Thunder Road report

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This issue:

Gold market - accident waiting to happen or crime scene? Don't shoot the messenger

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This report combines analysis of the gold market with the greatest story of hidden treasure in world history and (amazingly) most people have never even heard about it - although it has resurfaced on a couple of financial websites very recently. I would expect you to be cynical at first, as I was, but there is plenty of "primary evidence" which suggests it is true.

The motivation for writing this report is the fact that the gold market doesn't make sense. Basically, the numbers don't add up. This became apparent to me while I was writing the Gold War report at Redburn Partners in 2007. At the time, I was more interested in discussing the upcoming bust in the credit cycle and why gold and silver were the "go to" assets for investors. Since then, I've been meaning to write a piece interpreting the "official data" for the gold market.

How many "London Good Delivery" gold bars are there?

My analysis suggests that the data on the volume of gold traded, if put in its proper context, does not tally with my estimate of the amount of gold that is held in the form of bars which conform to "London Good Delivery" standard.

In my opinion, one of the following is true:

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Alternative 1:

On average there is more than one ownership claim on each gold bar conforming to London Good Delivery (LGD) standard on the "pool" of gold which acts as liquidity for the massive OTC gold trade based in London. Essentially, the market operates on a fractional reserve basis, but if a sufficient number of market participants become concerned about this and there is a stampede to take delivery of physical bullion, there is a risk of market failure. Such a process could be delayed by central banks lending gold to the market, although this would likely be obvious by a spike in gold lease rates, or by a much higher gold price in order to encourage holders to sell bullion. In this scenario, the gold price could SOAR at any time and the gold market, which is subject to little regulation, is basically an accident waiting to happen;

Or:

Alternative 2:

There is FAR more gold bullion held in private hands than is acknowledged by current industry estimates. It is the large amount of additional gold on top of known gold stocks which provides sufficient liquidity to support the high volumes traded through London. The most likely source for this gold dates back to the Japanese conquest of Asia from 1894-1945 when Japan is alleged to have looted the gold and valuables of 12 nations – it is best known as the story of Yamashita's Gold. If true, my analysis shows that particularly heavy volumes of this gold may have been laundered into the London market during 1986-90 and the mid/late 1990s. In this scenario, the continued evolution of the gold bull market could be more protracted, if supplies of this gold continue to enter the market periodically.

It seems to me that an investigation into the gold market is justified. The Bank of England and the Financial Services Authority (FSA), which have some responsibility for overseeing the gold market in London, are probably the best placed institutions to carry this out.

I'm not afraid to be ridiculed for these views, indeed it would surprise me if I wasn't (especially by the professionals in the OTC gold market), just as I experienced plenty of ridicule during 2006-07 when I was talking about credit bubbles, Kondratieff Winters and Austrian economics.

Given that the outlook for most paper currencies is so dire. I don't see the need to alter my portfolio weightings at this point whether Alternative 1 or Alternative 2 is correct. If it's the latter, it just means the authorities can keep the fiat currency party going for longer, but eventually the party has to end. As I said in the last Thunder Road, "Defence is sometimes the best means of attack", 90% of my portfolio is in gold, silver and food/agriculture related stocks at this point. I'm sitting tight for now, but may sell a bit of gold and silver exposure into a big spike if there is one (in case Alternative 2 is the correct one).

I should also make it clear that if Alternative 2 is correct, I have no intention of delving deeper into the subject of Yamashita's Gold – it would be something for others, possibly at an official level. Indeed, I have deliberately held back a great deal of information on this subject from a variety of sources. My main aim is to provide investors with a better understanding of the gold market which, even on a good day, is about as clear as mud and frequently behaves in a counter-intuitive fashion, as I have highlighted numerous times.

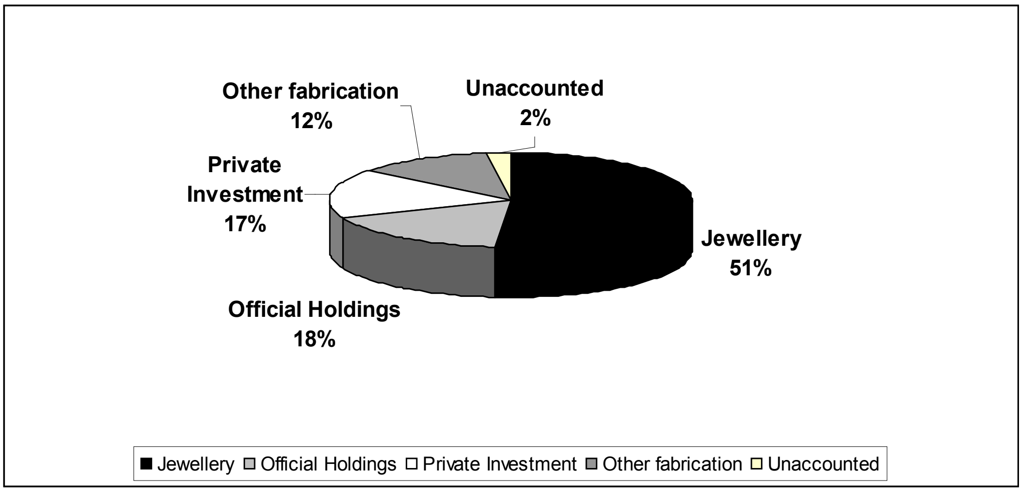
One final thought on Alternative 2. If it is true, much of the gold allegedly stolen by the Japanese is believed to come from China. Not only has China announced that it has doubled its official gold reserves, but it has started to promote the ownership of gold and silver to its people. Is China actively trying to reverse events which began more than a century ago?

One final thought on Alternative 1. If it is true, the next phase in the gold bull market will be a religious experience for anyone unfortunate enough to be short of gold.

Gold – how much is there and how much is traded?

The World Gold Council (WGC) was founded in 1987 by the leading gold miners to represent the gold industry. It publishes a quarterly report on supply & demand trends for gold in conjunction with the consultancy, GFMS Ltd. The WGC's website also provides a plethora of other information on the gold market, much of it in conjunction with GFMS, and is viewed by analysts as the "official" data. The GFMS data puts the total of all the gold ever mined and still available as "above ground stocks" (given that gold is hardly ever "consumed") at 163,000 tonnes at the end of 2008. This can be seen at the "Gold Market Knowledge" page on the WGC's website. These above ground stocks break down as follows:

Gold - above ground stocks end-2008 (tonnes)



Source: World Gold Council/GFMS Ltd.

David Guyatt, in his article "The Spoils of War", commented that prior to the Californian Gold Rush of 1848 the amount of gold believed to be in existence was about 10,000 tonnes, i.e. it was "the sum total of gold mined throughout the world during the preceding 5,850 years, for which mining records exist." In correspondence with the World Gold Council in 1998, Guyatt says that the WGC admitted that this figure was just an "industry estimate", although as he says:

"Nevertheless, this estimate has been incorporated into current day official mining figures and punched out as actual fact."

I'm not criticising the WGC or GFMS, far from it, but there is a scenario where this assumption might be incorrect, as I will explain below.

Turning to the trading of gold, the world's biggest market for gold bullion BY FAR is London where it is traded on an OTC (over-the-counter) basis via the LBMA (London Bullion Market Association) rather than on a recognised exchange. This is a wholesale market and is not one for retail investors - the minimum amount of gold traded in a single transaction is 1,000oz. Frankly, I think that excluding retail investors is unacceptable, but that's a different story.

The important thing to note here is that OTC markets are very lightly regulated – reminiscent of the self-regulatory/gentleman's club style of the London Stock Exchange prior to "Big Bang" in 1986. This means less transparency and arguably more potential for abuse. As GFMS said in its 1996 Gold Survey, the advantage of an OTC market is:

"confidentiality and lack of transparency; business can be conducted privately, sheltered from the attention of other market participants, competitors, regulators and, of course, analysts (how convenient, Paul)."

Even the LBMA says on its website:

"It also provides confidentiality, as transactions are conducted solely between the principals involved."

Let's look at the mechanics of the wholesale gold market. The vast majority of OTC gold is traded "loco London" which is described on the LBMA's website as follows:

"Loco London is a concept that is perhaps the most important aspect of the London bullion market as it represents the basis for international trading and settlement in gold and silver. Most global over-the-counter gold and silver trading is cleared through the London bullion market clearing system, with deals between parties throughout the world settled and cleared in London…With this business as a base, and supported by the increasing acceptance of the London Good Delivery List, London bullion dealing houses established global client relationships. These clients opened bullion accounts with individual London trading houses. It soon became evident that these "loco London" accounts, while used to settle transactions between bullion dealer and client, could also be used to settle transactions with other parties by transfers of bullion in London. Today, all such third party transfers on behalf of clients of the London market are effected through the London bullion clearing system."

You can see from the above that the London OTC gold is effectively the "global" gold OTC market. The gold traded through London has to conform to gold bars which match the LBMA's definition of "London Good Delivery" (LGD). The standard for LGD bars includes:

- Minimum fineness of 995 parts per 1000;
- Weighing 350-430oz.;
- Recommended dimensions (approximately) – top surface 255mm x 81mm, bottom surface 236mm x 57mm, thickness 37mm;
- Serial number; and
- Assay stamp of refiner.

It is also important to note that most of this OTC gold trading (over 95%) takes place in the form of "UNALLOCATED" gold. Unallocated gold is a general and unsecured claim on a "pool of gold" in a bank vault, rather than relating to individual, segregated gold bars with specific serial numbers which CANNOT be used by the bank as "liquidity".

The concept of unallocated gold very significant in the context of LBMA trading and this report. It could prove to be the gold market's Achilles' heel.

Will Deighton, Head of London Treasury Operations for UBS AG explained in a speech, "Loco London Clearing", at the 2004 LBMA Conference:

"an unallocated account is an account where specific bars are not set aside and the customer has a general entitlement to the metal. This is the most convenient, cheapest, and most commonly used method of holding metal (but not the safest, Paul). The allocated account, on the other hand, is an account opened when a customer requires metal to be physically segregated, and this needs a detailed list of weights and assays."

There are a number of key points to understand here:

- Customers holding unallocated gold are nothing more than unsecured creditors from the bank's perspective – they have even less protection than a holder of a typical current bank account. If the bank became insolvent, the holder of unallocated gold could lose some or all of their money – this is perverse when one reason for holding gold is protection from financial crises;
- The unallocated gold is nothing more than a financial liability for the bank (not a liability to be paid in bullion unless demanded by the customer). The gold, if it's there, is the property of the bank (part of its working capital) which can do what it wishes with it, e.g. keep it in the vault, lend/swap it, or even sell it – while retaining a financial liability to the holder of the unallocated account; and

- From the bank's perspective, the gold can be used as an interest free loan, since the banks can sell, lend or structure derivative trades with the gold. One could argue that there is an incentive, therefore, for banks to operate unallocated gold accounts on a FRACTIONAL RESERVE basis in the belief that it is highly unlikely that most holders of unallocated gold will suddenly demand either physical delivery or conversion to allocated gold accounts.

When I was at Redburn Partners, my bank analyst colleague asked two major UK bullion banks what level of gold backing, in ballpark terms, did they have for these gold unallocated accounts. One bank didn't reply and the other responded:

"I am not sure that there is anything helpful that I can add; there is nothing in our public disclosure that is going to get us close to a meaningful discussion, so I am afraid that I am not going to be able to help."

The subject is clouded in secrecy.

From 1997 onwards, the LBMA has released "Clearing Statistics" data on the volume of gold traded through London – previously nobody had a clue. At the time it was quite a shock as most commentators were STUNNED by the sheer size of the gold trade in London.

The only problem was that the LBMA didn't disclose the precise amount of gold traded, but rather the daily average amount of gold TRANSFERRED by the LBMA's six clearing members each month:

- Barclays Bank;
- Bank of Nova Scotia – ScotiaMocatta;
- Deutsche Bank;
- HSBC;
- JPMorgan Chase; and
- UBS.

Amazingly, even though the numbers published in the Clearing Statistics seemed huge, they still dramatically understated the true volume of gold traded as I will explain in a moment. However, it's important to understand exactly what the Clearing Statistics represent. Here is a summary of some comments from JP Morgan.

The Clearing Statistics include:

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

The Clearing Statistics exclude:

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

It should also be noted that the clearers only record one side of each transaction, the debit side, in order to avoid double counting of trades.

The key thing to note about the Clearing Statistics is that they represent NET VOLUMES moved between accounts held with clearing members. Here are a couple of examples of how it works from the LBMA's "Alchemist" publication:

"if 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 (better described as debits/credits in unallocated accounts, Paul), and no impact on the clearing statistics."

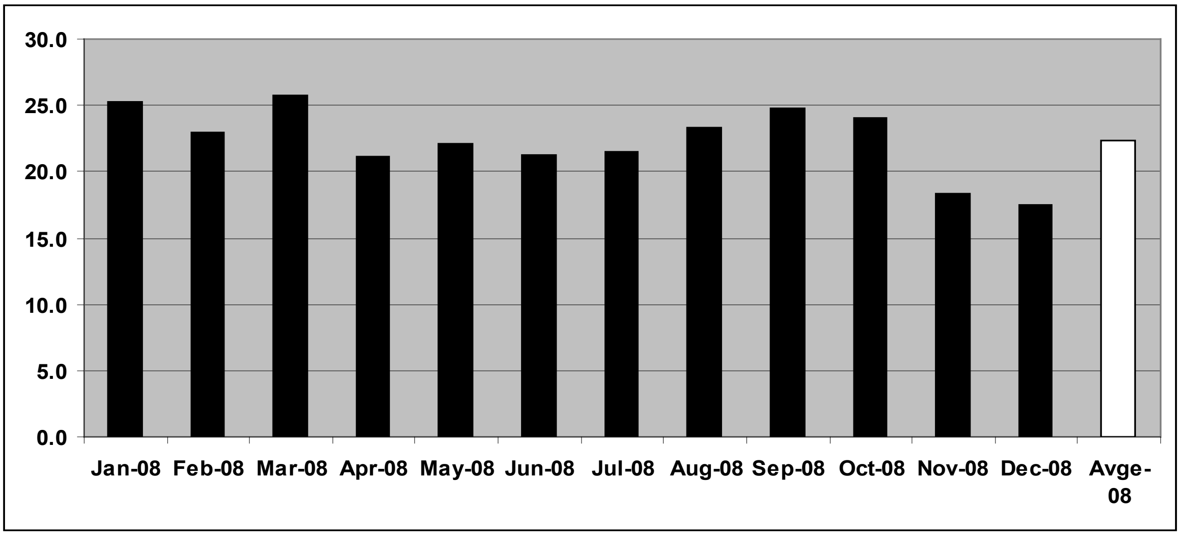
“the interbank market is also showing increased activity – but if I now trade 50 times a days rather than 20 with the same counterpart, it still comes down to only one (net) transfer of metal.”

Here is a another interesting example which suggests that a proportion of the institutional trading in the market also doesn’t feed through into the Clearing Statistics:

“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.”

In 2008, the average DAILY number of ounces transferred was 22.3m oz, equivalent to 693 tonnes of gold bullion

LBMA - average daily gold ounces transferred in 2008 (m oz.)



Source: LBMA

While seemingly a massive amount of gold, the 22.3m oz or 693 tonnes substantially understates the true amount of gold traded due to the netting of trades in the calculation of Clearing Statistics as highlighted above. An FT article from January 1997, when the LBMA first published the data commented:

“traders insisted the association’s statistics were only part of the picture…Mr Jeffrey Rhodes, of Standard Bank, London, said the 30m ounces should be multiplied by three, and possibly five, to give the full scope of the global market.”

In a letter to the European Commission from the LBMA’s Chief Executive, Stewart Murray, on 2 March 2007, he stated that:

“Previous estimates of the daily volumes traded in the London market have suggested that the quantities are a positive multiple of the clearing volumes with a multiplier of between 5 and 9.”

These are “their” numbers, but let’s be conservative and use a multiple of 4 – which means that in 2008, average daily amount of gold traded through London in 2008 was 89.2m oz. or 2,774 tonnes. From a reply to my email, the LBMA confirmed that this turnover includes spot gold transactions as well as forwards, options and leasing, etc., but it would not give me an idea of the percentage of gold trade which is spot. The only indication comes from the Bank for International Settlements’ 1997 annual report which states that:

“According to a Bank of England survey, most of the trading was spot – both physical and book entry – with a significant forward market and an active option market.”

So if most of the trading on the LBMA is spot, let's assume 70%, we can estimate that the DAILY spot volume of gold traded in London is about 1,942 tonnes (2,774 tonnes x 70%). The depth of this market is far greater than most people realise.

If you consider the aggregate amount of all the gold mined worldwide in 2008 (2,414 tonnes) and all of the scrap gold recycled in 2008 (1,212 tonnes), these two sources only amount to less than 15 tonnes of gold supply per working day, or less than 0.8% of daily spot gold turnover. Indeed, all the gold mined and recycled in a year represents less than two days of spot trade in London.

Gold mining - worldwide annual production is a "drop in the ocean"

Source: AngloGold Ashanti

There is some gold traded OTC which is not cleared through London. Here is a quote from Gerhard Schubert, a director of Fortis Bank in London, at the LBMA conference in 2008. He is a 30-year veteran of gold and silver trading:

"One of the most important objectives of the LBMA was to strengthen the loco London contract so that more OTC business could be settled and delivered through London. This objective has clearly been reached with at least 90% of the daily OTC turnover being settled and cleared…through London."

If we assume that the LBMA reported trade accounts for 91% of the world total, then the gross world average daily turnover in 2008 was 2,134 tonnes (1,942 tonnes / 91%), worth $72.0bn!

Let's assume that the announced sales by central banks are broadly representative of their activities in the spot market. I've little doubt that they write out-of-the-money call options against their gold to try and earn some income, but I doubt that they are cavalier enough to lose much bullion this way – so the spot trade generated from this will be very modest. Put in this light, recent annual sales and purchases of gold reported by central banks are a drop in the ocean in comparison with the overall spot trade in the gold market. In 2008, WGC/GFMS estimated that net sales by the "Official sector" were 236 tonnes. From the World Gold Council's website, I have identified nearly 150 tonnes of central buying, suggesting that the gross amount of spot trade by central banks last year was about 380 tonnes – equivalent to about 18% of ONE average day of London spot gold trade.

We can now put this daily wholesale trade of 2,134 tonnes through London each day in the context of the available "pool" of gold held in the form of London Good Delivery (LGD) bars. That information is not available publicly, so we have to deduce it by a process of elimination. Let's cast our minds back to the WGC/GFMS Ltd estimate for the total amount of gold ever mined and still available as above ground stocks, i.e. 163,000 tonnes at the end of 2008. The detailed break down of these above ground stocks is as follows:

Gold - above ground stocks end-2008

Category	Tonnes	% of total
Jewellery	83,600	51.3%
Official Holdings	28,700	17.6%
Private Investment	**27,300**	**16.8%**
Other Fabrication (Industrial/dental,etc)	19,700	12.1%
Unaccounted	3,600	2.2%
Total	**163,000**	**100.0%**

Source: WGC/GFMS Ltd.

My aim is to look at how much of those above ground stocks currently provide "liquidity" for the wholesale OTC gold trade, almost all of which takes place through London. Gold held in the form of jewellery is not immediately available – although it can be recycled into bars if owners are tempted by a sufficiently high gold price to sell it and there is available refining capacity. Gold used in industrial/dental applications will obviously be more difficult and have very limited availability at short notice. I'll return to the subject of central bank gold but, apart from the relatively small volumes being sold each year, it should be noted that any gold lent to the market by central banks is NOT permanent liquidity.

That essentially leaves the 27,300 tonnes of gold held as private investment as the foundation of the liquidity in the wholesale gold market. However, a significant chunk of this needs to be eliminated because it will not be in the form of 380-430oz. bars which conform to the LGD standard or, if it is in the form of LGD bars, is (semi-) permanently withdrawn from the market in allocated accounts, etc.

The question is how much?

To begin with, we need to eliminate gold held worldwide in the form of official coins. The most widespread gold coin is the one ounce South African Krugerrand of which there were 46.0m oz (1,430 tonnes) outstanding at the end of 2008 according to Wikipedia. Of course, there are many other gold coins like British sovereigns, American Gold Eagles and Buffalos, Canadian Maple Leafs, Austrian Philharmonics, Australian Kangaroos, and plenty of others. Data from the US Mint states that approximately 14.0m oz (435 tonnes) of Gold Eagles and Buffalos have been minted. That takes us to approaching 2,000 tonnes along with the Krugerands. According to the WGC/GFMS data, net retail investment in official coins has amounted to almost 800 tonnes in only the last 6 years alone (note this is just newly minted official coins and excludes the resale of second hand official coins). In total, I'm going to assume that there is about 3,000 tonnes of gold held in the form of official coins worldwide.

Official gold coins - net retail investment 2003-08 (tonnes)

Years	2003	2004	2005	2006	2007	2008	2003-08
Gold coins	106.7	114.5	112.0	128.9	137.0	197.7	796.8

Source: WGC/GFMS Ltd.

There is also a category in the WGC/GFMS estimates for net retail investment titled "Medals/Imitation Coin". Looking in the footnotes, it appears that this includes "Medallions of at least 99% purity, wires and lumps sold in small quantities" as well as "the initial sale of many coins ultimately destined to be considered numismatic" which seems to imply they are commemorative in some way. In just the last six years, demand for this form of gold has amounted to 281.3 tonnes.

Medals/imitation coins - net retail investment 2003-08 (tonnes)

Years	2003	2004	2005	2006	2007	2008	2003-08
Medals, etc	25.5	26.3	37.0	59.4	72.6	60.5	281.3

Source: WGC/GFMS Ltd.

I'm going to assume that in total, there is about 400 tonnes of gold held worldwide in this form.

Finally, on the subject of gold coins, there is all the gold coinage which is still in existence, but has not been part of official minting programmes in the modern era. This type of gold coinage is perhaps best described as "numismatics". Almost every country and civilisation has issued gold coinage at some point in its history. Examples include Indian fanams from the 17th-19th centuries, Prussian gold marks, Japanese kobans from the 16th-19th centuries, Swiss Helvetias, the Brazilians reis denominations and so many more. I assuming, and it has to be a stab in the dark, that there is about 500 tonnes of old gold coinage still in existence around the world. This is probably far too conservative as a "Report to the Director of the Mint, Washington DC" in 1896 estimated that 5,809 tonnes of gold coins had been minted worldwide during 1873-1895 alone. Now some of these will have been resmelted into bars and jewellery, but my 500 tonne estimate seems very low in this context, i.e. I've only less than 10% of this figure is still in existence.

The amount of gold held in ETFs has been broadly stable so far in 2009, having risen dramatically over this decade. The biggest ETF by far is the SPDR Gold Trust (ticker: GLD) which claims that it had 1,094 tonnes of gold in storage, all of which is in the form of London Good Delivery Bars. For simplicity, we'll assume here that GLD really does have all the gold it says it has. Overall, let's assume that there are approximately 1,300 tonnes of privately held gold is being held in all ETFs. Looking at GLD, its holding have been stable in recent months, so let's assume that there is about 1,300 tonnes of ETF-held gold which is not available as liquidity to the London market (on a net basis anyway).

On the COMEX exchange in New York, gold is traded in units of 100oz, rather than c.400oz. in London, which is another common size for gold bars. The aggregate of dealer and customer inventory held in COMEX warehouses is currently 92.9m oz (289 tonnes), let's call it 300 tonnes. One would expect an additional amount of 100 oz gold bars, which has been bought on COMEX, to have been moved into private storage, let's assume 100 tonnes, making 400 tonnes of 100oz. bars in all.

The combined amount of gold coins, ETFs and COMEX inventories/bars amounts to approximately 5,700 tonnes, bringing the 27,300 tonnes of privately held gold down to 21,600 tonnes. That figure is before we've taken account of private retail investment in GOLD BARS which are not immediately available as liquidity to the London gold market either – primarily because they are in the form of small bars. It is my contention that the amount of gold held in this form is significant:

- To begin with, it is worth remembering that London Good Delivery (LGD) bars weigh 380-430 oz, so just one of these bars is valued at US$402,000-455,800 at the current gold price of US$1,060/oz. In the retail market, therefore, it would only be very wealthy people, or those investing in gold via ETFs (already dealt with above), who are likely to invest in gold via LGD bars:
- While widespread interest in gold as an investment has only resurfaced in the western world in the last few years, it never lost its attraction in the developing world, especially in India, other Asian economies (e.g. Vietnam and Taiwan), Turkey and Middle Eastern countries.
- We should remember that in most countries and on most gold exchanges, gold is largely held and traded in bars of weights other than the LGD standard of 380-430oz. Any gold bar weighing less than the LGD standard is technically considered to be a "small" bar.

Let's consider the small bar market in more detail, There are numerous sizes of small gold bars, but the most popular are listed in the following table together with the region where they are popular:

Kilo bars	1 kg/32.15 oz.	India, Turkey, Italy, Middle East, TOCOM
Ten tola bars	3.75 oz	India, Pakistan, Middle East, Singapore
Five tael bars	6.02 oz.	Hong Kong, China, other South East Asia
Ten baht bars	4.90 oz.	Thailand
100 oz. bars	100 oz.	COMEX Exchange in New York

Here are some comments from Mehdi Barkhordar, Managing Director of the large PAMP gold refinery in Switzerland, in a speech "The Small Gold Bar Market" at the 2006 LBMA Conference:

"In India…10 tolas demand has been all but replaced by an increased demand for 100 grams and 1 kg .995 bars…Another significant development has been a gradual move towards coins and bars as the investment vehicles of choice for the retail public, which previously used gold jewellery for this purpose."

"Historically, the majority of the Middle East (including Turkey, Paul) market was primarily a .9999 kilo bar market but, today, .995 kilo bars represent the majority of bars sold."

Conversely, the far East continues as a .9999 kilo bar market, since both the public and jewellers value the added purity that ensures consistency and better quality of the end products."

Briefly shifting back to the western world - here in London, the ATS Bullion website is offering the following gold bars – 5 gram, 10 gram, 20 gram, 50 gram, 100 gram, 1 kilo and 1 oz. Blanchard, one of the largest bullion dealers in the US, has this to say:

"Blanchard and Company, Inc. also offers a comprehensive range of gold bullion bars, which are accepted in all major markets around the world. The choice extends from 400 ounce gold bars through kilo bars, 1 oz bars, 100 gram bars and various sizes in between."

It is widely believed that almost all of the gold held privately in the eastern hemisphere is in the form of jewellery. This is not the case. The WGC/GFMS has given an indication of this via its estimates for net retail investment demand, in the form of coin and bars, on a geographic basis since 2003.

Net retail investment in official coins and bars by geography 2003-08 (tonnes)

Year	2003	2004	2005	2006	2007	2008	2003-08
India	90.0	104.0	134.5	185.6	217.5	190.5	
Greater China	1.2	12.2	14.8	19.1	34.0	78.6	
Indonesia	1.6	5.0	3.0	-1.0	0.3	2.9	
Vietnam	36.0	39.2	34.0	64.0	56.1	96.2	
Middle East	16.2	17.1	22.6	19.9	20.1	28.2	
Turkey	48.7	48.6	53.5	59.9	61.1	57.1	
Other	50.0*	50.0*	71.0	51.0	51.3	103.7	
Sub-total (developing)	**243.7**	**276.1**	**333.4**	**398.5**	**440.4**	**557.2**	**2,249.3**
US	20.9	20.1	28.3	27.4	16.6	77.8	
Europe	9.1	-20.4	-13.9	-11.5	9.6	173.8	
Japan	49.6	70.8	40.0	-42.7	-56.3	-39.4	
Sub-total (developed)	**79.6**	**70.5**	**54.4**	**-26.8**	**-30.1**	**212.2**	**359.1**
Total	**323.3**	**346.6**	**387.8**	**371.7**	**410.3**	**769.4**	**2,609.1**
Developing (%)	*75.4%*	*79.7%*	*86.0%*	*100.0%*	*100.0%*	*72.4%*	*86.2%*

Source: WGC/GFMS Ltd., * TRR estimates

It is incredible just how dominant the eastern hemisphere has been in bar and coin investment, averaging 86% during the last six years. It was only last year that there was any significant reversal in that trend.

In order to get an estimate of the amount of gold held worldwide in private hands in the form of bars, I have looked at the average ratio of net retail investment in bar hoarding estimated by GFMS versus net retail investment in official coins since GFMS made the data publicly available in 2003:

Net retail investment in bar hoarding versus official coins 2003-08 (tonnes)

Year	2003	2004	2005	2006	2007	2008	2003-08
Bar hoarding	177.9	256.6	262.7	235.3	236.3	378.2	1,547.0
Official coins	106.7	114.5	112.0	128.9	137.0	197.7	796.8
Ratio							*1.94*

Source: WGC/GFMS Ltd.

During the last six years, therefore, net retail investment in gold bars has averaged 1.94 times the investment in gold coins. If this ratio is applied to my 3,000 tonne estimate for total gold held worldwide in the form of official coins, it suggests that there is an additional 5,820 tonnes, of gold held in bar form. The key point here is that the VAST MAJORITY this gold is likely to be held in small bar form whether it is held in the developing (most of it) or developed world. I'm assuming that 80% of this 5,820 tonnes does not conform to LGD bar standard, i.e. 4,656 tonnes – let's call it 5,000 tonnes.

Let's do some interim summing up. We started with 27,300 tonnes of privately held gold and have eliminated a total of 10,700 tonnes which by my estimates is not held in LGD bar form. Let's now assume that of the remainder, about 10% (1,700 tonnes) represents the long-term gold holdings of the ultra-wealthy and institutions which is held in ALLOCATED gold accounts on a semi-permanent basis and not available to the OTC gold market as liquidity (at least not until we see a much higher gold price). This leaves a maximum pool of gold available to the world's OTC gold market in LGD form of about 15,000 tonnes at the end of 2008.

Estimated privately held gold for OTC market liquidity in LGD bar form

End-2008	Tonnes of gold
Total privately held gold	**27,300**
Less:	
Official coins	3,000
Medals/imitation coins	400
Numismatic (old coinage)	500
ETFs (mainly SPDR Gold Trust)	1,300
COMEX/100 oz. bars	400
Retail investment in small bars	5,000
Allocated/withdrawn on semi-permanent basis	1,700
Total LGD bars for OTC market liquidity	**15,000**

Source: TRR estimates, WGC/GFMS Ltd.

Does anybody else think that a pool of gold matching London Good Delivery standard of only 15,000 tonnes might be a little too SMALL to support a massive 2,134 tonnes on average of spot gold trade through London EVERY SINGLE DAY? On this basis:

- 14.2% of the entire global inventory of privately held gold matching LGD standards is being turned over every day in spot gold trade; and
- the entire pool of gold is turning over every 7 working days, or an incredible 36 times on an annual basis.

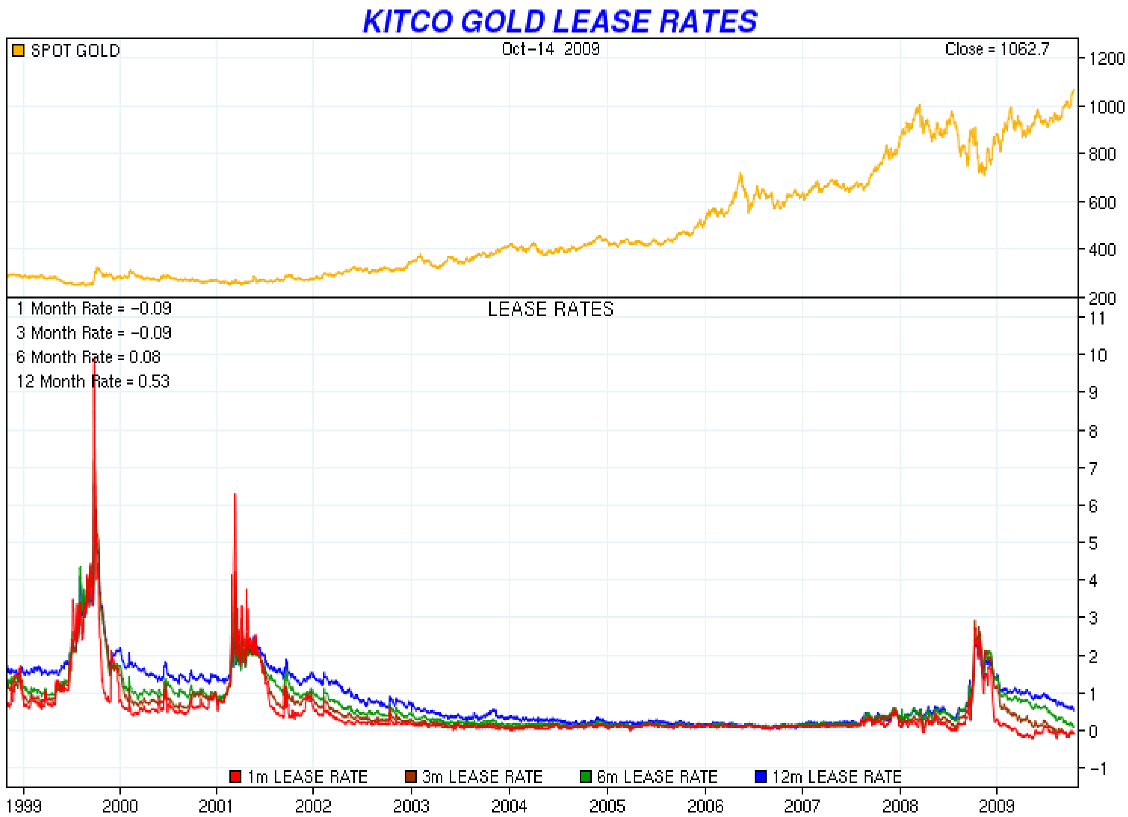
Now we should not forget that there is one other source of gold liquidity conforming to London Good Delivery standard. That is central bank gold which has been leased/loaned into the OTC market. Now it should be emphasised that this is only temporary liquidity because the reasons for borrowing gold are either to sell it or to cover a liability in bullion without buying in the market at the time. Either way, there is a requirement to buy it back at a later date and return it to the central bank lessor/lender. Effectively, leased gold will have dual claims of ownership – the central bank lessor and whichever party acquired the gold after it was "mobilised" in the market.

The gold leasing market has been very weak for several years. Firstly, the volume of gold price hedging by gold mining companies has completely collapsed. This was a large source of demand for leased gold in the 1990s and early this decade. The near extinction of gold price hedging by the miners was typified by the announcement last month from Barrick Gold, the biggest hedger historically, that it is closing out most of its remaining hedges.

Secondly, during the 1990s, when gold seemed to be a permanent bear market, it was the ideal asset to have on the negative side of carry trades, i.e. you could borrow gold at a lease rate of 1-2%, sell it and reinvest the proceeds in high yielding (in those days!) US Treasury bonds or anything else for that matter. Some entities might not have even bothered to hedge the gold price risk. LTCM was reportedly short of 300 tonnes of gold when it collapsed and the proprietary trading operations of a major investment bank's London operations were allegedly financed on gold loans. With gold having been in a bull market now for eight years, the gold carry trade (on the negative side anyway) has disappeared.

The chart below shows how gold lease rates have fallen sharply in recent years which is a function of two factors – the collapse in demand for leased gold and the general decline in short-term interest rates – although you can see that there was a brief flurry of activity in the wake of the Lehman collapse last year when all financial markets suffered from extreme stress.

Gold lease rates 1999-2009 (%)



Source: Kitco

Here is a comment from the Bank of England's Graham Young of its Foreign Exchange Division and this was all the way back in 2003:

"Recently, of course, gold lending rates have been extremely low. Commentators seem to be in broad agreement as to why that is. There is a low interest rate globally, and one might expect that to influence interest rates on gold. But there are also factors specific to the gold market. In particular, much, although not all, gold lending facilitates the hedging by gold producers of their future output. And, as is well known, producer hedge books have become smaller recently."

At the 2007 LBMA conference, Raymond Key, the Global Head of Metal Trading at Deutsche Bank gave a presentation titled "Lease Rates – Can they strike back?". His third chart (see the presentation here) showed how gold lending by central banks ("Official Gold Lending") had collapsed from an estimated 160m oz (4,977 tonnes) in 1999 to an estimated 70m oz (2,177 tonnes) by late-2007. Extrapolating the trajectory of the decline suggests that central bank gold lending at the end of 2008 would have been approximately 60m oz, or 1,866 tonnes.

This 1,866 tonnes is obviously set to decline further with the Barrick announcement, but let's be conservative (once again) and just look at the position at the end of 2008 as we can best estimate it. So, if I add this 1,866 tonnes of central bank lending to my estimate of 15,000 tonnes of gold held privately and conforming to LGD standard, this gives an aggregate pool of gold of just over 16,866 tonnes of gold to support an average of 2,134 tonnes of daily spot gold trade. On this basis, 12.7% of the pool of available gold is being turned over every day on average. I wonder how much of the gold pool is turned over on a big day…20%? And the entire pool is turned over every 7.9 working days.

In my opinion, this level of trade relative to the estimated pool of gold liquidity is excessive and doesn't pass the smell test.

Let's put this analysis of the spot trade in the gold market in the context of another financial market - the equity market. You might ask why not compare gold with another commodity market, like copper or oil, for example? The reason has to do with stocks-to-flow ratios and how this relates to daily market turnover versus the total amount of gold liquidity, equity market capitalisation or copper/oil inventories. As mentioned earlier, almost all of the gold ever mined is still in the form of above-ground stocks, of one form or another, since gold is hardly ever consumed. The overall stocks-to-flow ratio for gold (using the official figures) is about is about 67.5, i.e. it would take 67.5 years of 2008 mine production of 2,414 tonnes to produce the current above ground gold stocks in all forms estimated at 163,000 tonnes by the WGC/GFMS.

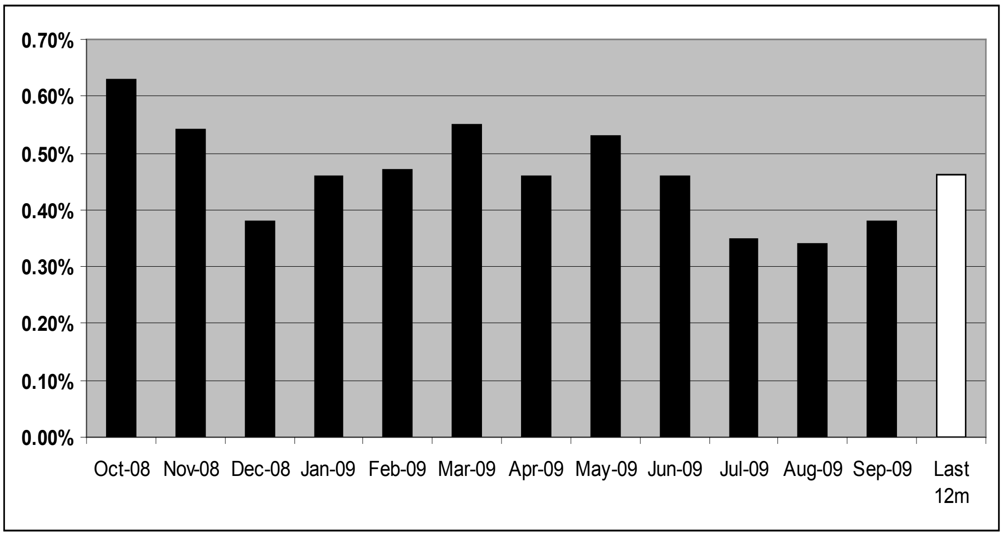
In stark contrast, when commodities like copper, oil, corn, soybeans, steel – just about everything for that matter - are produced, the vast majority are either consumed almost immediately (in the case of industrial commodities), or over a period of several months (in the case of agricultural commodities). The stocks-to-flow ratio for these commodities is expressed in fractions. For example, combined LME, COMEX and Shanghai Futures Exchange copper stocks are currently about 530,000 tonnes compared with annual world copper production of about 15.7m tonnes – a stock-to-flow ratio of 0.03. If we take crude oil, OPEC's latest forecast for OECD commercial stocks is 2.765m barrels compared with global production of about 83.6m bpd – a stock-to-flow ratio of 0.09. Consequently, one would expect the volume of copper traded versus typical copper inventories is dramatically higher than it would be for something like gold.

Gold is owned primarily as a store of value and as speculative instrument. Its role as a medium of exchange has diminished, although we might well see it reassert itself vis-à-vis paper currencies in due course, as it has in Zimbabwe. Gold is produced in order that it might be hoarded (held as "stock" or "inventory", effectively) in the form of bars, coins and, in some parts of the world, as jewellery. In a sense, equities have very similar characteristics in that they are held as stores of value (although that value relates to the perceived earnings power of corporations) and as speculative instruments.

In a "stocks-to-flow" sense, as described above, equities are much more similar to gold than are copper and oil, etc. For example, the "flow" in terms of new shares, e.g. from IPOs, rights issues and conversion of options is very small relative to the overall amount of equity outstanding across a mature equity market like the US and UK. If we take the UK stock market, the stocks-to-flow ratio was 21.65 for the twelve months ending September 2009. Obviously, both gold and equities are traded and one would expect the DAILY turnover of both gold and equities to be fairly low versus the total amount of "stock" outstanding, i.e. the pool of available bars matching LGD standard in the case of gold and the aggregate market capitalisation of the stock market in the case of equities.

But as I estimated above, the wholesale OTC gold market is turning over 12.7% of the entire global inventory of LGD gold bars on average every day. Let's see if this looks reasonable in comparison with the UK stock market - one of the world's biggest and most liquid. Thanks to derivatives meister David B. from Sigmund's old firm for helping me with the data. The chart below shows that during the last 12 months, average daily turnover in UK equities has been between 0.34% and 0.63% of the month-end market capitalisation of the UK Main Market and AIM (Alternative Investment Market), with an average of 0.46%. The latter is ONE TWENTY EIGHTH of the daily turnover (estimated at 12.7%) in the gold market – a massive difference.

UK equity market - avge daily turnover as % of market cap.



Source: London Stock Exchange

In September 2008, when Lehman collapsed and equity trading volumes were particularly heavy, the average daily turnover in UK shares was still only 0.73% of market cap. I should also note that, like the gold market, the total "pool" of UK equities is effectively higher than the market capitalisation because of the ability to borrow stocks to enable short trades – hence the true average daily turnover percentage is even lower.

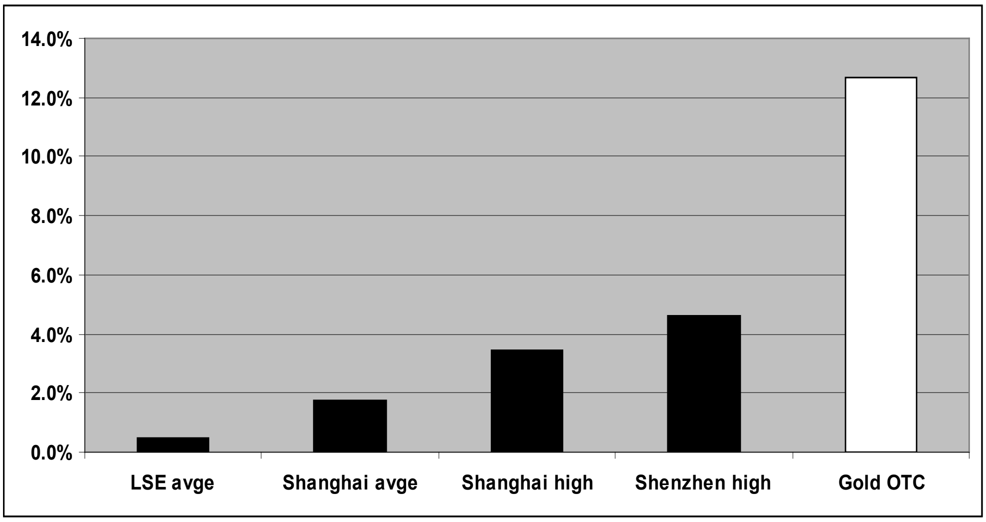
While average daily turnover on the NYSE and Deutsche Borse is somewhat higher than the UK equity market, let's look at the extreme examples of heavy equity trading. Take China. Gambling is believed to have originated in China around three thousand years ago in the form of a game known as "keno" (a type of lottery) and early versions of games like poker and black jack are also thought to have originated in the Middle Kingdom. The data from the Shanghai Stock Exchange's website shows that the year-to-date daily turnover has averaged 1.74% of market cap with a monthly peak of 3.46% (and this is "tradeable" market cap not total market cap).

Let's get even more extreme and consider the Shenzhen Stock Exchange, where they really "chuck it around"! The monthly peak in daily turnover as a percentage of (tradeable) market cap so far this year has been 4.63% - not even close to what we saw on average in the gold market in 2008.

Shenzhen Stock Exchange

The following chart shows a comparison of some of these daily turnover statistics:

Comparisons of daily turnover with the gold OTC market



Source: LSE, Shanghai Stock Exchange, Shenzhen Stock Exchange, TRR estimates

Some critics will obviously be unhappy with this comparison of gold and equity markets, but they are two very liquid markets with high stocks-to-flow ratios and, in my opinion, the sheer scale of the divergence in trading volumes looks out of line. Other critics will say, "Ahh!, but gold is a currency" which is correct, but there is a critical difference between gold and paper currencies as I'll mention in a moment. Still, let's have a quick look at currency trading and the data from the Bank for International Settlements' "2007 Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity". The survey showed that in April 2007, global daily forex turnover averaged US$3.21trn, 65% higher than April 2004.

Global daily foreign exchange turnover (US$bn)

	2004	2007	% in 2007
Spot transactions	621	1,005	31.3%
Forwards, swaps, etc.	1,152	2,076	64.7%
Est. gaps in reporting	107	128	4.0%
Total	**1,880**	**3,210**	**100.0%**

Source: BIS

The following table shows the breakdown of forex trade by major currencies:

Percentage share of global foreign exchange turnover

	2004	2007
US dollar	88.7%	86.3%
Euro	37.2%	37.0%
Yen	20.3%	16.5%
Sterling (£)	16.9%	15.0%
Swiss franc	6.1%	6.8%
Australian dollar	5.5%	6.7%
Canadian dollar	4.2%	4.2%
Swedish krone	2.3%	2.8%
Hong Kong dollar	1.9%	2.8%
Others	16.9%	21.9%
Total	**200.0%**	**200.0%**

Source: BIS

Obviously, because two currencies are involved in each forex transaction, the sum of the percentage shares of each currency adds up to 200% rather than 100%. However, if we focus on Sterling, the actual daily turnover in forex trade involving Sterling will be half of that gross market share, i.e. 8.25%, multiplied by the gross value of forex turnover, i.e. US$3.21trn, which gives US$264.8bn (£168.7bn) - assuming that trading volumes in the forex market have remained comparable since 2007.

To estimate the spot turnover in Sterling as a percentage of total Sterling forex turnover, let's assume that it is in line with the the forex market as a whole – 31.3% - as shown in the table before last. On this basis, we can broadly estimate that there is about US$82.9bn (£52.8bn) of daily spot turnover in Sterling. If we compare this with the latest data on UK broad money supply (M4) of £2,017.4 trn outstanding at end-August 2009, the daily average turnover is 2.6%. Even if we throw in the forward and swap activity, the £168.7bn of daily Sterling turnover is only equivalent to 8.4% of UK broad money.

Now I'm not saying that the volume of Sterling traded on the forex market is a perfect comparisons with the wholesale gold market either. All I'm trying to do is show that the daily turnover in the OTC gold market appears to be ABNORMALLY high. With regard to the forex market, a critic could also argue that a significant proportion of the UK broad money supply is not available to the banking system (both central banks and commercial/investment banks) and to the other market participants with which to trade in the forex market. But there lies a vital difference between gold and forex trading – the basis for the latter is nothing more than CREDIT. If you have collateral, the banking system can always create credit to initiate new trades or settle old ones and if you're a central bank you can print it. The relative values of currencies move up and down, but it works perfectly well as a CREDIT-BASED SYSTEM.

Gold is completely different - the total amount of physical gold in existence, however much that is - GFMS says 163,000 tonnes - is finite. You can't print gold! Production of newly mined gold and the recycling of existing gold is only adding about 15 tonnes per day of bullion which could be re-cast as LGD bars to provide additional liquidity to the market. This is nothing compared with average daily turnover of spot gold of 2,134 tonnes.

Remember back to the first part of this report and the mechanics of trading in the OTC gold market. Approximately 95% of trades are in the form of UNALLOCATED gold which are nothing more than PAPER CLAIMS on a general pool of gold in a vault. In my opinion, the excessive amount of gold trading relative to the likely pool of available gold bars conforming to LGD standard is evidence that the wholesale gold market has evolved into MORE OF A CREDIT-BASED SYSTEM than is generally realised IF THE OFFICIAL ESTIMATES FOR ABOVE GROUND GOLD STOCKS ARE CORRECT. This is very dangerous if the bedrock of all this trade is a finite quantity of rare metal AND the custodian of the world's reserve currency is debasing it on an unprecedented basis.

My conclusion is that one of two alternative scenarios is true. Either:

Alternative 1:

On average there is more than one ownership claim on each gold bar conforming to London Good Delivery (LGD) standard in the pool of gold which acts as liquidity for the massive OTC trade centred on London. Essentially, the market operates on a fractional reserve basis, but if a sufficient number of market participants become concerned about this and there is a stampede to take delivery of physical bullion, there is a risk of market failure. Such a process could at least be delayed by central banks lending gold to the market, although this would likely become obvious by a spike in gold lease rates, or by a much higher gold price in order to encourage holders to sell bullion. In this scenario, the gold price could SOAR at any time and the gold market, which is subject to little regulation, is basically an accident waiting to happen;

Or:

Alternative 2:

There is FAR more gold bullion held in private hands than is acknowledged by current industry estimates. It is the large amount of additional gold on top of known gold stocks which provides sufficient liquidity to support the high volumes traded through London. The most likely source for this gold dates back to the Japanese conquest of Asia from 1894-1945 when Japan is alleged to have looted 12 nations – it is best known as the story of Yamashita's Gold. If true, my analysis shows that a substantial amount of this gold may have been laundered into the London market during 1986-90 and the mid/late 1990s. In this scenario, the continued evolution of the gold bull market could be more protracted if supplies of this gold enter the market periodically.

It seems to me that there is a case for an investigation into the OTC gold market. The Bank of England and the Financial Services Authority (FSA), which have some responsibility for the overseeing the gold market in London, are probably the best placed institutions to carry this out.

The implication of Alternative 1 is, of course, fairly straightforward – at least in terms of the direction of the gold price. If true, there are two ways in which Alternative 1 can be resolved.

- The long way, where the reality of a shortage of physical bullion relative to claims on that bullion becomes apparent with an inexorable rise in the gold price; or
- The short way - an announcement is made that the central banks will stand behind the short gold positions of the bullion banks and the COMEX futures exchange. The central banks (Fed, Bank of England and the Swiss National Bank to name three) would have to offer cash settlement to those willing to trade out of their long gold positions. My guess is that in order to clear the market, the price would probably need to rise to at least US$2,000/oz to encourage investors to accept cash in lieu of bullion.

If Alternative 1 is correct, the end game is the same in terms of a much higher gold price whether we get there the long way or the short way. But you really have to ask yourself what chance there is that central bankers and bullion bankers will admit that they allowed the gold market to be swamped by an avalanche of paper promises? When they get into a corner, the modus operandi of such entities is usually to play for time. Although the current fiat currency system is headed for disaster, there is never a shortage of politicians and central bankers with the belief that they can defy economic gravity, even when the crisis is on top of them:

"And we will never return to the old boom and bust"

Gordon Brown, 21 March 2007

"the impact on the broader economy and financial markets of the problems in the sub-prime markets seems likely to be contained,"

Ben Bernanke, 28 March 2007

Pigs might fly and the US federal government might be able to overcome its technical bankruptcy without decimating the value of the US dollar, but it's unlikely.

A related question in the scenario of Alternative 1 is whether there is any evidence that gold investors/ holders are beginning to demand actual ownership of physical bullion or for it to be segregated in allocated accounts. The answer to this is an unequivocal "yes":

- Hong Kong announced that it was withdrawing its gold reserves from London and storing them in a newly-constructed vault
- There has been a great deal of debate as to whether the major gold ETFs are really fully-backed by gold bullion. Greenlight Capital, run by David Einhorn, sold its large ETF gold position and repurchased physical bullion;
- The Bundesbank and the Federal Reserve have confirmed that they have engaged in gold swaps. As I outlined in a previous Thunder Road, there is widespread speculation that the Bundesbank wants its gold back.

The recent surge in the gold price has taken many people by surprise – was it all due to the Independent newspaper's article about the demise of the dollar? In keeping with the increasing desire to own the physical bullion, the independent analyst Rob Kirby (www.kirbyanalytics.com) picked up a very interesting "nugget" of information last week. It seems that a substantial tonnage of gold was bought in the London market in the latter days of September. The buyer(s) chose to exercise their right to demand physical delivery and disrupted the market. According to Rob Kirby:

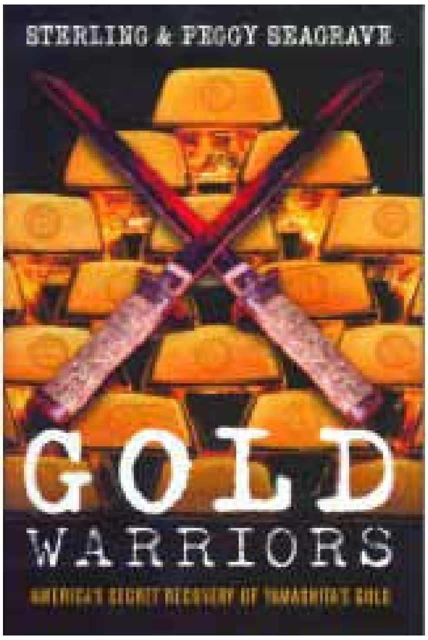
"The unexpected immediate demand for substantial tonnage of gold bullion created utter panic in at least two banks who were counterparties to this trade…Because these banks did not have the bullion to honor their contracted commitments, one or both of them approached the counterparties and asked if there was any way they could settle this embarrassing matter quietly on a 'cash basis' to absolve the banks from fulfilling their physical bullion delivery obligations. The purchasers were not interested in a 'cash settlement' and demanded delivery of physical bullion giving these banks 5 business days to resolve the situation. A premium of as much as spot plus 25 % (that would be 1,250-1,300 per ounce of gold) was offered to settle this matter in fiat money instead of the embarrassment of a very public 'failure to deliver'… Earlier this week, no less than two Central Banks became involved in effecting the physical settlement of this situation."

"Alternative 2" and Yamashita's Gold

Now let's consider the alternative conclusion and why there might be far more privately owned gold than is officially acknowledged. Some of you may know this story although I checked with a couple of people in London who know the gold market well and even they were not aware of it. The story is best known as "Yamashita's Gold".

It's interesting because the subject of Yamashita's Gold has been mentioned on two financial websites in recent weeks. It is the story of a vast amount of gold, silver and other valuables stolen by Japan during its conquest of Asia during 1894-1945. An almost forensic explanation of this subject was written in 2003 by Sterling and Penny Seagrave in "Gold Warriors – America's Secret Recovery of Yamashita's Gold".

Gold Warriors



Source: Amazon

According to the venerable London Review of Books:

"Gold Warriors is easily the best guide available to the scandal of 'Yamashita's gold', and the authors play fair with their readers by supplying them with massive amounts of their raw research materials."

In the Author's note, the Seagraves comment:

"As a precaution, should anything odd happen, we have arranged for this book and all its documentation to be put up on the Internet at a number of sites. If we are murdered readers will have no difficulty figuring out who 'they' are."

I should probably mention that I'm going to send this to the editors of the major UK newspapers (one of whom I know personally), a wide variety of journalists and commentators both in the mainstream media and online, my MP – as an extreme precaution – and to the FSA (not that I expect a response). By the way, my last medical was fine - blood pressure marginally below normal, cholesterol so low I was amazed (is it the red wine?). Furthermore, I'm not remotely suicidal, don't eat crustaceans, I drive and cross roads very carefully (drive "like an old lady" apparently) and rarely see the need to fly in light aircraft. If Alternative 2 is correct, it is a matter for others to pursue. As I said earlier, I don't intend to delve into the subject of Yamashita's Gold in further detail and have not included a great deal of further information on the subject from many sources, including the Seagraves.

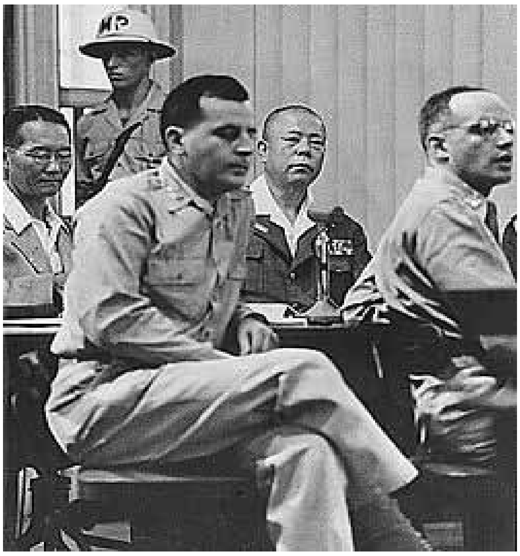
In an interview in 2003, Penny Seagrave was asked why she and her husband avoid travelling to the UK and US:

"We have been warned repeatedly that something will be planted in our luggage, so we can be arrested and salted away. Neither one of us wants to be a permanent guest at Guantanamo. We've even been told that the State Department has us on a list of "anti-Americans". That's ridiculous. Is being anti-corruption the same as being anti-American? Of course not – the price of liberty is eternal vigilance. We're not right-wing nor left-wing…As for the UK, there have been many cases of people who were falsely arrested and jailed in UK for asking too many questions about gold-bearer-certificates… The collaboration of Bush and Blair in lying about Iraq makes us wary of both regimes."

But we have a fine justice system in the UK, don't we?

Japan's conquest of south east Asia is part of (relatively) recent history which is poorly understood in the UK/US. Japanese expansionism was partly driven by naked imperialism, but also the need to acquire raw materials (e.g. iron, rubber and oil) for its industrialising economy. The First Sino(China)-Japanese War in 1894-95 saw Japan take control of Korea (annexed in 1910), Formosa (Taiwan) and part of the vast Manchuria region in northern China. Japan conquered Manchuria in 1931 and sought to takeover the rest of China during the Second Sino-Japanese War in 1937. The infamous Rape of Nanking (Nanjing) occurred that year when Japanese troops are estimated to have butchered up to 300,000 civilians. When World War II began, Japan was still fighting Chinese Nationalists and Communists for control of China and this conflict continued. Post-Pearl Harbor, Japanese forces advanced through south-east Asia conquering Hong Kong, British Malaya, the Philippines, Singapore, French Indochina, (Vietnam) Burma (Myanmar), Guinea, Borneo (Brunei) and Indonesia.

General Yamashita (second right) at his trial in Manila 1945



Source: Wikipedia

General Tomoyuki Yamashita commanded the Japanese Twenty-Fifth Army which invaded Malaya before inflicting the terrible defeat on the Allies with the fall of Singapore in February 1942 which led to the surrender of 130,000 Allied troops. The tide of the Pacific War turned with the Battle of the Coral Sea, followed by the Allies' emphatic victory in the Battle of Midway in June 1942. The same year, Yamashita was posted to Manchuria, but returned to command the Fourteenth Army in 1944 to defend the Philippines – which is where the gold story begins.

If you aren't aware of it, here is an unsatisfactorily brief summary of the allegations:

The test bed for the systematic looting of conquered Asian nations was the pre-Second World War theft of vast amounts of precious metals, art and manuscripts in Korea – a 2,000 year old culture which had remained essentially untouched until then. In 1937, as Japanese forces moved through China, Emperor Hirohito's brother, Prince Chichubu, set up the "Golden Lily" organisation to manage the capture of all forms of treasure.

As nation after nation in south east Asia fell to the Japanese after Pearl Harbor, the loot amassed by the Golden Lilly organisation was moved to Penang and Singapore and then by sea to Manila in the Philippines. Fake hospital ships were used as the Japanese began moving it back to the homeland and secreted away in vaults and tunnels, e.g. in the Japanese Alps.

When US submarines blocked the sea lanes in 1943, the movement of the plunder was halted and the Japanese changed tactics and began secreting the treasure in tunnels and vaults dug in the Philippines at about 172 locations in all. Each time a vault was completed, the slave labourers were incarcerated and the entrance closed up - along with the Japanese engineers (more than 170 in "Tunnel-8") just prior to Yamashita's surrender.

The US became aware that Japan was hiding treasure in the Philippines when a US Navy Warrant Officer, working with Filipino guerrillas, observed and photographed Japanese troops moving heavy boxes into a cave. The guerrillas subsequently recovered the boxes which were full of gold bars. The same Warrant Officer monitored another movement of loot on the island of Leyte afterwards.

US intelligence first learned of the locations of more hidden Japanese treasure sites in October 1945 from torturing Major Kojima Kashi, General Yamashita's driver. He led them to 12 treasure sites north of Manila. The haste with which Yamashita was hanged for war crimes and some of the legal technicalities of his trial have aroused suspicion.

President Truman was briefed and the decision was taken to keep the treasure hoards a state secret. To some extent, this made sense, as to have done otherwise could have undermined the post-war monetary system negotiated under the 1944 Bretton Woods agreement. Currencies were pegged to the US dollar which itself was pegged to gold at US$35/oz.

The decision was taken to use the gold and other valuables as funding for covert activities, in particular to fight Communism around the world. According to former CIA deputy director, Ray Cline, the first gold bullion was recovered during 1945-47 and moved out of the Philippines by ship.

Japan was designated as the anti-Communist stronghold in Asia. In order to achieve this, the right wing ruling elite were returned to power in the late 1940s and evolved into the Liberal Democratic Party (LDP). As one commentator has put it "It's not Liberal, it's not Democratic and it's not a Party".

Unfortunately for conquered Asian nations and hundreds of thousand of POWs and civilian slave labourers who experienced extreme suffering at the hands of Japanese troops during World War II, Japan was deliberately shielded from war reparations by the US. Japan was declared broke under Article 14 of the 1951 peace treaty.

Apart from minor recoveries, there was a lull of about 20 years after 1947 until Ferdinand Marcos, who controlled the Philippines from 1965-86, accelerated the recovery of hidden gold. For instance, a large hoard from Tunnel-9 was retrieved by 1974 and there seems to have been more major shipments during the early/mid-1980s in the run up to Marcos being ousted. When Marcos got too greedy, he was deposed in a "popular coup" according to the Seagraves.

What happened to the gold which Marcos recovered but hadn't sold is not known, nor the remaining treasure still hidden in caves and tunnels around the Philippines.

It's a fantastic story, but the key question is whether there is any evidence to support its authenticity? Just like the assassination of JFK, there is usually an independent eye witness to an event of such magnitude. In the former case, it was obviously Jean Hill, the lady in the red raincoat in the Zapruder film (frame 298), who saw a gunman behind the white picket fence on the (now famous) grassy knoll. As Jean Hill found to her cost, with years of threats and harassment, being an eyewitness can have unfortunate side effects.

In the case of Yamashita's Gold, we have not one but several eye witnesses (some of whom also came dangerously close to death) who have also provided evidence in a court of law which found in their favour. As the Seagraves argue:

"For hard evidence, the keystone case was the Gold Buddha, because it proved certain elementary things about Japan's looting of Asia and the postwar recoveries of this loot. The evidence was presented to a jury in a US court in Hawaii…"

The reference is to the case of "Roger Roxas and the Golden Budha Corporation versus Ferdinand E. Marcos and Imelda Marcos in the Supreme Court of the State of Hawaii". Roxas was a former Filipino soldier who discovered a cave close to Bagui General Hospital, north of Manila, in 1971 which he claimed contained a large Buddha statue made of 22 carat gold weighing approximately 1 tonne, boxes piled "five or six feet high, over an area six feet wide and thirty feet wide containing gold bars (although he only opened and removed the contents of one which was later to prove important) and two handfuls of diamonds. Roxas was subsequently arrested by the Marcos regime, tortured and jailed and later died under suspicious circumstances. The lawsuit was filed by his estate and a company, the Golden Buddha Corporation, which was formed to assert its rights to the treasure.

Below I've provided excerpts reported by the Supreme Court of Hawaii from the testimony of five witnesses in the case. The full document can be viewed online.

Robert Curtis:

"Robert Curtis, an American owner of a mining and refining business in Sparks, Nevada, testified that, in late 1974, he received a number of telephone calls from Norman Kirst, an associate of Ferdinand, inviting him to travel to the Philippines to meet the president. Kirst stated that Ferdinand wanted Curtis's company to resmelt some gold bars and change the 'hallmarks'. Ferdinand also wanted Curtis to change the chemical composition of the gold while resmelting it so that its origin would not be identifiable…

Ferdinand told Curtis that he had recovered an enormous amount of gold from the Yamashita treasure, which he had found at various sites, and that he needed help because the 'International World Court had... passed a ruling that any...World War II treasures that were recovered would revert back to the countries from...whence they were taken'. Ferdinand told him that he had so much gold that selling it could have a large effect on the world economy or even 'start World War III'.

Curtis also testified that General Ver had brought him to a basement room in the Marcoses' Miravelles summer palace, where the gold bars were kept. Curtis entered a room 'about roughly 40 by 40', stacked to the ceiling with bars of gold. He estimated the ceiling to be ten feet high. Two or three four-foot wide aisles ran through the stacks of gold. The bars were in a standard seventy-five kilogram size. He noticed that the bars had '[o]riental markings' on them. Later, Ferdinand showed Curtis a solid gold buddha statue with a removable head, which Curtis identified from the pictures taken at Roxas's house as the same buddha that Roxas had discovered.

On cross-examination, Curtis testified that his study of the Yamashita treasure had suggested that the treasure contained eighteen buddhas and was distributed among 172 sites. He also testified that Ferdinand had told him that the gold that Curtis had seen had come from a site in the Luzon region. Moreover, in 1975, while Curtis was working with Ferdinand, another site was discovered in the town of Teresa, and more gold was retrieved."

Olaf Jonsson:

"Olof Jonsson also testified that he had seen stacks of gold bars…General Ver showed him a basement room in the guest house outside Malacanang Palace and another room in the summer palace, both filled with gold. He was also shown a golden buddha in the summer palace that was too heavy for him to move. Jonsson described the basement room in the guest cottage as being approximately twenty feet wide, forty feet long, and twelve feet high. He estimated the room in the summer palace as measuring "probably 40 feet by 25 or something" and twelve feet in height. Both rooms were filled with two-foot-long bars of gold stacked to the ceiling."

Michael O'Brien and John Doel:

"A number of witnesses also testified regarding Ferdinand's alleged attempts to sell his gold surreptitiously. Two Australian citizens, Michael O'Brien and John Doel, testified that they were partners in an Australian real estate venture. In 1983, O'Brien and Doel were seeking capital to finance their project. The partners met a Malaysian, Andrew Tan Beng Chong (Tan), who asked the partners to serve as brokers for the sale of ten thousand metric tons of gold in exchange for commissions on the sale…O'Brien also traveled to the Philippines. At one point, when he expressed doubt as to the existence of so much gold, he was blindfolded and taken to a warehouse. Inside the warehouse was a stack of approximately three hundred to four hundred boxes, each the size of a six-pack of beer. O'Brien opened one and observed that it contained three crudely smelted gold bars, which he described as being pitted "like an orange peel." He tried to lift several other boxes and found them too heavy to move."

Richard Hirschfield:

"Richard Hirschfield, an American attorney, testified that he met the Marcoses in Hawaii in 1986 or 1987. Ferdinand hired him to arrange for an eighteen million dollar loan from Al-Fassi, a member of the Saudi royal family. Marcos offered to secure the loan with gold bullion, of which he claimed to possess tons. He told Hirschfield that he 'had access to this Yamashita Treasure from the General of the Japanese War'. Hirschfield also testified that either Ferdinand or Imelda told him that they had taken a golden buddha from the person who discovered the treasure and replaced it with a brass buddha."

Moving on to the court rulings:

In July 1996, the court found in favour of the Roxas estate and awarded US$22bn in compensation, consisting mainly of US$1.3m for the golden Buddha, US$0.1m for seventeen gold bars, a massive US$22.0bn for "one storage area" of gold bullion, i.e. all the unopened boxes, and US$6.0m for battery and false imprisonment. With lost interest, the award rose to over US$40.0bn, the biggest in history.

On appeal, the Court found that there was insufficient evidence to support an award of damages for such gold bullion as may have been contained in the unopened boxes allegedly found by Roxas, inasmuch as the record was speculative regarding the gold's quantity and purity. However, the Court sustained the portion of the verdict that found that Marcos had stolen the golden buddha and 17 bars of gold (the 24 bars Roxas took out of the chamber minus the seven that he sold). With respect to this claim, the Hawaii Supreme Court specifically found as follows:

- "There was sufficient evidence to support the jury's special finding that Ferdinand converted the treasure that Roxas found";
- "There was sufficient evidence to support the jury's determination that Roxas "found" the treasure pursuant to Philippine law"; and
- "In the present case, Ferdinand's expropriation of the Yamashita treasure and Roxas's attendant detention and torture were shown to have been carried out for Ferdinand's personal benefit and were therefore violative of international law. That being so, we hold that the act of state doctrine is no bar to the plaintiffs-appellees' claims for relief."

Besides the eyewitness evidence presented in the Roxas court case, I should mention that the Seagraves also conducted extensive interviews with another eyewitness, Ben Valmores, and refer to this in their book. Valmores was the Filipino valet of Prince Takeda, a member of the Japanese Imperial family who was in charge of hiding the treasure in the Philippines. Valmores visited all 172 sites and was given copies of Takeda's maps according to the Seagraves.

If you remember, captured treasure from the conquest of Asia was allegedly being shipped from the Philippines to the Japanese homeland until it was prevented by the US submarine blockade in 1943. In terms of believable sources regarding a substantial amount of this loot being successfully transferred back to Japan, they don't get much better than a report prepared by General MacArthur's own General Staff. On page 223 of "Reports of General MacArthur, MacArthur in Japan, The Occupation: Military Phase, Volume I Supplement" signed off for the Library of Congress by the US Army's Chief of Staff and available on the internet is the following comment:

"One of the spectacular tasks of the Occupation dealt with collecting and putting under guard the GREAT HOARDS OF GOLD (my emphasis, Paul), silver, precious stones, foreign postage stamps, engraving plates, and all currency not legal in Japan. Even though the bulk of this wealth was collected and placed under United States military custody by Japanese officials, undeclared caches of these treasures were known to exist. Consequently, the task of investigating, uncovering, inventorying, and safeguarding all property in this category was a continuing and increasing responsibility. The precious metals were stored in the United States vaults of the Bank of Japan at Tokyo and in the Imperial Mint at Osaka. Eighth Army furnished custodial staffs for both depositories."

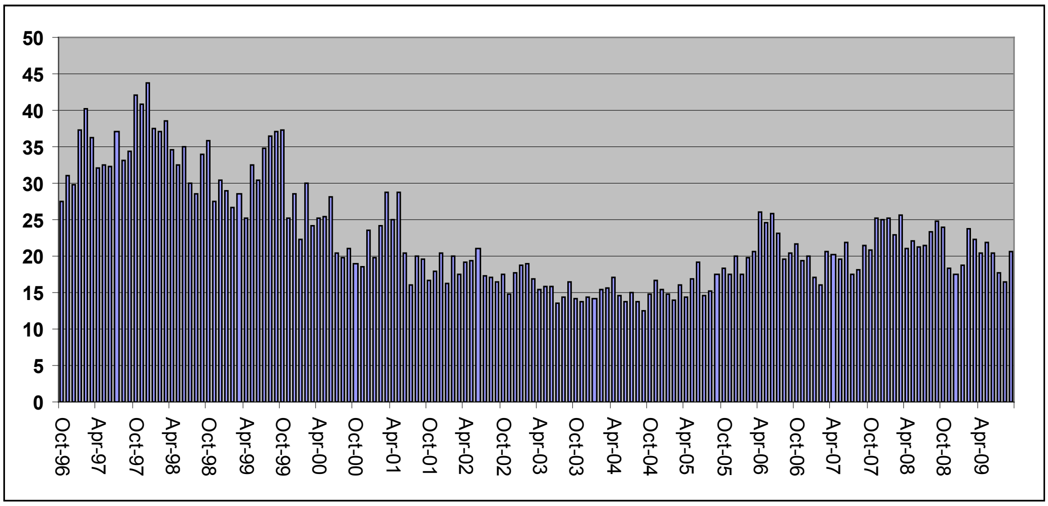
It does make you question what happened to those "great hoards of gold" and whether Japan really was bankrupt at the end of the War? I will stop there but there is a huge amount of additional information in the Gold Warriors book, and elsewhere, and it is up to the individual as to whether they believe that Yamashita's Gold is fact or fiction?

Now let's get back to some financial analysis.

If you remember, we estimated the amount of spot gold traded daily worldwide by multiplying the volume transferred by the LBMA's clearing agents by 4, multiplying this by 70% (to exclude derivative trades) and then dividing by 91% (to take account of OTC gold trade outside of London market). If you also remember, our starting point was the average daily volume of gold cleared through the LBMA clearing members in 2008 of 22.3m oz (693 tonnes).

The story gets more interesting when you realize that this is a fairly low number compared with trading levels in the mid/late-1990s. Here is the monthly average since October 1996, the first month for which the LBMA reported volume data:

LBMA daily gold transfers 1996-2009 (m oz.)



Source: LBMA

Well, well, well - going back more than a decade, there were months when the daily volume of gold cleared through the London market was over 40m oz. on a daily basis. The peak was 43.7m oz (1,359 tonnes) in December 1997 – 96% higher than the average in 2008. Does this strike anybody else as being a bit strange?

In 1996-98, most people in the UK, US and Europe COULDN'T EVEN SPELL G-O-L-D IN AN INVESTMENT SENSE and yet there was enormous volume going through London.

Let's look at 1997 in particular. The average daily volume of metal transferred during the year was 36.8m oz., equivalent to 1,145 tonnes – 65% higher than the level in 2008. If we apply the same methodology for estimating the total amount of spot gold trade on a daily basis, we get an average figure of 113.2m oz. or

3,521 tonnes. Now let's try to put this volume in the context of the amount of privately held gold back in 1997 which conformed to LGD standard.

The nice people at GFMS Ltd wanted to charge me a princely sum for their historic data which I declined. However, the GFMS estimates for above ground gold stocks and the amount held as private investment in 2001 are available on the internet:

- ☯ Total above ground stocks of gold = 145,100 tonnes
- ☯ Gold held as private investment = 22,200 tonnes (15.3%)

We can then track back to 1997 in terms of total above ground gold stocks by using GFMS Ltd's estimates for gold mine production during 1997-2001 as follows:

Gold - world above ground stocks and mining production 1997-2001 (tonnes)

	1997	1998	1999	2000	2001
Above ground stocks	134,772	137,314	139,888	142,479	145,100
Mining production		2,542	2,574	2,591	2,621

Source: WGC/GFMS Ltd, TRR estimates

Having established that above ground gold stocks under the GFMS methodology were approximately 134,772 tonnes at the end of 1997, we need to estimate the amount held as private investment. As shown above, this amounted to 15.3% according to GFMS in 2001 and from checking more recent data was about 16.3% in 2006 and 16.7% in 2008. This obviously suggests a rising trend but let's be conservative and assume that privately held gold was the same proportion of above ground stocks in 1997 as in 2001. On this basis, 15.3% of 134,772 tonnes is 20,620 tonnes.

Back in 1997, gold held by ETFs was minimal if not non-existent, so we can't make any reduction. I haven't a clue what COMEX inventories were in 1997, but let's assume 200 tonnes and just 250 tonnes for Medallions/Imitation Coins. For numismatic coins, we'll assume the same level of 500 tonnes. For official coins, we can remove the net retail investment in Official Coins for 2003-08 of 796.8 tonnes (see earlier table). For the five years from 1998-02, I'm assuming approximately 100 tonnes p.a. This gives total net retail investment in gold coins from 1998-2008 of 1,296.8 tonnes. Taking this away from my estimate for total private investment in gold coins of 3,000 tonnes at the end of 2008 gives an end-1997 level of 1,703 tonnes.

For retail investment in gold bars, I found the GFMS data from 1998-2002 as follows:

Net retail investment in gold bars 1998-2002 (tonnes)

	1998	1999	2000	2001	2002	1999-02
Bar hoarding	174	269	242	261	264	1,210

Source: WGC/GFMS Ltd.

If we add the 1,547 tonnes of net retail investment in bars from 2003-08 (see earlier table) to the 1,210 tonnes for 1998-02, this gives total net retail investment in gold bars from 1998-2008 of 2,757 tonnes. Taking this away from my estimate for total private investment in gold coins of 5,000 tonnes at the end of 2008 gives an end-1997 level of 2,243 tonnes. If we then assume that 10% of the remainder is withdrawn from the OTC market on a semi-permanent basis in allocated accounts, etc, we can have a stab at estimating the amount of privately held gold conforming to LGD standard at the end of 1997:

Estimated privately held gold for OTC market liquidity in LGD bar form

End-1997	**Tonnes of gold**
Total privately held gold	**20,620**
Less:	
Official coins	1,703
Medals/imitation coins	250
Numismatics (old coinage)	500
ETFs	0
COMEX/100 oz bars	200
Retail investment in small bars	2,243
Allocated/withdrawn on semi-permanent basis	1,600
Total LGD bars for OTC market liquidity	**14,124**

Source: TRR estimates

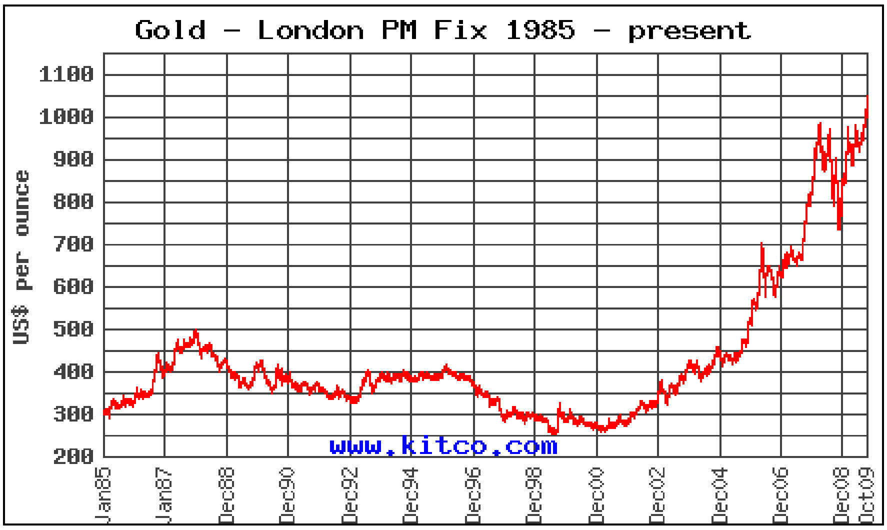
So we have roughly 14,000 tonnes of LGD "liquidity" from privately held gold at the end of 1997. We know that the gold lending market peaked at about the time that hedging by gold mining companies peaked in 1999. We have the Deutsche Bank estimate from earlier that central bank gold lending was 4,977 tonnes in 1999 – so let's assume just over 4,000 tonnes at the end of 1997 which would give overall liquidity in the form of LGD bars of 18,000 tonnes at that time.

From our earlier estimate of daily average spot gold trade in 1997 of 3,521 tonnes, 19.6% - basically one fifth - of the OTC gold pool was being turned over every day and the entire pool every 5.1 working days. This compares with my estimate of 12.7% and 7.9 working days for 2008 and appears, at least, to be even less believable.

This analysis could be more evidence that there is far more gold held in private hands than is currently acknowledged - or that the OTC gold market operates more on credit that physical bullion? It could also be evidence that something very strange was happening in the gold market in the period around 1997 to justify such massive volumes when hardly any of conventional investors in the western world, either institutional or retail, were showing interest in gold.

What adds to the suspicion that something untoward was occurring in the gold market around that time was the behaviour of the gold price. Here is the gold price chart which shows a period of extreme weakness beginning in 1996 which lasted right through to the first low of the 1999/2001 double bottom - and saw the price decline by almost 40% from c.US$400/oz to US$250/oz:

Gold price - US$/oz



Source: Kitco

The mid/late 1990s was very interesting period for the gold price because the phenomenon known as Gibson's Paradox completely broke down. I discussed this in my report "Remonetisation of Gold: Start Hoarding" back in 2006 when I was working at Credit Agricole. This is my explanation in the report:

This is the observation by the economist, J.M. Keynes, that during the period of the Gold Standard, there was a direct correlation between the long-term interest rate (he used the yield on British "Consols") and the general price level. The "paradox" stemmed from the way it differed from the consensus view that the long-term interest rate was correlated with the rate of change in prices, i.e. inflation. Under Gibson's Paradox with a Gold Standard, a falling price level corresponded with falling real interest rates. With the gold price fixed, the purchasing power of gold is obviously increasing (e.g. in the Great Depression).Keynes described Gibson's Paradox as:

"one of the most completely established empirical facts in the whole field of quantitative economics."

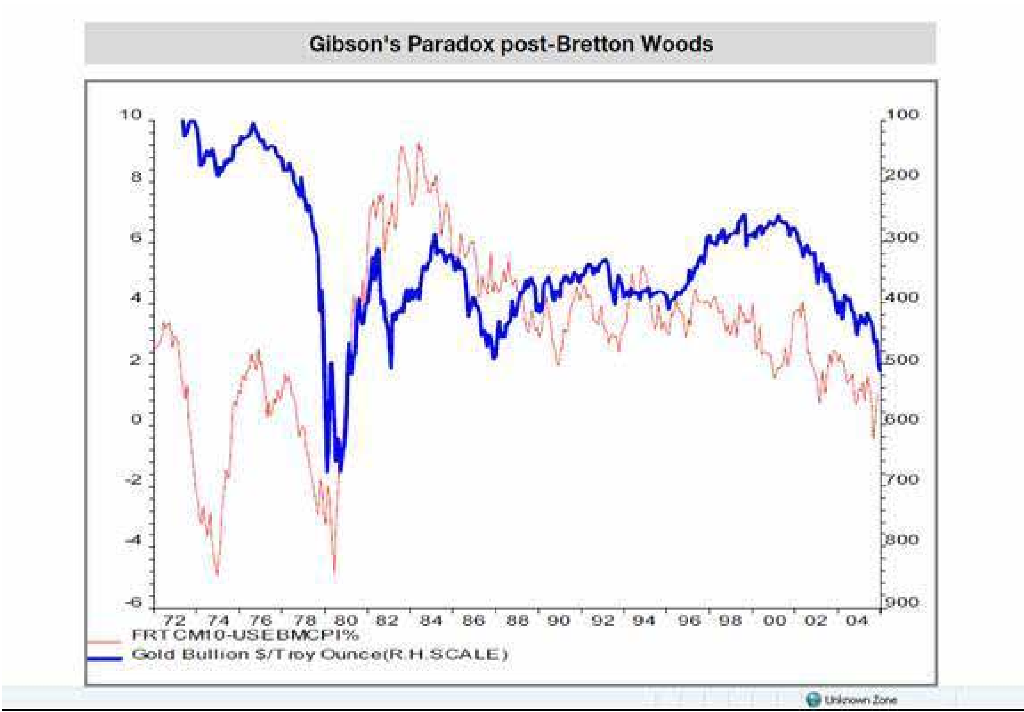
The thinking behind Gibson's Paradox can be transferred to today's world of floating gold prices and fiat money. A rising gold price equates to a falling price level (in gold purchasing power) and lower real interest rates. This makes sense as falling real yields make holding financial assets less attractive, while rising real interest rates increase the opportunity cost of holding gold. In simple terms and outside of a Gold Standard, Gibson's Paradox suggests that the gold price rises as the attraction and confidence in financial/paper assets declines. This was neatly outlined by former Fed Governor, Wayne Angell, in July 1993.

"The price of gold is pretty well determined by us…But the major impact on the price of gold is the opportunity cost of holding the dollar…We can hold the price of gold very easily; all we have to do is to cause the opportunity cost in terms of interest rates and US Treasury bills to make it unprofitable to own gold."

(Volcker proved it by hiking rates to 14% in the early-80s, but imagine the devastation now, Paul).

This is the chart of Gibson's Paradox from that report - apologies for the quality but this was the best copy I could make. Please note that the darker blue line (and right axis) is the gold price but it is inverted, so the gold price is rising when the line is falling. The thinner red line is the yield on 10-year US Treasuries minus US inflationte – the point being that in non-crisis conditions the gold price tends to move inversely with real interest rates, i.e. the two lines should always move in the same direction.

Gibson's Paradox and the gold price post-Bretton Woods 1975-2004



Source: Datastream, Credit Agricole Cheuvreux

You can see it better by opening the report through the link here and scrolling to page 39.

I made the following points about the chart in the report:

- There is a clear correlation between the general trend of real interest rates and the inverse movement in the gold price (n.b. after gold ownership became legal again in the US in 1974, sales by the US Treasury initially restrained the price);
- The end of the gold bull market in 1980, clearly shown in the chart, was triggered by Paul Volcker's (then Fed Chairman) unwavering desire to squeeze inflation out of the system using higher interest rates (echoing Fed Governor Angell's comment);
- The chart shows a clear divergence in the trend for several years beginning in the mid-1990s at the time the Gold Anti-Trust Action Committee (GATA) alleges the recent suppression of the gold price began;
- Gibson's Paradox is a free market phenomenon. Studies have shown that it was disrupted by government intervention in the gold market after World War I and the London Gold Pool (1960s, Paul) in the run-up to the collapse of Bretton Woods. In both of these instances, when government intervention was relaxed, the gold price rose strongly and found its correct market level. Given renewed intervention by governments in the gold market from around 1995, it seems reasonable to expect the same to occur this time.

In the light of the story of Yamashita's Gold have another look at the chart of Gibson's Paradox. There are actually two periods when the relationship breaks down in a major way and the gold price falls sharply when the correlation suggests that it should have risen:

- The obvious one is in the mid/late 1990s which coincided with massive volume reported by the LBMA, the likes of which have never been seen since, even though we've been in a gold bull market for the last eight years and gold, as an asset, has become "investible" again in western financial markets.
- The slightly less obvious one, but have a closer look, is 1986-1990. Now we don't have any LBMA volume data for those years, but remember the story of Yamashita's Gold – Ferdinand Marcos, who eyewitnesses testified had recovered enormous amounts of gold which he was holding in Manila, was DEPOSED in 1986.

If Alternative 2 is correct, and there is far more gold in existence than is generally understood, a strong case can be made that the unusual behaviour of the gold price and the huge volumes of gold traded through the LBMA in a major bear market for gold suggests that looted gold was being laundered through the London market - during these periods in particular and most likely others given the frequent counter-intuitive movements in the gold price for more than a decade. The question for my friends at the Gold Anti-Trust Action Committee is whether the gold price suppression has been the result of covert sales of central bank gold or from the Yamashita hoard?

Finally, if Alternative 2 is correct, what are the implications from an investment standpoint? If it is true then the periodic laundering of clandestine or "black" gold into the London market has been a feature of the gold market since the end of the Second World War so going forward what's chagned? One of the key themes of Thunder Road has been the inevitable approach of a dollar crisis (and a Sterling crisis) hence the need to own gold and silver. Alternative 2 doesn't change the technical insolvency of the US. At the same time, nations like China and Russia are buyers of gold. My lateral thought on China is that much of the gold allegedly stolen by the Japanese is believed to come from the Middle Kingdom. Not only has China announced that it has doubled its official gold reserves, but it has started to promote the ownership of gold and silver to its people. Is China actively trying to reverse events which began more than a century ago and reclaim its gold?

From a tactical perspective, if there are still quantities of clandestine gold which can be dumped into the market periodically, short-term pull backs in the price will remain a feature in the gold market but, once again, that's no different from what we've been experiencing anyway. Let's not forget, the gold price on 15

January 2009 was US$810/oz compared with US$995/oz on the day before Bear Stearns collapsed in March 2008. In the intervening 10 months, the world economy had been decimated and governments around the world, especially in the US, had spent or pledged many trillions of US dollars created out of thin air. Counter-intuitive anybody?

A final thought is: why did the LBMA suddenly surprise everybody by starting to publish data on the volume of gold trade going through London in January 1997? If Alternative 2 is correct, was somebody high up in the LBMA suspicious about the heavy selling of bullion which was pushing the gold price down? Was it their way of letting us know? Here is an posting on the internet from 31 January 1997 from "CMAX". The only changes I have made are to improve the English without restraining some of his (slight?) hyperbole!

"HOW HOW HOW...in this enlightened age of information, did something exist so large as loco London?? It has been hidden all this time not by government mandate...but by private enterprise. The discovery of loco London is akin to discovery of the New World by Columbus...these are the numbers of a GOLDEN ALTERNATIVE CURRENCY, here and NOW."

Post-script: please note that Simon Black, "The International Man", who supplied the story information about the Chinese government promoting the ownership of gold and silver to its people, asked me to mention that he has changed his website address to www.sovereignman.com.

Author: I started work the month before the stock market crash in 1987. I've worked mainly as an analyst covering the Metals & Mining, Oil & Gas and Chemicals industries for a number of brokers and banks including S.G. Warburg (now UBS), Credit Lyonnais, JP Morgan Chase, Schroders (became Citibank) and, latterly, at the soon to be mighty Redburn Partners.

Charts: Thanks to barchart.com, LME, timingcharts.com, kitco.com, kitcometals.com.

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