super-clever, and we should really try not to patronise customers. The wedding rings all of us here are wearing are not sophisticated and fashionable products either.
Bernhard Schnellmann, Argor-Heraeus SA

On Trading
Perhaps the British government's experience with the Millennium Dome is an example par excellence of the sort of fiasco that can result from not getting out of bad decisions. This behaviour is sometimes called sunk-cost bias – it refers to the problem of throwing good money after bad.
Gerald Ashley, Consultant

On De-hedging
Looking at this slightly differently, this 673 tonnes [of de-hedging] is actually demand; it is gold coming off the market. This begs the question: what other source of demand is going fill the vacuum if and indeed when the dehedging phenomenon has run its course?
Jessica Cross, Virtual Metals Research and Consulting

On Mining
While I do not believe in size for size's sake, we still have a very fragmented and inefficient industry... in the future the industry will be concentrated in the hands of the larger players. That said, I also think that rather than fighting to get the largest piece of the global pie, the successful players need to work together to make the pie bigger.
Rex McLennan, Placer Dome Inc

Regime Change

by Kamal Naqvi Precious Metals Analyst, Macquarie Bank

Mohammed Saeed al-Sahaf, the former Iraqi Minister of Information who inadvertently managed to provide some much-welcome lighter moments during some otherwise very serious events, would surely have made an excellent precious metals analyst.

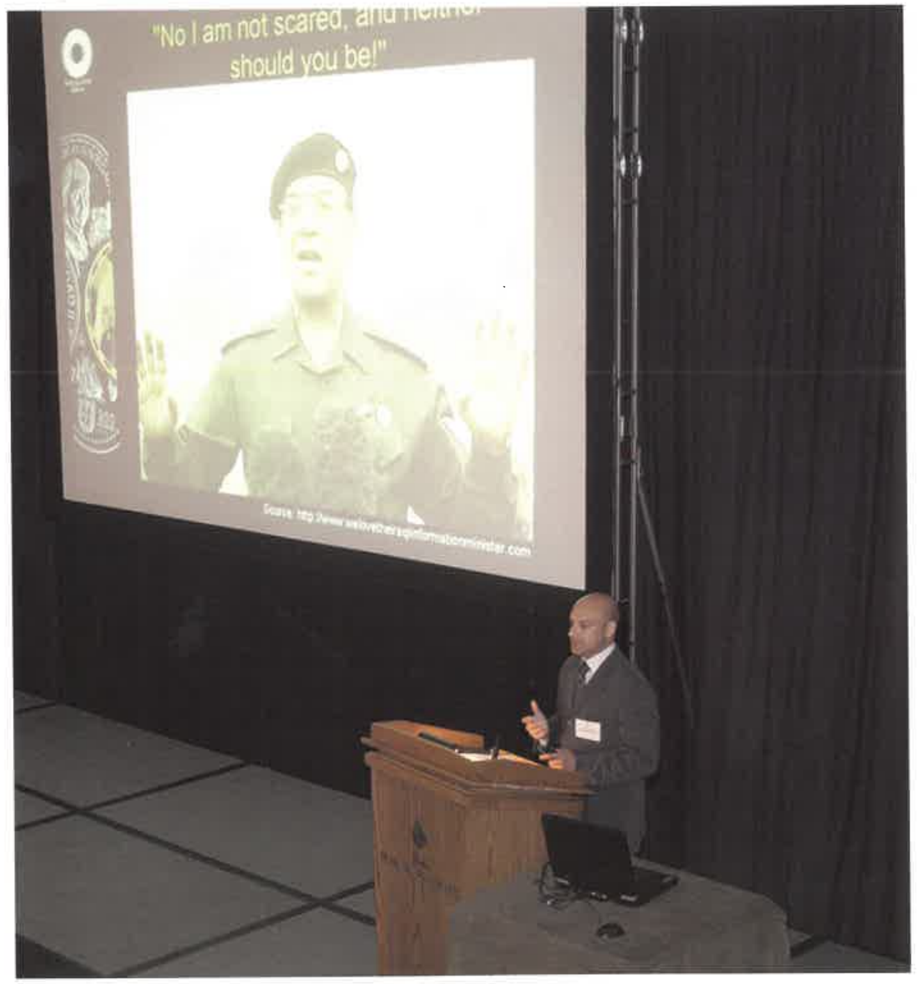
For Saeed al-Sahaf satisfied all the right criteria: a desire to step proudly into the spotlight when most rational people would step back, an ability to speak confidently about the past and the future but with only the barest grasp on the present and a tendency towards a more colourful turn of phrase, almost regardless of its relevance.

However, this depiction misses what might be his greatest strength – an absolute and total commitment to the cause despite all the facts – and it is perhaps here that he shares more in common with the one-eyed gold bulls that frequent various precious metals websites! The typical precious metals analyst tends not to be quite so committed. In fact, one recently retired long-standing metals analyst instructed me repeatedly that the only way to forecast accurately is to forecast often! Indeed, most analysts, myself included, have had to forecast often over the past 12 to 24 months.

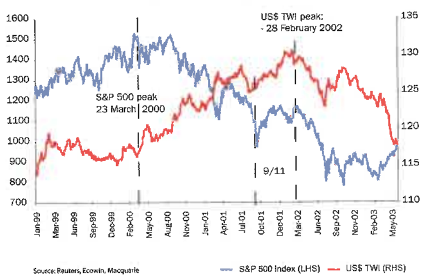
Like so many things, precious metals have changed course since 2001. However, with the benefit of hindsight, it is actually more accurate to see the start of the millennium as the true turning point (a Y2K effect after all!) The last years of the second millennium can now be described as an almost utopian period for equity markets – along with incomes, house prices and free trade – and the global financial system showed remarkable resilience to the shocks that occurred (the Asian crisis, LTCM, etc.).

The peak in the S&P 500 in early 2000 spelled the end of the "miracle economy" and the transition to the "post-bubble economy". Equity markets have continued their correction ever since, and the implications of that continue to greatly complicate the economic outlook.

An external shock was added to this already difficult environment – "terrorism"– so catastrophically brought to global attention in the 9/11 attack. The economic tide had already begun to turn, but that event ensured that the transformation would be dramatic and far-reaching.



A Different Decade, a Different World



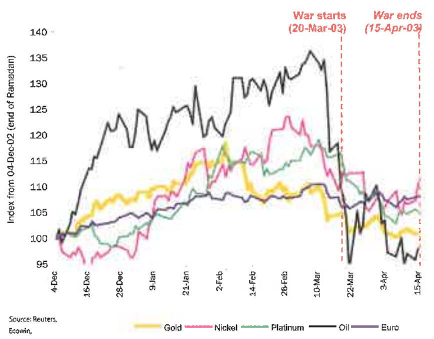
Most of the issues that have been affecting the precious metals markets in recent months fall into one of three broad areas – commodity fundamentals, war and terrorism and the macroeconomic environment.

In the case of gold, the use of standard commodity analysis is fundamentally flawed, primarily because the cornerstone of commodity price forecasting – the link between inventory levels and price – is non-existent. However, gold was saved from its poor physical commodity fundamentals during 2002 by two external factors (terrorism and the US dollar) and one internal factor (producer de-hedging).

War and Terrorism: The Return of the "Safe Haven"

The media, particularly the non-financial press, were fascinated by the war story developing in Iraq and the rising gold price,

Other Commodities Also 'Benefited' From the War



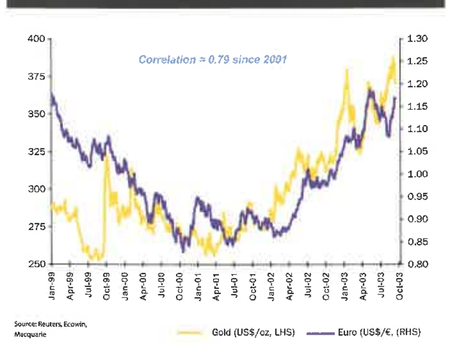
resulting in a slew of newspaper and magazine articles reporting the return of gold as the asset of last resort or, the most-loved phrase, the "safe haven" asset.

Admittedly, there was a very strong run higher in gold prices leading up to Gulf War II, however, mass liquidation of long positions occurred a remarkable six weeks before the war even commenced. Nor was gold the only commodity to rise in the lead-up to the war and then suffer profit taking – oil, nickel and platinum rose at least as strongly, as the war provided speculators with trigger points for position taking and liquidity. However, the underlying causality for the price movements remained in the wider financial markets. Indeed, the history of military events since the 1970s suggests that only those wars that have had a significant macroeconomic impact influence the gold price.

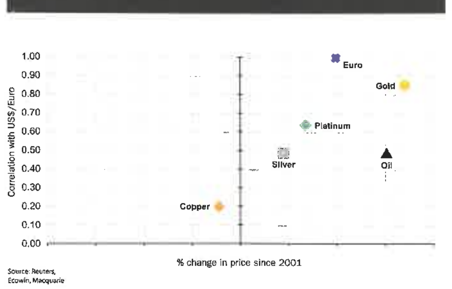
The Macroeconomic Environment: The Fall of the Greenback

The dominant macroeconomic theme since 2001 has been the downward trend in the US dollar, most notably against the euro, which benefited many commodities, gold more than most. Given the manner in which the speculative market has seized upon this relationship, we would expect this to continue in the foreseeable future. However, we do caution that such trading relationships never last forever.

Gold: The Counter Greenback (or Alternative Euro?)

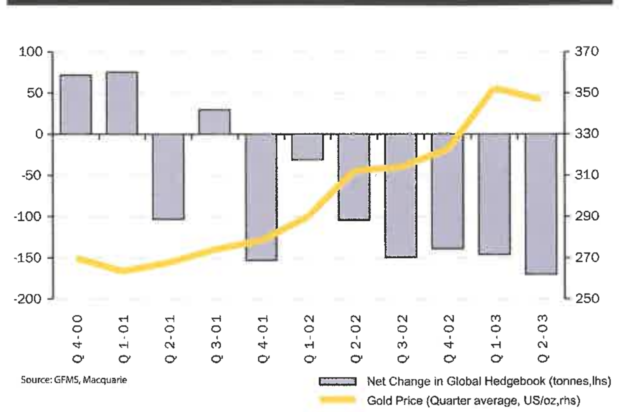


Commodites & the Euro Since 2001



Many other macroeconomic issues are used to justify higher gold prices, among them equity market weakness, falling bond yields, negative real interest rates, rising money supply, rising fiscal deficits and competitive currency devaluations. But despite the fact that many bullion market participants enjoy discussing the impact of weighty financial, economic and geopolitical issues on gold, the reality may well be that much of this connection is rather more self-fulfilling than self-sustaining.

Plenty of Gold Producer 'Buying' Interest



One increasingly common discussion is the inflation/deflation/stagflation/reflation debate. There does appear to have been a strong relationship between gold and inflation in the past, and arguably this could surface again should underlying inflation rates reflate back over 4%. That will take a long time. As for deflation, despite the rhetoric, it is difficult to be categorical. If we look back at the Great Depression, then the collapse of silver prices to their historical lows suggests that deflation may not be as favourable an environment for precious metals as some commentators have suggested.

The Importance of De-Hedging

The only truly significant, gold-market-specific development in recent months has been the phenomenon now commonly referred to as "producer de-hedging". This refers to the unwinding of derivative positions – largely forward sales – by gold producers.

Generally this has not been "buying" as such, with most of the reduction in hedge books being the result of delivery into existing contracts. It would be better to describe this phenomenon as "reduced selling", but it has still been a sea change from the late 1990s, when large forward sales were common. The combination of rising gold prices, low contangoes, changes in accounting rules and shareholder pressure has seen a much more significant and sustained period of de-hedging than any had expected.

The importance of de-hedging is not merely the reported quarterly reductions in positions, but that this policy has been a clear boost to market sentiment and a signal of trading flows. The multiplier effect of de-hedging, purposely promoted by the rhetoric of several large gold producers, has been by far the most important gold market factor that has helped support the rising price trend.

How long will de-hedging last? The signs are that it will continue at a similar quarterly pace through most of 2003. However, the delivery profile of the global hedge book is heavily skewed to the near term, with positions due for delivery in 2004 being around half the level due in 2003. Hence, unless there is a move towards outright buying-back of future positions, then a major slowdown in de-hedging is inevitable. By itself, the market impact of such a slowdown might be modest, but again, it is the (dampening) impact on market sentiment that will be crucial to gold prices.

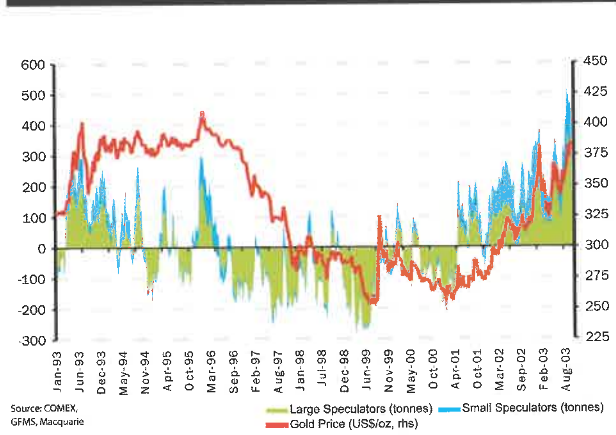
How Sustainable is the Gold Rally?

The lack of breadth of interest in gold is the greatest threat to a sustained bull run in gold prices. Reading the media reports, one would assume that there has been a massive and broad-based return to gold. The reality, sadly, is quite different. While it is true that there has been a welcome increase in enquiries about gold from potential investors, this is coming from a base of virtually nothing, allowing for considerable upside. Gold remains largely a sideshow act for most fund managers and investors – interesting enough to watch but not (yet?) requiring serious attention.

The deluge of news articles should be accompanied by a momentous pick-up in activity at the various global bullion trading centres. While London clearing volumes continue to decline, there has been a welcome pick-up in volumes on COMEX and TOCOM, where speculative investors play a much more prominent role.

Indeed, according to the weekly COMEX commitment of traders report, the total speculative net long positions (large plus small speculators) has been regularly hitting new all-time highs throughout 2003. Worryingly, these positions tend to be dominated by technically driven commodity trade advisors (CTAs) and held for relatively short periods – hence they constantly carry the threat of future liquidation.

COMEX Commitment of Traders: Plenty of Speculative Buying Interest



What About the Investment Community?

For the vast majority of investors, gold equities remain the main vehicle from which to obtain gold price exposure. Here is a real signal of the problem. Despite the fact that gold prices are now trading at levels not seen since 1996, global gold equities (using the FT Global Gold Mines Index as a basis) are generally being valued at prices below these levels.

A simple linear regression analysis using the spot gold price as the explanatory variable for gold equities provides an explanatory success rate (R squared) of a more than 70% – strongly suggesting that spot gold prices are the prime driver for gold equities as a group. This also suggests that gold equities are not normally a barometer for future spot gold price direction, although there are occasions when such a role can be inferred during major price breaks (e.g., 1992-93).

Using this simple econometric model, one can imply that the FTSE Global Gold Mines Index has tended to discount at least $20/oz off the daily spot gold prices since 2002. Does this suggest that the broader investment community is not yet convinced by a long-term bull run in gold? Possibly. However, in truth, it probably reflects the variance in performance of gold equities during this rally – companies that have under-performed have tended to have large hedge books and/or limited production growth and/or rising mine costs and/or a lack of perceived takeover potential and/or local currency appreciation. Indeed, gold companies perceived as non-hedgers have generally performed extremely strongly.

How about physical investment demand from private individuals? The obvious proxy, in the US at least, is American Eagle coin sales – but while there are signs of improvement after the post-Y2K surge, sales of these gold coins remain very modest.

The Great Hope: The Long-Term Investor in Gold

Up until now, despite the media commentary and much of the rhetoric in the industry, the move upwards in gold has been based on a relatively thin foundation of activity by largely technically-driven speculative (short-term) traders, plus extremely significant producer de-hedging.

The bullion trading community is now holding net long positions in gold in record volumes. These positions will only be maintained, let alone grow larger, if fed a continual diet of US dollar weakness, equity market uncertainty and terrorist concerns. Meanwhile, gold producers appear to be a somewhat more dependable group, although the concern here is whether there remains enough fuel to maintain the recent pace of de-hedging.

The physical market cannot be depended upon to drive gold prices higher. The majority of physical demand is price sensitive and hence at best can act as support during a price correction, unless there is some supportive change in the local market (i.e., a firmer currency or a reduction in taxation or other regulatory change – for example, the Letter of Credit business in India this year). Meanwhile, although mine output and official sector sales are stable, scrap supplies are also highly sensitive to local prices (eg., Egyptian supplies have soared this year). Hence, the physical market is most unlikely to be the conduit to drive gold prices higher.

A new buyer must emerge if the current rally is to be sustained, let alone rise further. Thus we come to the great hope of the gold industry – the significant, long-term investor. There are some developments that, in theory at least, seem to offer hope.

> *A new buyer must emerge if the current rally is to be sustained, let alone rise further.*

First, new bullion trading exchanges, which potentially offer much-needed extra trading liquidity and interest. The Shanghai Gold Exchange opened, albeit belatedly, for trading on 30 October 2002. It has not been exactly swamped with trading activity – the SGE recently announced that its average daily trading volume was 877.33 kg in the first six months. While this represents an 85.8% increase over the last two months of 2002, that figure looks less impressive when compared with the approximately 80 tonnes traded daily on TOCOM. But it is a start.

Possibly more interesting may be the proposed move by the People's Bank of China to allow domestic individuals to buy and sell gold in bar form on the SGE – at present, individuals in China are limited to gold jewellery. However, it is unclear when this change will come into force.

A wait-and-see approach to the impact of the liberalisation occurring in China is strongly advised. Many potential gold investment booms have come and gone because of the mirage of large numbers – remember the great projections for potential gold demand from Japanese savings in the first quarter of 2002?

A bullion exchange is also to begin in India, where the LBMA held a forum earlier this year to provide support to market development. Again, in theory, there is potential for a significant increase in trading liquidity. However, there is a note of caution. During the forum, one of the major proposals from local delegates was to be allowed the ability to export, as well as import, gold. If this came to pass, it could potentially greatly magnify the impact of the price sensitivity of both Indian demand and scrap supply on the world market.

Secondly, there is the emergence of listed stock-exchange-traded gold products. In Australia, Gold Bullion Limited and Perth Mint Gold have already listed on the Australia Stock Exchange, while World Gold Trust Services LLC, another World Gold Council initiative, has filed with the US Securities and Exchange Commission to be listed on the New York Stock Exchange. This is in addition to a number of new investment products released by several bullion banks, even Macquarie Bank! Will these listed products be the catalyst for the re-emergence of a significant flow of investor funds into gold?

Certainly they do allow a far greater number of potential investors to invest in gold – as they do not require a physical purchase or storage nor involve taking company risk on a particular gold equity.

But one only needs to look at the changes in the Financial Times over the past year or so, to see just how "alternative" gold, let alone the other precious metals, have become. The world's number one financial paper has progressively slashed its commodities coverage from a full page in 2001 to one-eighth of a page in 2003. This is probably indicative of the underlying sentiment towards the commodities asset class in general and gold in particular – it is seen as an extremely alternative alternative asset. However, as we have seen in recent years, investment perceptions can be forced to change.

As an aside, it has to be said that the gold conspiracy theorists have not helped their own cause here. Leaving alone probable disappointment at the absence of the 'inevitable' systemic collapse when gold prices surged past $350/oz, the fact is that potential large investors regularly express concern that investing in gold may well be seen by others in their peer group not as portfolio diversification but as agreeing with the conspiratorial view of the world – heavy baggage for gold to carry.

Personally, I feel that significant investment flows are possible but it will take considerable time to inspire. Such inspiration does not occur only through the availability of a suitable investment vehicles, although that is clearly vital, but from a desire to seek such an alternative investment in the first place. Three things, in my view, would help to create such a desire.

The first is a loss of confidence over the short, medium and long term for traditional investment assets. Hence, you need further and sustained disappointment in the equity and bond markets and, probably, falling house prices to be the final blow that would force mainstream perceptions to widen enough to consider gold again.

Second is sustained out-performance by gold throughout this period.

Third is leadership from prominent investors. This element may have begun – back in May, George Soros took time out from philanthropy to admit to CNBC that he was buying gold (as well as Australian and New Zealand dollars) against the US dollar. His comment: "I have a short position against the dollar because I listen to what the secretary of the treasury is telling me, so who am I to stand in the way?"

A public statement from such a prominent speculator is either a sign of things to come, or a very strong signal to sell. Time will tell.■

__Kamal Naqvi__ is the London-based precious metals analyst for Macquarie Bank, where he is an associate director. He has worked for the bank for the past six years and is part of a dedicated research team that services the equity, bullion and commodities trading and corporate advisory divisions of the bank with metals and minerals research, strategy and market intelligence.

Prior to joining Macquarie, Kamal was a consultant with CRU International Ltd in London, as part of both the lead/zinc and precious metals teams. Earlier, he was a project manager/economist for the Mining & Mineral Processing Division of the Tasmanian Department for Development and Resources.

Educated at the University of Tasmania, Kamal obtained degrees in economics (with honours) and law. He is a member of the LBMA's Management Committee and is chairman of the Public Affairs Committee.

When is a Commodity Not a Commodity?

A Hedge Fund's Perceptions of Precious Metals

by Steve Mathews Commodities Strategist, Tudor Investment Corporation

When Tudor Investment Corporation examined the problem of commodities analysis, it became clear to us that we needed to reduce the commodities data universe from a vast and diverse array of mine closures, cattle placements, and crop conditions to a set of statistics that could be compared on an apples-to-apples basis across trading instruments.

On any given morning, when a certain Mr Jones is surveying the entire marketplace – from equities to fixed income and from currencies to commodities worldwide – the last thing he needs to see is every soybean emergence number. Therefore, Tudor has come up with a number of measures which allow a comparison of various diverse commodities on common terms, and which allow us to make enough sense of these markets to transact, on average, 270 distinct futures trades every day.

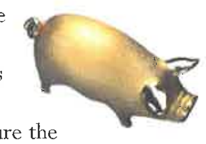
My precinct includes energies, grains, meats, softs, and base metals as well as precious metals. This is also something of a disclaimer because due to my personal limitations I am not a true expert in any of the commodities I track, but rather a relayer and synthesiser of expertise from specialists in each subject area. When I'm in farm country, I sometimes attract a hostile glare from people who work with corn or soybeans for a living, because they see the attempt to distil their data as a devaluation of their expertise. But only by having analysts who compile detailed information through exhaustive detective work are the compressed, synthesised summaries that I offer made possible.

We at Tudor have decided that there are three primary non-chart-based areas of concern: volatility, liquidity, and fundamentals. Without sufficient volatility and/or liquidity, there is no potential for a trading return. Without fundamentals on our side, we are fighting the long-run pricing tendency of the market most of the time.

Liquidity: Avoiding the Roach Motel

First of all, liquidity is a big concern. For big accounts, the liquidity of a position can mean the difference between booking a small profit and getting stuck in a Roach Motel – a trap where cockroaches can check in, but they can't check out.

Table 1 displays the liquidity measure we use to assess the tradability of a commodities future. This measure is compiled by taking the average dollar volume of trades made over the past forty days. (Please keep in mind that these numbers were accurate at the time they were compiled in the spring, and may not be as accurate now. It's fair to say, however, that the broad picture the numbers create is consistent over the longer term).



Gold fits in right in the lower middle of the table, with a sufficient turnover to allow easy entry and egress from the market. Silver is less commodious, and platinum is relatively untradable to a fund of our size.

Table 1

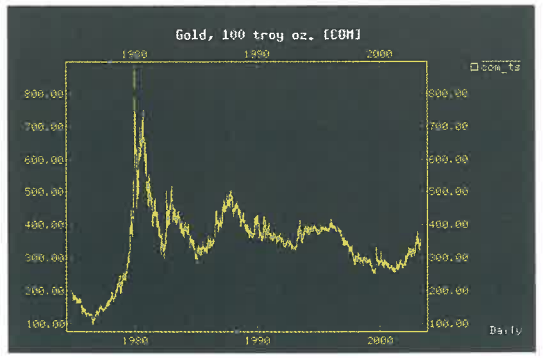
Commodity	Liquidity
Pork Bellies	11
Cocoa	44
Platinum	**116**
Coffee C Arabica	154
Soybean Oil, Crude	163
Silver	**166**
Lean Hogs	180
Copper, High Grade	198
Wheat	237
Cotton, No. 2	325
Sugar, No. 11	385
Live Cattle	390
Soybean Meal	414
Corn, No. 2, Yellow	465
Gold	**538**
Nickel	636
Zinc	987
Soybeans	994
Unleaded Gasoline	1174
Heating Oil, No. 2	1797
Brent Crude Oil	2543
Natural Gas	4041
Aluminium	4125
Crude Oil, Lt. Sweet	6930

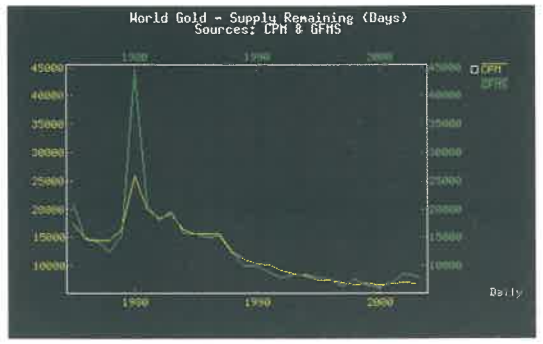
Table 2

Commodity	Volatility % per week
Live Cattle	1.27
Gold	**1.54**
Aluminium	1.66
Zinc	1.84
Silver	**1.99**
Copper, High Grade	2.26
Soybeans	2.32
Corn, No. 2, Yellow	2.35
Cotton, No. 2	2.43
Platinum	**2.53**
Soybean Oil, Crude	2.54
Wheat	2.6
Soybean Meal	2.62
Cocoa	3.15
Nickel	3.22
Lean Hogs	3.74
Sugar, No. 11	4.04
Brent Crude Oil	4.22
Crude Oil, Lt. Sweet	4.27
Heating Oil, No. 2	4.33
Unleaded Gasoline	4.34
Coffee C Arabica	4.59
Pork Bellies	4.84
Natural Gas	5.41

Table 3

Commodity	Hist. Vol. (60-day % Sigma)
Silver	**9.72**
Live Cattle	10.02
Gold	**10.46**
Aluminium	11.51
Zinc	11.67
Copper, High Grade	14.34
Soybean Oil, Crude	16.91
Corn, No. 2, Yellow	19.98
Soybeans	22.08
Wheat	22.69
Soybean Meal	22.98
Nickel	23.46
Lean Hogs	23.53
Cotton, No. 2	23.79
Cocoa	25.70
Platinum	**26.79**
Pork Bellies	32.11
Unleaded Gasoline	35.36
Brent Crude Oil	36.08
Heating Oil No. 2	36.72
Sugar No. 11	38.58
Crude Oil, Lt. Sweet	39.30
Natural Gas	44.30
Coffee C Arabica	69.95





Volatility: Movement Equals Money

Another issue for us is volatility. If a commodity future doesn't move around in price, we can't make any money on it without using options. We prefer simple directional bets, a method that has been successful for us. Table 2 shows volatility as measured by the average % change per week. The average is taken over the last 50 weeks. Gold looks fairly stationary, and silver and platinum are progressively better, if good is defined as 'volatile.'

Table 3 uses a more standard volatility measure, the standard deviation of historical price change. The results are similar to the earlier method of volatility calculation, but show that silver is less volatile than gold due to statistical differences in the calculation of the index. I include the second method of calculating volatility simply to satisfy the majority of traders who are used to looking at the standard deviation.

To summarise – our trading interest within this analytic framework indicates that we have a difficult time finding trades in gold, and difficulty executing in platinum, whereas silver offers a fair compromise between an interesting market and adequate tradability.

Gold's Days Are Numbered (7,019 of Them)

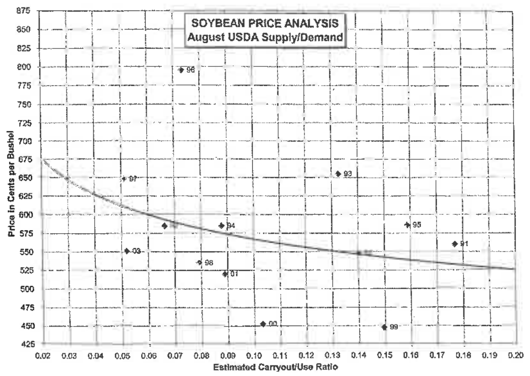
The third cross-commodity metric that we like to use is DR or "days remaining of supply". This measure is equivalent to a stocks-to-use ratio expressed in terms of how many days of supply are in storage, given no further production and continuing demand at a constant pace.

The illustration on the preceding page shows a list of the commodities we trade with the days remaining of supply, arranged from the lowest number of days at the top to the highest at the bottom. In some sense, this indicates how "on edge" the market is, or how easily perturbed it can be by real world events. Silver appears in the lower half but ahead of such items as coffee, cocoa, and sugar. Platinum has a far greater stocks-to-consumption ratio than almost all the others – with one notable exception.

It's fair to say that nothing else even comes close to gold's 7,019 days. This leads us to a proposition that I'm sure some of you have thought about before: the right way to trade gold is as a foreign currency, not as a commodity. You would need someone else to give you a trading recommendation; I abdicate my duty to declare myself bullish or bearish flat price in the face of what I consider overwhelming evidence that gold resides outside my supply/demand analytical framework.

The Tudor Investment Corporation supply/demand analysis front end gives a good insight into the method behind the analysis of the days remaining calculation. We look at the three elements of a supply sufficiency forecast: production, consumption, and stocks along with a price chart and a chart of the changing supply situation over time.

The lower left-hand box in the screen shot above left is the history of days remaining. Gold's current level of 7,019 days of supply remaining is low for it, but still quite amazingly high for a commodity – so high that almost no event in the world can substantively affect a consumer's ability to fill his or her need for metal in a physical sense. In some commodity markets, there are such tight physical constraints on supply that some hypothetical events could mean that consumers could not get the material at any price. This is simply not true in the case of gold.

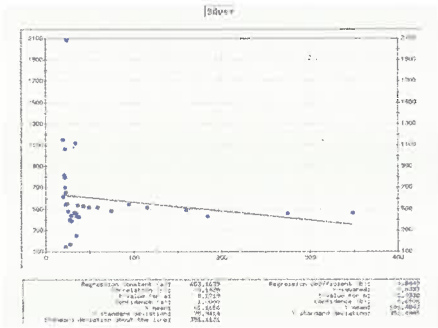


It's generally accepted in the commodities trading world that price is related to supply sufficiency. Traders in general believe that if supplies decline or demand increases, prices will rise, and that the opposite is true as well. Testing this proposition is tricky, however.

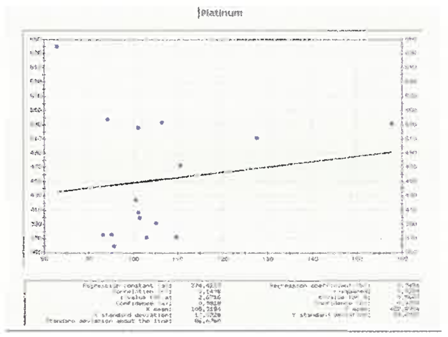
Just to show that I'm not crazy, here is a plot from a well-known (in agricultural circles) forecaster showing the relationship between supplies of soybeans and soybean prices. As the stocks/use ratio (or carryout/use ratio) increases, the price decreases in a curvilinear fashion described by the black line on the chart.

I've taken a stab at a similar analysis with a few of our commodities, shown above. Using the statistical method of linear regression, the computer drew a line through the middle of the data. By inverting the stocks/use relationship, I've removed the need for a curved line, so the computer could more easily fit a line to the data. I want to make it clear that this will show a linear relationship between the two data series if there is one to show, but the usual caveats apply. When you attempt to replicate this regression at home, your mileage may vary.

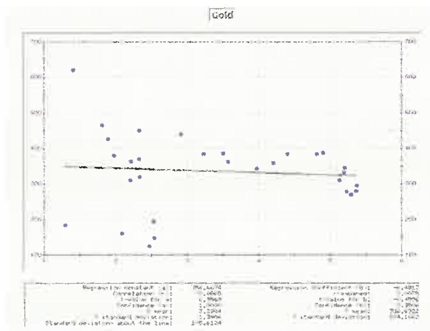
A solid regression featuring aluminium prices shows that as supply became tighter in the past, prices rose, and as supply became looser, prices fell – just the behaviour we expect from a commodities market.



Silver is a mess. According to this line, as consumption grows relative to supply, prices go down. When a regression result contradicts what we know of reality, we throw it away and start over. In this simple case, the regression technique is not working for silver.



The same thing for gold: it shows no significant relationship between supply and price, and I contend that the reason for this failure is that supply hasn't varied enough for the relationship to become visible. As supply draws down or consumption grows, I think you would start to see a relationship between the two, but since we have no data showing that, we can't know for sure.



To summarise: silver has a commodity-like set of fundamentals, decent volatility and decent liquidity. Platinum is ruled out by severely constricted liquidity – it would take a stupendous investing opportunity to justify a foray into such an illiquid commodity. And last but not least, I don't classify gold as a commodity at all. My fundamental analysis framework is inappropriate for forecasting gold prices. Obsessively following mine production and demand are valuable only as a way of anticipating actions of other traders. Gold trades as a form of foreign exchange. ■

Steven C. Mathews is Commodities Strategist at Tudor Investment Corporation. He manages physical commodities research, formulating, evaluating and executing futures and options trading strategies. Prior to assuming his current role, he received his MBA in Finance and Operations Research from the Stern School of Business at NYU and worked at several Wall Street firms as a quantitative analyst in equities and fixed income derivatives. He graduated from West Point in 1989, served in the Armoured Corps of the US Army, and left as a captain in 1994.

It's My Business

Johan Louw, Jeweller

This article is the first in an occasional series profiling the work of professionals in various sectors of the precious metals market.

The prize-winning design: a neckpiece inspired by the shimmering haze of dragonflies suspended in mid-flight.

A runner-up design by the same artist appears below right.

Johan Louw, a jeweller working in Capetown, South Africa, was the winner of this year's Riches of Africa gold jewellery design competition sponsored by AngloGold.

Johan graduated from Stellenbosch University with a degree in fine arts and works in a family jewellery business owned by his brother-in-law, Uwe Koetter, where his days are divided between management duties, designing and client appointments.

Married with three sons, Johan enjoys rough-track riding in 4-by-4 vehicles.

I really enjoy entering competitions. Once you become a professional, there aren't many opportunities to have your work judged – after all, I haven't sat exams for some years. Competitions give a design the chance to be evaluated objectively by one's peers – when colleagues at work praise or shoot down a design there are often politics involved. But in a competition, the designer isn't known, so the design is anonymous. It doesn't come with any baggage. I think it's the most honest process.

Another reason to enter competitions is that it is an opportunity to be purely creative. Normally I have to work to or within certain specifications. Whether I design a piece for an individual customer or develop a theme for a range of stock, I am playing to a specific audience. A design for a competition, on the other hand, is based purely on creativity.

I think an artist looks at the world with a different perspective. I constantly take in shapes, lines and colours in both nature and man-made items. So I find inspiration in many places, and I sometimes experiment with less-common materials outside the normal jeweller's range. For example, inspired by pop art I've used rusted metal next to precious metal...the rusted metal almost becomes the gem surrounded by gold.

The theme of the Riches of Africa contest this year was the four seasons, which gave contestants quite a wide range of possible interpretations. My design came about as a combination of inspirations. My family and I live on the slopes of Table Mountain, and we regularly go for walks on the mountainside. That's where I saw the dragonflies – and they, together with some Inca jewellery I'd seen years ago, gave me the basis for my design.

All my work is in gold, and roughly 75% of my range is 18 carat, though the mass market here is nine carat and cubic zirconium. There may not be much gold in nine carats, but at least there's a bit – diamonds lose out completely in that market!

Plain gold pieces actually represent a very small percentage of our production, and we usually incorporate diamonds, for two reasons. One is because that's where we do most of our profit taking. Second, from a design point of view, a diamond provides a focal point; it helps draw attention to a line or a shape. Diamonds are a jeweller's best friend – in combination with gold, of course.

My family and I live on the slopes of Table Mountain, and we regularly go for walks on the mountainside. That's where I saw the dragonflies – and they, together with some Inca jewellery I'd seen years ago, gave me the basis for my design.

I don't think the South African jewellery market could replicate the high carat/low mark-up ranges found in places like Dubai or India, because customers here don't buy primarily for investment purposes – greater emphasis is put on design, which is why mark-ups tend to be much higher.

Having said that jewellery isn't an investment, the economy goes up and down here too, and when times are hard, you can have people coming in wanting to sell their gold. That can be a difficult situation, especially if it's an old client and you have to offer them a third of the price they paid, after taking off taxes, profit margin and taking into account refining and smelting costs. If someone here wanted to buy gold as an investment, they'd be much better off with Krugerrands.

Customers are becoming increasingly mobile and well educated, which has some knock-on effects. One of my customers, an investment advisor, purchased some gold on a trip to Dubai, which he brought back to me and said, "Now make me a piece". Basically he wanted the best of both worlds: use cheaper gold but retain the design element he'd come to expect. Not wanting to lose a valuable client, I told him there'd be no problem.

I made the piece and just charged him a make-up fee, but that's not ideal. I wouldn't survive if I had to repeat that sort of arrangement too often.

I see a similar threat in the way we purchase our diamonds. As a jeweller, I can't buy directly from DeBeers – I buy from the diamond cutters (because I am not a site holder), who add a margin. I then add my own margin before selling to the man on the street.

But now these middlemen are increasingly going directly to the public, enabling them to buy diamonds at the same price as jewellers, or perhaps only slightly higher. The consumer then takes the diamond to the jeweller and asks him to make a piece with it.

If a client comes in having already purchased both the gold and the diamond, the only area left to make a profit is labour. And there is no way – even if I were to add a prohibitive labour charge – that I could survive by only selling my time, because I can't charge for every minute. If a client doesn't find what they're looking for in our ranges, I may sit with them for an hour and make a design based on our discussion. If they then decide, "sorry, it's not in my budget", there's no charge for my time. So we need to have mark-ups on raw materials as well as labour charges. We have overheads, a certain standard of living to maintain, and we have to take our profit somewhere.

Of course, there are external threats to my business as well. People will always want desirable luxury items – which I think and hope includes jewellery – but are increasingly careful and clever about how they spend their dollars and there is competition from items such as fashion accessories, cell phones and other desirables.

The mass market is important. It's the arena where the biggest volumes get moved and there's no avoiding that. At Walmart-type stores, a thousand people might buy the same piece. I do feel that we need to spend some time and effort thinking seriously about how to make jewellery more affordable for the masses whilst still taking a decent profit.

But we can't afford to stop marketing to the upper end of the market, even if volumes are much lower there. You have to maintain the gloss and the glamour, because without them, there wouldn't be any mass market – that's what the mass market is, after all, aspiring towards. I think marketing efforts directed toward the two sides of the market should be kept distinct, but both are worthwhile.

What can we do to attract and maintain interest? Maybe offering more personalised service would help. There was much more emphasis on that sort of service in the 1950s and 60s, when you knew the corner grocer and the dressmaker, but this was gradually replaced by the convenience of supermarkets and department stores. It's important to pay attention to what's happening in areas outside one's own profession, and looking around me, I see that service is making a comeback in some areas. Why not in jewellery, where people might prefer to purchase their gold from a jeweller who knows them, who understands their taste?

But I think the real key to keeping jewellery in the mind of the consumer comes back to the way our product is perceived. If jewellery is to hold its own against technologically sophisticated products like the latest cell phone, then it needs to be seen – if not exactly as fine art – then in the same kind of awe as high fashion, as something designed especially for you. Jewellery has to be more than the sum of its materials. And fine jewellery is.

That's why I don't base the price of a piece of my jewellery solely on its gold content – the price is heavily dependent on design and workmanship. These add value; they transform a lump of gold into a desirable fashion item. To sell just on price is a one-way ticket to disaster. ■

The Riches of Africa

The Riches of Africa gold jewellery design competition is an annual event sponsored by AngloGold. Its twin goals are to promote innovative South African design in jewellery and give a wider audience to local talent.

Entrants are given a theme and must supply three designs. Selected finalists are then supplied with the gold necessary for the fabrication of their designs.

Below, other finalists' designs from the 2003 competition:
Left, a yellow and white gold broad-band choker designed by Heidi Liebenberg
Right, a neckpiece designed by Ingrid Gartenschlager with alternating strands of polished and sandblasted gold.

Clearing the Air

Discussing Trends and Influences on London Clearing Statistics

Peter Fava, Chairman, London Precious Metals Clearing Limited, Peter Smith, Chairman, LBMA Physical Committee

"London is to gold what New York is to dollars and Tokyo to yen, home for the settlement of international transactions." – Towards Transparency, Alan Baker, Alchemist 6

Alan Baker, then chairman of the LBMA, noted the general call for greater transparency in listing a number of initiatives in his editorial comment of January 1997. Among them were the announcement of the Association's first overseas function and the publication of a new page on Reuters displaying mid-market indications for gold lease rates.

However, it was undoubtedly the first item on his list – the release of the first set of clearing statistics for the London market – that drew the most attention. It was long known within the market that substantial amounts of gold and silver clear in London, the result of transactions carried out not only by and with London dealers, but also by counterparts around the world with each other and with their clients. For the first time, statistics quantified how much metal was involved.

Released on a monthly basis ever since, the figures show daily averages for three measures: the ounces transferred, the value of the ounces based on monthly average London fixings and the number of transfers.

The figures differ fundamentally in nature from volume figures published by exchanges. Unlike those figures, London clearing statistics do not measure individual transactions; they measure the metal that is transferred from one clearing account to another on a net basis. Two counterparts may buy and sell from each other many times over the course of a day, but upon close of business, only the net ounces that one owes the other are transferred from one clearing account to the other. For example, if the one participant buys and then sells 10,000 ounces of gold with the same counterpart for the same value date, although 20,000 ounces of gold have traded, there will be no movement of metal, and no impact on the clearing statistics (see sidebar – About the Figures).

In the ensuing seven years, clearing statistics for both gold and silver have declined almost steadily. Annual averages for ounces transferred have fallen by an overall average of 56% in gold and 70% in silver from 1997 to 2003. The number of transfers has declined somewhat less steeply over the same period – more notably in gold, where they are down 38%. The decline stands out even more sharply when compared to the recent increase in volumes on exchanges, notably NYMEX and TOCOM.

Peter Fava and Peter Smith were both involved in the compilation and release of the original figures. They look at some changes in the nature of the market and over the intervening years that might have had an impact on the reported numbers.

Have there been changes in the overall pattern of trading activity from certain counterparts?

P Fava – There have been major shifts in levels of activity from groups of counterparts that would definitely impact clearing statistics.

There's been a decrease in some areas – notably producers and central banks. The decline in producer hedging has of course reduced the demand for borrowed gold. With lease rates standing at extremely low levels, it's no longer attractive for central banks to place gold on deposit, so there isn't the continual rolling over of positions month-by-month that used to be such a staple of business. Instead, many central banks have extended the duration of their lending through interest rate swaps and longer-term collateralised agreements.

However, these decreases have been offset by increases from other sectors. At higher prices, there tends to be less real physical business, but more speculative activity, with counterparts increasingly trading on a leveraged, forward basis. Many of these positions are closed out before they mature – in a similar manner to a futures contract – therefore, they don't involve the transfer of any metal.

There is much more fund participation in the market – but their spot transactions are generally netted against EFPs – exchange for physicals, which swap the original exposure to the spot London market with a futures contract. So the initial loco London transaction is offset and essentially nullified by the EFP, which moves the position to the exchange. Therefore, no loco London clearing takes place.

The interbank market is also showing increased activity – but if I now trade 50 times a day rather than 20 with the same counterpart, it still comes down to only one transfer of metal.

Also, the availability of Access, NYMEX's electronic platform, which makes it possible to trade on the Exchange around the clock, might have an impact on London trading volumes.

What factors outside of trading might have an effect?

P Smith – As mentioned in the original Alchemist article, we were always aware that the element of netting would cause the clearing figures to understate the actual volume of business.

However, not everyone was netting in 1997 – some clients were using FX-based systems that handled transactions on a deal-by-deal basis. Netting has grown much more widespread and the old systems have been replaced in the drive towards greater efficiency. Virtually all counterparts now net.

The fact that the number of transfers hasn't declined as steeply as the ounces transferred suggests smaller transactions overall. What might be causing that to happen?

P Smith – There has been an increase in another area of trading – some banks have expanded into consignment accounts in physical markets, notably Istanbul, Dubai and India.

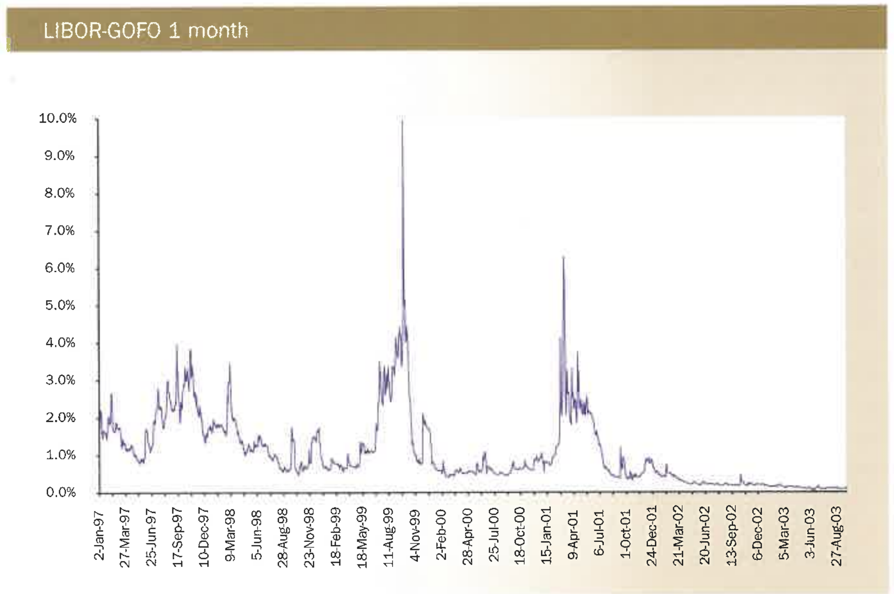
When customers purchase out of the consignment account and the metal is hedged loco London, these transactions tend to occur in small increments, so that might contribute towards a lower number of ounces per transfer on average.

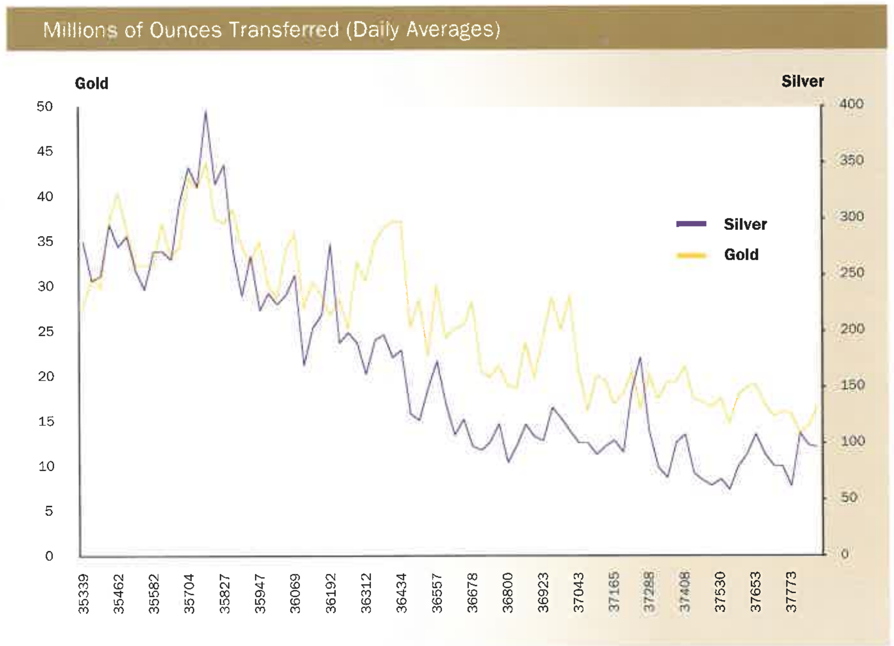
GOLD CLEARING TURNOVER

Measure	1997	1998	1999	2000	2001	2002	2003
Daily average ounces transferred (millions)	36.8	33.4	31.0	23.1	21.5	17.8	16.2
Daily average value (US$ billion)	12.1	9.8	8.6	6.5	5.8	5.5	5.8
Daily average number of transfers	1,285	1,188	1,007	793	802	729	803

SILVER CLEARING TURNOVER

Measure	1997	1998	1999	2000	2001	2002	2003
Daily average ounces transferred (millions)	294.2	247.9	185.1	115.7	108.0	87.0	89.9
Daily average value (US$)	1.46	1.39	0.96	0.58	0.47	0.40	0.43
Daily average number of transfers	550	503	405	256	241	241	225





About the Figures

The figures show the volume (in millions of troy ounces) transferred on average each day, the US dollar value of that volume (applying the monthly average London pm fixing price for gold and the average London spot fixing price for silver) and the average number of transfers each day. In order to minimise double counting, the clearers only record the debit side of each transaction.

The figures consist of:

- Loco London book transfers from one party in a clearer's books to another party in the same clearer's books or in the books of another clearer
- Physical transfers and shipments by clearers
- Transfers over clearers' accounts at the Bank of England.

Excluded from the statistics are:

- Allocations between clearers where the sole purpose is for overnight credit
- Physical movements arranged by clearers in locations other than London.

The numbers don't differentiate between types of products, but do you think there's been any shift that might have contributed to the decrease?

P Smith – Short-dated forwards were much more active when the early sets of numbers were released. Under normal circumstances, the shortest periods – such as tom/next, spot/next or one week – are the cheapest area of the curve to borrow, thus that would appeal to those holding short positions.

But they are also the most risky periods. A lender with metal in his account to spare at the end of the day is happy to lend it very cheaply – his alternative, if the metal stays in the account, is zero interest. But when the market is tight, there is no metal sitting in the account at the end of the day – it's already been lent. Some participants took the availability of cheap short-dated metal for granted, and were caught when rates spiked upwards. These incidents discouraged a lot of the activity in very short-term rates.

Of course, the market currently has plenty of liquidity – there is very little borrowing demand in the short dates, as participants can borrow for three months, for example, at exceptionally low implied gold yields.

P Fava – Also, the increased use of off-balance sheet deals, such as interest rate swaps, would reduce the number of ounces transferred across London clearing accounts.

Gold and silver prices have been much more volatile in recent months. Shouldn't the wider intra-day trading ranges result in higher clearing statistics?

P Fava Actually, it's possible that increased volatility might contribute to a decrease in the figures. In the past, we had smaller trading ranges and fewer intra-day moves, so a trading position was less likely to be closed out over the course of the day, necessitating a transfer upon close of business. But with the price more active, positions tend to be opened and closed within the same day, so there is less movement of metal. ■

Market Moves

Elizabeth Blackhurst to Mitsui London

Elizabeth Blackhurst has joined the London Branch of Mitsui & Co Precious Metals Inc from their Sydney Branch to focus on the precious metal producer sector within the European time zone. She has had 10 years experience in precious metals marketing, the last three with Mitsui in Australia.

Kevin Crisp to Koch Metals Group

Kevin Crisp has joined the Koch Metals Group, where he will focus on precious metals sales origination and market analysis. Earlier this year, Koch Metals added precious metals and steel to its industrial metals trading activities.

Kevin began his career in the metals markets with Consolidated Gold Fields, later joining GFMS at its inception in 1989. In 1995 he joined JP Morgan as metals analyst, moving to CSFB in 2000 and then to Dresdner Kleinwort Wasserstein, where he was a director and global precious metals strategist.

Kevin was vice chairman of the LBMA in 2001.

Peter Drabwell to J. Aron

Peter Drabwell joined J. Aron London on Aug 18. Primarily responsible for gold and silver spot market-making during the London and New York sessions, he will also be involved in forward trading.

Peter's career prior to joining J Aron includes three years at AIG in spot and forward market making and, before that, positions with UBS and JP Morgan.

Colin Griffith to DMCC

Colin Griffith has been appointed Executive Director of Gold and Precious Metals for the Dubai Metals and Commodities Centre. He will assume his new responsibilities in November.

Colin, who began his career trading silver, copper and tin in 1968, comes to DMCC from Standard Bank of London, where he has been Head of Resource Banking Services since 1998 and, from 1994 to 1998, Head of Precious Metals. From 1987 to 1993 he was Head of Precious Metals at Credit Suisse London, in 1993 attaining the position of Deputy Treasurer and Member of Executive Committee

Colin was a member of the LBMA Management Committee for 15 years and was Chairman of the Finance Committee from 1995 to 2003.

Nikos Kavalis to GFMS

Nikos Kavalis joined Gold Fields Mineral Services on 1 September. He is primarily responsible for developing econometric modelling, which is currently focused on future gold and silver prices and has also been assisting in investment research.

Nikos holds a first degree in Econometrics and Economics from the University of York, and an MSc in Econometrics and Mathematical Economics from the London School of Economics.

Matthew Keen to Koch Metals

Matthew Keen has joined Koch Metals Group as head of precious metal sales and pgm trading.

Matthew started his career at Johnson Matthey Bankers in 1982. He moved to Engelhard Metals in 1987, where he specialised in pgms, and in 1991 accepted a position at JP Morgan, where he built that company's franchise in pgms. After ten years, he joined Dresdner Kleinwort Wasserstein as a director, tasked to build a precious metal operation in London, globalise the existing precious metal business and develop a pgm focus.

Matthew has long had a role on the management committee of the London Platinum and Palladium Market. In 2001 he led a team of eight desk jockeys up the Eiger to raise money for the Motor Neurone Disease Association.

Claudia Walter to UBS

Claudia Walter has joined the UBS precious metals team in London, where she will be a point of focus for the continued development of UBS's global platinum and palladium activities.

She joins UBS from Dresdner Bank, where she worked for seven years advising official sector and industrial clients. Prior to that, Claudia worked at Degussa in Frankfurt in silver trading and sales. ■

A Walk on the Wildebeest Side

Dominic Mtakula, LBMA Bursar for 2002-2003

If one were to stumble upon a half-eaten wildebeest while on an excursion in Zimbabwe, there's bad news and there's good news. The bad news is that this means there are lions nearby. The good news is that they've already had enough to eat and won't come after you. Hopefully.

Our authority on this is Dominic Mtakula, the LBMA bursar for 2002-2003, who never imagined that his chosen course of study at the University of Zimbabwe – geology – would include encounters more to do with zoology. His un-hungry-lions experience took place in 1995, during his third year of study, when he was one of a group of students on a field excursion to study rock formations on an island in Lake Kariba, a large man-made lake in the north of the country.

A year later, when Dominic received a BSc (Hons) from the university, he began working for Reunion Mining as an exploration geologist estimating resources in gold and diamonds. After Reunion's takeover by Anglo American, he joined Independence Gold Mining as a Projects Geologist, joining Krumlin Mining a year later.

The course of study that Dominic followed in Zimbabwe had been mainly technical in nature. Feeling that his career would benefit from further studies combining geology with a business orientation, he applied for the bursary. At the Royal School of Mines, Imperial College London, he followed the Mineral Project Appraisal option for his MSc, which enabled him to complement his prior experience in exploration with resource evaluation techniques. The course included two weeks of fieldwork in South Africa studying a variety of deposits – coal and diamonds, lead and zinc, platinum and gold.

For his dissertation, Dominic evaluated whether the Hartely platinum mine, which was closed in 1999, could have remained viable using alternative methods of mining and ore smelting. ■

The Ruff Guide to Bursary

Dominic, the eleventh LBMA bursar, continues a bold tradition of narrow escapes from dangerous wildlife. Emmanuel Nyamusika, the 2000-2001 bursar, killed a python he encountered while on the job at Ashanti's Geita project in Tanzania (he pelted it with rocks). The bursar for the following year, Theophilus Kandawasvika, unwittingly aroused the protective instincts of a lioness prowling around the dump area of one of Delta Gold's mines with her cub (he ran). The bursary was initiated in 1988, a year after the Association's founding. It covers fees and provides a monthly subsistence allowance for graduate students in mining disciplines from developing countries.

Follow the Money

Deciphering Support, Resistance and Trend Lines

by Chris Langguth, Chartered Market Technician

'If the market ever gets there again, I'll…'

Fill in the blank – buy or sell everything. Whatever the action vowed, such a comment amounts to either support or resistance. Action that is rewarded is repeated. Action that is penalised is avoided.

Money and/or price are the basis of most business decisions. Technical analysis portrays these decisions chronologically and graphically. To the technician three principles are universal: everything is in the price, markets trend and history repeats itself.

Trends move in three directions: up, down and sideways. Examination of long periods of price activity in any given market will show that, in any given market and about 70% of the time, the direction is sideways. The other 30% will be divided, with about two-thirds up and the other third down.

Support, Resistance and Trendlines

Support is that level where, in the past, there have been sufficient buyers to absorb all of the selling; conversely, a resistance level has sufficient offers to stop an advance. When a level is penetrated or broken, it becomes a significant activity. Those who sold at a former resistance level that is now below the market would be thrilled to buy at the same price – in effect the resistance becomes potentially the new support.

The reason for determining support, resistance and trendlines is to identify:

(1) At what point one's opinion may be wrong

(2) The optimal levels for taking action.

Because these evaluations can be done in advance, the stress level for the decision maker can be markedly reduced. It also can provide time for conferring with others.

Once the price activity is plotted, it is usually easy to determine the direction of a given commodity. Or is it?

That depends on the time frame, and most technical analysts use a top down approach, starting with longer-term charts with points or lines representing a year, a quarter, a month or a week. They then turn to a chart using a shorter period of time to fine-tune the analysis. This process may continue down to ever-shorter time periods to ultimately extract the optimal moment for taking action – for example, the market may be trending up or down on a monthly basis, but be trending sideways on a daily basis.

If one accepts the premise that a decision-maker will probably take action in the market before he or she announces it to the world, the first place an economic change becomes apparent is in the price. Once a trend has changed, the counter-trend moves – i.e. the support or resistance levels – can be anticipated based on the previous activity. This allows a trader to anticipate where to join the market and to judge whether or not it is acceptable from a risk-to-reward point of view.

> *The reality of the market is that, like the mind, once stretched, it never goes back to its original size.*

Trendlines are initially tentative – any two points can be connected, usually simply two high or two low points. When the price again touches or even slightly penetrates the line and turns back, the trendline becomes valid. The more points that touch a line, the more important that line becomes, attracting the attention of other traders deciding whether to enter or leave the market.

Trendlines drawn in most computer charting programmes are usually straight. Many technicians also use hand-drawn curves to fit points to a chart – equally valid and tending to work better in markets that are accelerating. The reason curves are not used in technical charting programmes probably has more to do with the complexity of fitting the line than the limitations of the machine.

Scales and Repetitions

To find a support level, it has been observed that certain divisions of scales work better than others. One method is to divide the range into halves, quarters and eighths, or alternatively, into thirds and sixths. Another method is to use the Fibonacci golden section, Phi (1.618033987…), used to project extensions, and the reciprocal, phi (0.618033987), used for contractions. Sometimes called the divine proportion, it was used by the ancient Egyptians, among others. The Fibonacci golden section can be complex, though it retains many adherents for one reason: it works. What tends to be forgotten is this is a method of determining where to look for change.

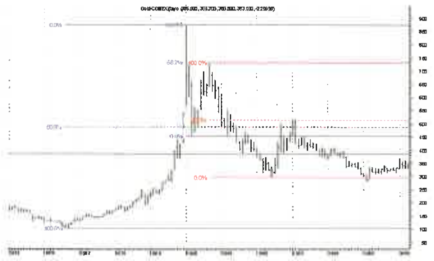
Because each market is different, analysts will apply either method and take the one that seems to fit best. It's usually at this point those who haven't done technical analysis start looking for the egress.

The purpose of the scales is to determine if the trend is still in force. A move of 25% – 38.2% counter to the primary trend before the primary trend resumes indicates that not only is the trend still intact, but it is also vigorous. A 50% countermove is the most common turning point, and 61.8% to 66% are the last turning points. A move that extends beyond 66% usually goes back to the point of origin. Each possible turning represents a potential support level.

Many technicians use repetitions in addition to percentages, taking the dollar range from the first move to estimate the second. A market that has moved, for example, $100 in either direction is much more likely to repeat the move than a market that has never moved that much – i.e., history repeats itself. This is the basis of swing charting.

A market is not an abstract mathematical equation but rather a group (the same group with very little change) that just experienced a movement of certain dimensions. If you were to ask someone who had participated in the first $100 move what they would like the second time, the answer is likely to be, "Why, $100, of course." This might be called a "100% repetition of the previous move in the same direction."

The reality of the market is that, like the mind, once stretched, it never goes back to its original size.

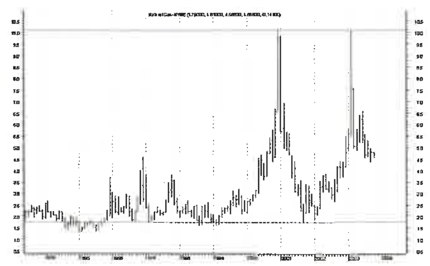


Gold

It's easy to fine-tune an analysis in hindsight, but back in 1980 there were days when the gold range was $100 or more. All a trader wanted at that point was an idea of how close the price was to the end of a move in either direction. The rally started in 1976 at $101.50 and crested in January 1980 at $873. A 50% correction from the high would be $487, and the low of the next move was $453. When the price advanced once again beyond the 50% mark, the next point to look for was 66.7%, or $732. The high was $729, a $3 difference.

When the price fell from $729, the question was how far it would fall. Where was it likely to find support? The first decline from $873 to $453 was $420. If history repeated itself, the price should fall to about $309. The actual 1982 low was $295, a difference of $14. When the price turned, the question became: where was it most likely to find resistance? A 50% correction was $512. The actual 1983 high trade was $514, a $2 difference.

Other than a brief $14 decline to $281 in 1985, the price stayed within the $295-to-$514 range for almost 15 years.



Natural Gas

Natural Gas has shown remarkable support at about $1.75 for the past ten years. The two major rallies in December 2000 and February 2003 both stopped at exactly $10.10. The irony was not that the price repeated the high, but that commercial buyers hesitated when presented with the opportunity to buy below $2.00 in both September 2001 and January 2002. They refused, thinking the price would go lower.

COMEX Copper

This is a quarterly copper chart. It is a market that most technicians believe "charts" extremely well, meaning that support and resistance levels and trends are usually reliable. When the trend is broken, it is frequently signals the start of a significant move.

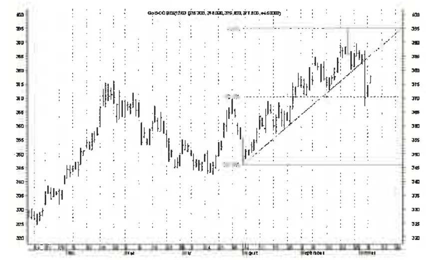
In 1974 the price reached an apogee of $1.4070. In 1980, the high was $1.431. Only for a period of two quarters in 1988-89 did the market briefly venture above $1.50. One copper producer declined to sell above $1.25 in 1980, convinced that next time would be different. It was. The company no longer existed.

LME Copper

On a monthly LME copper chart one can see where support lines become resistance lines. This is a current chart, and it's conceivable that copper is on the verge of moving up sharply. The resistance line at 38.2%, a Fibonacci correction level, is an important point. Until this is broken the trend is defined as sideways.

Silver

Silver began trading on the COMEX in 1963 and flat-lined until 1967, when the US government stopped silver coinage. After rallying from $1.29 to $6.49 in 28 months, it lost half its value in only in seven months. It then recovered a little more than half in one month. That two-month trading range ($3.73 to $5.29) virtually defined the limits for the next 40 months.



Gold – Dec 2003

The previous examples were all long-term charts – remember that analysis is best done top down, and once the overview is in place, the fine-tuning can be done. Daily charts can call attention to subtleties not visible when a month or a quarter is compressed to a single line.

The chart shows the recent sharp fall in the gold market. For those who use technical analysis to project support, resistance and price objectives, the decision of where to buy – or where not to sell – was clear. The price fell through a valid trendline and stopped just slightly past the 50% correction level. Markets do trend and history does repeat itself. And the charts prove it. ■

__Christopher B Langguth__ is an independent analyst focusing on metals and energy products, primarily for industrial users of the futures markets. He is a Chartered Market Technician and, in a career spanning 30 years, has been a broker, physicals trader and arbitrageur. Throughout his career, he has found a technical understanding of the market indispensable.

LBMA News

By Stewart Murray, Chief Executive, LBMA

Membership

Members

Man Financial Limited took over the Membership previously held by GNI Limited on 19 July.

Merrill Lynch International became a Member on 1 August.

The Membership held by Commerzbank's London Branch has been transferred to Commerzbank International SA in Luxembourg. The address is:

Commerzbank International SA Luxembourg
Global Precious Metals
11 Rue Notre Dame
Boite Postale 303
L-2240 Luxembourg
Tel: +352 4779 11 420
Fax: +352 4779 11 840

The company will be relocating on 17 November to:
25, rue Edward Steichen
L-2540 Luxembourg
Tel: +352 477 911 2540
Fax: +352 477 911 2840

AIG International Limited relocated on 1 September to:
One Curzon Street
London W1J 5RT
Tel: +44 20 7659 7060
Fax: +44 20 7659 7200

Associates

Anglogold Limited became an Associate on 1 August.

Gold Fields Minerals Services Limited relocated in July to:
Hedges House
153-155 Regent Street
London W1B 4JE
Tel: +44 20 7478 1777
Fax: +44 20 7478 1779

Following a change of ownership, OMG AG Co KG changed its name to Umicore AG & Co KG on 1 August.

Good Delivery List

The Anhui Tongdu Copper Stock Company of Tongling City, Anhui, China, was admitted to the Silver List on 10 September.

Annual General Meeting

The LBMA's AGM was held at the City Club, Old Broad Street, on 25 June. In addition to the normal business of approving the Accounts, the following Members representatives were elected to the Management Committee:

Simon Weeks (Chairman)
Peter Fava (Vice Chairman)
Paul Copsey
Nicholas Frappell
Nigel Munt
Kamal Naqvi
Diego Parrilla
Martin Stokes

The LBMA takes this opportunity to thank the two members who resigned at the AGM, Colin Griffith and Rick McIntire, for their past service on the Committee.

Committees

Management

The Management Committee met monthly during the summer and also held a special brainstorming session in early September.

With a view to assisting the central banking community in their deliberations about a possible successor to the existing Central Bank Gold Agreement, the Committee agreed that a survey of market participants should be carried out on the basis of a questionnaire that was issued in July. It was agreed that the resulting report should be collated by the Chief Executive and that it should be issued in the first place to the signatory central banks of the first agreement before being distributed to the membership, the media and other interested parties. The aim was to encapsulate the views of market participants rather than to put forward any particular view. A copy of the resulting report can be found on the LBMA website.

The Committee also accepted a proposal from the Bank of England that it should assist the Bank and the Office for National Statistics in developing a new reporting form to allow figures on bullion transactions to be included in the UK's Balance of Payments Statistics. A number of meetings between the Bank and an ad hoc working party of LBMA Members has taken place in the past two months and it is expected that the new reporting form will be available by the end of 2003, with the first returns to be made at the end of the first quarter of 2005.

The date for the Biennial Dinner next year has been decided – it will take place in Goldsmiths' Hall on 26 October 2004. The Committee has started the process selecting a guest speaker for the event as well as the list of invited guests.

Public Affairs

The work of the Public Affairs Committee (PAC) has been somewhat less hectic than usual in recent months. Its first task following the Conference in Lisbon was to analyse the feedback from participants with a view to making any necessary adjustments to the format of future conferences. Plans are now being made for next year's Conference, which will be held in Shanghai with the provisional date being in the first week of September.

On the publications front, the Chinese version of the Guide to the London Bullion Market was launched at a special members conference of the Shanghai Gold Exchange, at which the Chief Executive presented a paper on the LBMA and its role in the London bullion market. Other LBMA Members also made presentations, with the aim of providing detailed information on the products and procedures within the London market.

In order to widen the input from Members into the PAC's work, alternate monthly meetings will now be held as an open forum to which all Members and Associates are being invited. The first such meeting will take place on 8 October, with the two main subjects on the agenda being the LBMA website and the Annual Conference. Readers with thoughts, comments or suggestions on these issues are invited to send them to the Chief Executive or Susanne Capano, the secretary of the PAC.

Physical

The main focus of the Committee's work has been on the Good Delivery Lists for gold and silver and the introduction of proactive monitoring, which is now expected to commence early in 2004.

Preparation of the documentation that will be sent to Good Delivery refiners is now underway. This has been drawn up following consultation with the refiners who attended the special meeting in Lisbon in early June and those who submitted their views via a questionnaire that was circulated to all refiners on the Lists in July. In addition, the LBMA has held discussions with the companies that will act as supervisors for the dip-sampling operation that will be involved as part of the proactive monitoring.

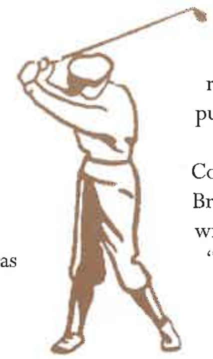
Finance

Following the resignation of Colin Griffith, who chaired the Finance Committee for ten years, the Committee will hold its first meeting under its new chairman, Nick Frappell of Sumitomo Europe, in mid-October in order to prepare the LBMA budget for 2004. ■

Golf

Foster Smith Trophy Triumph

by John Coley



The LBMA regained the Foster Smith Trophy in a titanic struggle at The Drift Golf Club. And, as ever, the conviviality of old friends from the LME ensured the match was played in a wonderful spirit.

The weather was dull but the golf was sparkling and the tension high as all four morning matches went to the 18th. At lunch the LBMA held a slender 2-1/2 to 1-1/2 lead. The afternoon round concentrated the tension into the 2nd and 3rd matches. The other two matches were comfortably won 7 and 5 and lost 6 and 5, thus leaving it imperative that one point still be won. Finally – and to great rejoicing – David Spraggs holed a knee-knocking putt on the 17th to secure a famous win.

Congratulations to the team of Peter Beaumont, Brian Bevan, Andy Chapman, Darren Johnson, the writer, Colin Griffith, David Spraggs and Andy 'Two-Wins' Smith. ■

DIARY OF EVENTS

October 2003

20 – 25
The Mexican Association of Mining, Metallurgical and Geological Engineers XXV Convention
Acapulco, Mexico
Tel: +52 (55) 5543 9130
Fax: +52 (55) 5543 9135
fernando_galvan@aimmgm.org.mx

21 – 23
Goldfields Mining Expo
Kalgoorlie, Western Australia
Fax: +61 (0) 8 9021 1402
events@miningexpo.info

22
The First Mining Of The Americas Meeting
Tel: +52 (55) 5543 9130
Fax: +52 (55) 5543 9135
fernando_galvan@aimmgm.org.mx

29 – 31
Mining 2003
Brisbane, Australia
Tel: +61 (0) 8 9388 2222
Fax: +61 (0) 8 9381 9222
stewart@verticalevents.com.au

November 2003

4 – 5
GFMS – North American Precious Metals Seminar
New York, NY
Tel: +44 (0) 20 7539 7820
Fax: +44 (0) 20 7539 7818
www.gfms.co.uk
laurette.perrard@gfms.co.uk

4 – 5
Omega Asian Mining and Metals Forum:
Global Gold Investment Conference 2003
Shanghai, China
Tel: +27 21 689 7881
Fax: +27 21 689 8015
www.omegaconferences.com
teresab@omegainvest.co.za

4 – 5
The Hong Kong Gold, Diamonds and Precious Metals Workshop
Hong Kong
Tel: +27 21 689 7881
Fax: +27 21 689 8015
www.omegaconferences.com
teresab@omegainvest.co.za

17 – 18
Second Annual China Silver Conference
Weihai, China
Shanghai White Platinum & Silver Exchange
Tel: (8621) 5879 0172
Fax: (8621) 5879 3403
info@mail.ex-silver.com

20 – 21
Euromoney - 2nd Annual Gold Investment Summit
London, UK
Tel: +44 (0) 20 7779 8330
Fax: +44 (0) 20 7779 8603
hhutchin@euromoneyplc.com

23 – 24
San Francisco Precious Metals Conference
San Francisco, CA
Tel: +1 305 669 1963
Fax: +1 305 669 7350
www.iiconf.com
iiconf@iiconf.com

24 – 25
NewGenGold 2003
Perth, Western Australia
Tel: +61 (0) 8 9321 0355
Fax: +61 (0) 8 9321 0426
sonia@louthean.com.au

December 2003

1 – 5
NorthWest Mining Association 109th Annual Meeting and Convention
Spokane, WA
Tel: +1 509 624-1158
Fax: +1 509 623-1241
nwma@nwma.org

2 – 4
Mining Journal World Congress 'Mines and Money'
London, UK
Tel: +44 (0) 20 7216 6060
Fax: +44 (0) 20 7216 6066
peter.jacobs@mining-journal.com

January 2004

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

February 2004

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

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

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

Membership has its Privileges

Editorial Comment by Jack Allen, Chairman, Membership Committee

On a recent marketing trip to the Far East, I visited a potential client in Hong Kong. My company, Investec, hadn't had any relationship with the company prior to our meeting, and I was prepared to give them a lot of background about what we could offer. The meeting was progressing nicely – albeit rather slowly – until I mentioned that Investec is a full member of the LBMA. The atmosphere changed immediately. A door had opened; barriers fell. We were suddenly fast friends.

I've been involved with the LBMA for a number of years, by serving on its committees and by being both a Market Making and Ordinary Member, and thought I knew all there was to know about the Association. But until that day in Hong Kong, I'd never seen such a clear demonstration of what is arguably the most important – and most difficult-to-quantify – benefit of membership: instant credibility and immediate recognition that extend far beyond London.

Joining forces

When I arrived at Investec in 2001 to build a bullion-trading department, there was no question in my mind that one of the steps the company should follow if it really wanted to establish itself in the bullion market was to apply for LBMA membership. Once we were accepted as Members, Investec included our status in company brochures and the annual report.

In recent months, the Association has received a record number of enquiries from companies interested in joining as either a Member or Associate – a logical result of the renewed attention that trading in precious metals, along with other commodities, is receiving. So far this year, three Members and three Associates have been admitted, bringing overall membership numbers to 90.

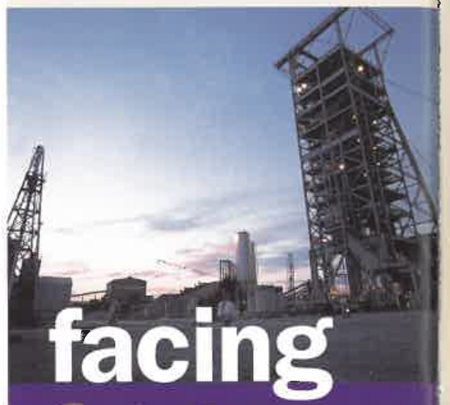
Of course, application is no guarantee of acceptance. Interested companies need to have a track record of involvement in the market, and they must provide the names of three existing LBMA Members, one of which must be a Market Maker, willing to act as sponsors.

Having to obtain sponsorship letters isn't a case of having to be in the club to join the club. I've been both a provider and recipient of sponsorship, and whether I was asking for a sponsor or acting as one, I would never underestimate the responsibility it carries.

In acting as a sponsor, a Member does put their reputation at some risk. It wouldn't be sufficient for them to have vaguely heard that the company in question might be involved in bullion trading, or for the two companies to have a relationship in another department, or for them to have just done their first gold trade together. There must be a well-established business relationship between the two – there must be proof that the applicant has a commitment to the bullion market.

Those admitted to membership become part of a cohesive global network of traders and brokers, miners and refiners, analysts and researchers, seasoned professionals all. And all members have input into the work the Association undertakes on their communal behalf – endeavours that cover every area of the market, from good delivery to standard documentation, as well as participate in activities like the annual Conference at discounted rates, the Annual General Meeting, biennial dinner and other less-formal gatherings that bring Members and their customers together.

From the UK to Australia, from the mine to the trading desk – and from Investec to Hong Kong – membership has its privileges. ■



facing facts

Paul Burton
Editor, World Gold
editor@worldgold.net

London Lights

After a real summer in the UK for once, the gold price shone as bright as the sun that brought record temperatures to the London area. There may be a correlation between rising mercury and the performance of the yellow metal.

This renewed upward movement in the metal price triggered some sharp rises in gold shares, although only towards the end of the summer. At the end of August most of the world's gold indices were at or close to 52-week highs after showing gains of around [illegible] over the month.

Most of the majors gained 10-15% in August, although their performance was eclipsed by some of the mine developers, notably MinMet, Oxus Gold, Ivanhoe Mines and Golden Star Resources.

The sustained improvement in the gold price and the stronger market prompted a number of smaller gold producers and developers to take advantage of the fair weather and raise funds through equity offerings. Substantial amounts of money were raised by Alamos Gold, Aurizon Mines, Bolivar Gold, Cumberland Resources and Eldorado Gold – to name just the first five in alphabetical order. In most cases demand for shares was such that the underwriters took up their over-allotment option.

The bigger producers also made hay while the sun shone. The world's second largest producer, AngloGold Ltd, placed R2 billion of five-year bonds to fund the company's programme of capital expenditure in South Africa. Canadians Bema Gold, Wheaton River Minerals and Cambior Inc raised sums of C$60 million, C$100 million and C$94.5 million, respectively, through equity sales to fund mine projects. Durban Roodepoort Deep Ltd sold US$43.1 million in new shares to South African investment bank Investec Group.

AIM: A Time to Sow

The improved climate for gold companies prompted a number of mine developers to come to London's Alternative Investment Market (AIM) over the summer period. AIM has become particularly popular as an alternative to Toronto for smaller companies wishing to raise development funds for projects all around the world.

HPD Exploration plc is a name that may not be familiar to readers, but the team is basically the same that discovered the Esquel project for Brancote Holdings, sold to Meridian Gold for US$368 million last year. HPD is now looking for another prime epithermal resource, not far from Esquel, in Patagonia. GMA Resources plc listed in June and is looking to develop a gold mine through a 52% earn-in the Tirek gold project, in Algeria. Cambrian Mining is earning up to 90% in a project in Ghana and latest AIM entrant, Archipelago Resources, is undertaking a feasibility study review of the Toka Tindung project, in Indonesia.

London players also have had a pivotal role in the drama acted out to gain control of Ghana's most prized asset, Ashanti Goldfields. London-listed Randgold Resources submitted an indicative bid in opposition to the one AngloGold placed on the table in May. London-based Lonmin plc – with 28%, Ashanti's largest shareholder – was the key stakeholder that had to be won over.

There is a touch of irony in the fact that the two protagonists for Ashanti operate harmoniously in joint venture at Morila – one of the world's lowest cost and most profitable mines. In the June quarter Morila's cash costs were US$93/oz, putting Randgold Resources in second place behind new entrant Wheaton River Minerals in World Gold's league table. But despite the performance of these companies and perennial low-cost operators Goldcorp and Meridian Gold, there is a distinct trend of increasing operating costs as the US dollar has weakened against the main producing currencies, the South African rand and the Canadian and Australian dollars. Average total cash costs in the June quarter were US$224/oz, a 24% increase from a year ago. The South Africans were hardest hit with unit cash costs rising a staggering 51% over the twelve months, far outpacing the 26% appreciation of the rand. Harmony's costs increased by 70% year-on-year, Durban Deeps' by 56%; and AngloGold's by 39% This cost inflation is putting a squeeze on margins in South Africa as prices in rand/kg terms fall.

A Time to Reap

The average London pm fix in the June quarter was US$347/oz. Despite the evidence of shrinking global hedgebooks, a number of producers received a price above the spot price through their hedge positions. For instance, Australians Sons of Gwalia and GRD each received a price closer to US$400/oz.

But in times of a rising market, inflexible hedging strategies can make prices look a little sick. Take, for instance, Avgold, which only realised a price of US$309/oz. Cambior at US$312/oz, and Cameco, at US$314/oz, were hardly in a better position. However, Gold Fields, an unhedged South African producer, received a price of US$349/oz while its cash costs were US$291/oz, a cash margin of US$58/oz.

Over the past few months Gold Fields has gone long way to satisfying the requirements of the Mining Charter in that country by agreeing to sell a 15% interest in its South African gold-mining assets to Mvelaphanda Resources Ltd for R4.1 billion in cash. The assets involved in the deal include the Beatrix, Driefontein and Kloof mines, representing 71% of Gold Field's total attributable output. Gold Fields chief executive, Ian Cockerill believes that the structure of the deal is simple, fair, and sustainable. "This is not nationalisation by stealth" he told World Gold. "This is a real deal for real money for real assets."

He was critical of some of the other agreements that have been concluded between gold mining companies and empowerment groups. "I think a lot of the empowerment deals that have been done to-date have questionable long-term sustainability," he maintained. "And if they are sustainable it's probably because they have been sold at a huge discount."

Despite a poor quarter for Gold Field's Driefontein mine – which saw production decline by 67,000 oz as the grade fell from 6.5 g/t to 5.5 g/t, the company maintains its position as the fourth largest producer in the world with a running four-quarters production of 4.4 Moz.

Newmont Mining remains the largest producer by some way, with 7.9 Moz over the last twelve months, followed by AngloGold (6.0 Moz) and Barrick Gold (5.7 Moz). US copper-gold giant Freeport McMoRan posted a production rise year-on-year of a massive 93% (414,000 oz) as its Grasberg mine encountered higher orebody grades. ■

The *Alchemist* is published quarterly by the LBMA. For further information please contact Susanne M Capano, Editor LBMA Executive 3rd Floor, 13-14 Basinghall Street London EC2V 5BQ Telephone: 020 7796 3067 Fax: 020 7796 2112 Email: alchemist@lbma.org.uk www.lbma.org.uk

The *Alchemist* is designed and produced by IonRiver, London