# **Equity & Cross Asset Strategy**

# **Death of the Gold Market**

Reforming the LBMA and the true price of physical gold







# **Executive Summary**

Using data from the LBMA and Bank of England on gold stored in London vaults and net UK gold export data from HM Revenue & Customs, we estimate that the "float" of physical gold in London (excluding gold owned by ETFs and central banks) has recently declined to +/- zero.

Summarising the data in the report:

Gold in	London in June 2015	6,220 tonnes
Less:	Gold held by London-based ETFs	(1,281)
	Central bank gold stored at BoE	(4,570)
	Net UK exports since June 2015	<u>(430)</u>
Gold flo	pat/(deficit)	(61) tonnes

If we are correct, the London Bullion Market is running into a problem and is facing the biggest challenge since it collapsed from an insufficient supply of physical gold in March 1968.

Besides the growth in physical gold demand from existing sources (see below), there is more than US\$200 Billion of trading every day in unallocated (paper) gold. If buyers lose confidence in the market's structure and ability to deliver actual bullion, the market could become disorderly (via an old fashioned "run" on the vaults) as it seeks to find the true price of physical gold.

Reaching "critical" — paper versus physical gold illusion in London



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Intuitively, we think that central banks might have lent/leased gold to maintain the status quo and mask what is technically a default. However, rather than being used to provide temporary liquidity, it is possible that loans/leases are being rolled. This is not sustainable and implies dual ownership claims.

Going forward, the market is vulnerable to several trends in physical gold trading patterns:

- Since 2009, **central banks** have switched from net sellers to net buyers;
- The extraordinary strength in **Chinese gold demand** as indicated by withdrawals of bullion on the Shanghai Gold Exchange, e.g. an astonishing 2,597 tonnes, or more than 80% of all of the gold mined worldwide, in 2015;
- The rebound in gold held by London-based **gold ETFs**, which has been increasing since January 2016, as western investors dip their toes back into physical gold; and
- **Net gold exports by the UK** mainly to support strong Asian (especially Chinese) demand which have been a feature of the market since 2013.

But the vulnerability is not confined to *current* trends in physical bullion.

If there is no gold float, there is **nothing supporting more than US\$200 Billion of trading every** day in unallocated (paper) gold instruments which accounts for more than 95% of gold trading in London.

The convention of trading unallocated gold has been based on a fractional reserve system. It works as long as gold buyers retain **confidence** that the banks could deliver physical gold if demanded, but our analysis suggests that they could not.

For more than four years, selling of paper gold overwhelmed growing demand for physical gold from the likes of China and central banks (in aggregate). The "gold market" became a chimera as fundamentals were turned upside down. Banks added paper "gold supply" in almost elastic fashion on occasions when western investors increased net gold exposure via paper gold instruments.

We've argued for many years that a breakdown and bifurcation in the gold market between physical and paper gold substitutes would be necessary for accurate price discovery of physical gold bullion. The lead article in the January 2016 edition of the LBMA's quarterly magazine was titled "Wholesale Physical Markets are Broken", which might be confirmation that this process is reaching an advanced stage.

In the interim, we could move towards a two-tier gold market - where physical gold trades at a premium to paper gold instruments, such as unallocated gold in London and COMEX gold futures in the US.



It saddens us that **London's position and reputation as the hub of the world gold market** is in jeopardy unless the LBMA, BoE and other stakeholders embrace rapid and far-reaching reform. The London Bullion Market is structurally flawed and overdue for reform - it is not an exchange, it is under-regulated and there is near zero transparency. More than anything, it is primarily a system of paper credits/debits which benefits the banks and undermines the investment case for gold and, consequently, interests of gold investors.

Seeing the Achilles Heel of London's gold market, China's Shanghai Gold Exchange (SGE) launched a Yuan-denominated physical gold benchmark gold contract on 19 April 2016. Examining the SGE's white paper, it's clear that China acknowledges that its introduction should lead to a more realistic price for physical gold and that its strategy is to shift price discovery in the gold market from London to Asia.

Unfortunately time is running out for London and meanwhile...

The vast pools of western capital are not underweight gold, they are almost zero—weighted. Ultimately, gold is a bet on financial system mismanagement in many guises - such as inflation, deflation, rising credit risk, declining confidence in policy makers, etc. The fact that mainstream investors and commentators have started to have doubts about central bank policies has been positive for gold.

For years, the typical pushback on investing in gold by western investors was that it had no yield. In a bizarre twist of investing, more than US\$7 Trillion of bonds now have negative yields thanks to unconventional monetary policies like ZIRP/NIRP, and gold investing can be justified on a yield basis. Unlike every other financial asset, including sovereign bonds, physical gold has no counterparty risk.

We have been here before...

"Someone once said, 'no one wants gold, that's why the US\$ price keeps falling.' Many thinking ones laugh at such foolish chatter. They know that the price of gold is dropping precisely because 'too many people are buying it'! Think now, if you are a person of 'great worth' is it not better for you to acquire gold over years, at better prices? If you are one of 'small worth', can you not follow in the footsteps of giants? The real money is selling ALL FORMS of paper gold and buying physical! Why? Because any form of paper gold is losing value much, much faster than metal. Some paper will disappear all together in a fire of epic proportions! The massive trading continues at LBMA, but something is now missing"

Anonymous quote from many years ago (the 1990s!)

We contacted the LBMA (via telephone messages) and the Bank of England (via the Financial Sector Continuity enquiry email address), to discuss the conclusions of this report, but neither replied.



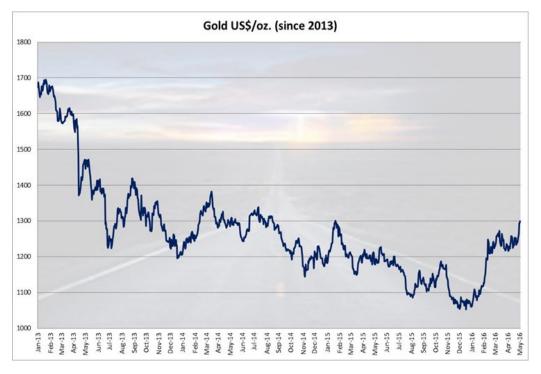
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# Gold and central bank credibility

Gold has suddenly enjoyed a resurgence in price and investor interest, partly as concerns have emerged that central banks' unconventional monetary policies might not work in a sustainable way.



Source: ADMISI, Bloomberg

### Its been a long road but...

The inevitability of that outcome was clouded by the undoubted success for the Fed, ECB and BoJ in extending the current cycle after it suffered its biggest post-GFC test during 2011-12.

However...

# With hindsight the BoJ's move to negative rates might be seen as a "crossing the threshold" event in terms of central bank ZIRP-QE-NIRP policy.

The BoJ has pursued the most aggressive ZIRP/QE policy and its credibility was already damaged with Japan flipping in and out of recession and the 2% inflation target remaining well out of reach. Kuroda's denial regarding any desire to implement NIRP just days before the announcement has hardly helped. More importantly, however, the post-NIRP strengthening of the Yen was in sharp contrast with previous responses to globs of additional monetary stimulus.

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The BoJ's unexpected monetary largessse and adverse market reaction was followed by the ECB on 10 March 2016. While Mario Draghi's 10bp cut to -0.4% in the deposit rate was expected, he also upped the pace of QE by an additional Eur20bn per month (adding the ability to purchase non-bank IG bonds) and launched new 4-year TLTROs – effectively paying banks to make loans.

The knee-jerk weakness in the Euro and rise in equities were reversed in the days after the EC-B's announcement when Draghi indicated that he did not aniticipate further rate cuts. Markets took this as suggesting that the chairman may have negotiated a grand bargain with the ECB's council for one last major policy move, but no more. It raised a vexing question about whether ECB policy was reaching a limit.

A week later was the FOMC announcement and Janet Yellen's press conference. Despite the reported unemployment rate falling below 5.0% and February 2016's core CPI rising to 2.3% - above the 2.0% target – the Fed stood pat and signalled a more dovish approach with regard to further tightening.

There are no more "compliant" reporters than CNBC's Steve Liesman, but even he was moved to call into question the Fed's credibility in a question to Janet Yellen during the March 2016 press conference.

"Madam Chair, as you know, inflation has gone up the last two months. We had another strong jobs report...And yet the Fed stands pat while it's in a process of what it said at launch in December was a process of normalization...Does the Fed have a credibility problem in the sense that it says it will do one thing under certain conditions, but doesn't end up doing it?"

Our sense is that even the mainstream perception of central bank policy is changing.

The fact that consensus thinking is expressing doubts about central bank policies, their stewardship of the financial system and questioning their credibility, is positive for gold.

Over the centuries periods of gold outperformance have tended to coincide with periods of financial/economic mismanagement in one form or another, including rising inflation (obvious), deflation (gold is money) or periodic fears about the financial system, e.g. rising counterparty risk and confidence in policy makers.

However...

A barrier to efficient price discovery in gold is the flawed structure of the gold market. The good news is that there are signs of imminent change.



# When is a gold market not a gold market?

Now...

The first rule of the gold market is...it's not a gold market (sounds slightly familiar).

That's the cornerstone of understanding its mechanics. An assumption that the current gold price reflects supply and demand for gold bullion is incorrect.

The "gold price" on our screens today is a hybrid price consisting of largely unbacked/paper gold claims relative to a relatively miniscule amount of physical bullion.

For more than four years, selling of paper gold overwhelmed demand for physical gold bullion.

The "gold market" became a chimera.

Fundamentals were turned upside down, but this can only continue as long as there is a sufficient "float" of physical gold in the London Bullion Market and no serious competition, e.g. China (see below).

For some, the only viable investment strategy has been to gradually accumulate undervalued physical bullion and (very patiently) wait for gold to revalue when the decline in physical gold availability – basically the gold "float" in London - reaches a "critical" level.

Realistic maybe, but it's been far from satisfactory.

Gold's disappointing performance has kept it off the radar screens of most western investors. The vast pools of western capital are not underweight gold, they are almost ZERO WEIGHT.

Most western investors probably haven't stopped to think about their relative positioning in gold vis-à-vis their own central banks. This was Greenspan in 2014 returning to his pro-gold roots.

"If the dollar or any other fiat currency were universally acceptable at all times, central banks would see no need to hold any gold. The fact that they do indicates that such currencies are not a universal substitute. Of the 30 advanced countries that report to the International Monetary Fund, only four hold no gold as part of their reserve balances...the gold held by the central banks of developed economies was worth \$762 billion as of December 31, 2013, comprising 10.3 percent of their overall reserve balances."

It has also contributed to an incredibly poor understanding, not just of gold's monetary role (see Financial Times online video "Gold our dangerous obsession" for an extreme example by a normally talented journalist), but of the mechanics and structural flaws in today's gold market.

### 92: 1 paper versus physical...

The vast majority of trading in today's gold market is in paper "facsimiles" which purport to be gold bullion, or be readily exchangeable into gold bullion, when they are not.

In this category we include:

- The most important unallocated gold accounts created by LBMA members in London;
- Futures and options contracts on COMEX in the US;
- Unbacked ETFs or ETFs with unsatisfactory prospectuses/disclaimers; and
- OTC derivatives.

There is only one official body which has attempted to estimate the ratio of paper gold instruments to physical gold. In its January 2013 report "Report of the Working Group to Study the Issues Related to Gold Imports and Gold Loans by NBFCs", the Reserve Bank of India estimated the ratio of paper gold trading to physical gold trading at 92:1.

Table 5.1: Gold Futures and OTC Market Vs Physical Market for Gold					
(Million ounces)					
Instrument 2001 2007 2008 2009 2010					2010
Physical market	114.3	127.0	115.8	120.4	120.8
Futures & Options ET vol.	1203.1	4609.8	6133.4	5327.2	6438.8
LBMA (OTC) clearing	5288.8	5130.3	5605.5	5165.3	4727.7
volume					
Total	6606.2	9867.1	11864.7	10613.9	11287.3

Source: The CPM Gold Yearbook 2011.

Source: RBI

### According to the RBI:

"the traded amount of 'paper linked to gold' exceeds by far the actual supply of physical gold: the volume on the London Bullion Market Association (LBMA) OTC market and the major Futures and Options Exchanges was over 92 times that of the underlying Physical Market."

The extreme paper/physical ratio acts to the detriment of investors in the underlying physical bullion and gold mining companies since the price is divorced from supply and demand for the actual metal. Because gold facsimiles are effectively paper instruments, banks and other entities trading in the gold market have been able to add "gold supply" in an almost elastic fashion when investors increase net gold exposure via these types of instruments.



Craig Hemke of the TF Metals report explained the situation in his podcast from 15 April 2016.

"It (the gold price) has no bearing, no attachment to physical metal. The banks simply create paper contracts, they feed them to the specs (buyers/speculators) as the specs demand them. And then, as the specs sell, the banks buy them back and put them all back on the shelf."

We are always surprised when we hear about experienced investors buying paper gold instruments rather than physical bullion. For example, a recent Zero Hedge article showed the top 10 holdings of one of Crispin Odey's hedge funds in which paper gold – not physical gold - was by far the biggest long position.

TOP EXPOSURES	31-Mar-16

Rank	Security	Strategy	Notional Exposure (%)
1	GOLD 100 OZ FUTR Jun 16	Long	43.8
2	ACGB 2 3/4 04/21/24	Long	21.0
3	JPN 10Y Bond(Ose) Jun 16	Short	19.0
4	Ashmore	Short	6.7
5	Las Vegas Sands	Short	6.7
6	Sky	Long	6.5
7	Intu Properties	Short	5.5
8	Nokia	Long	5.3
9	Statoil	Short	5.2
10	ArcelorMittal	Short	5.1

Source: Zero Hedge, Odey Asset Management

Back to Craig Hemke and he went on to emphasise the differences between the gold market with the requirement to deliver the underlying (i.e. share certificates) when investors buy equities.

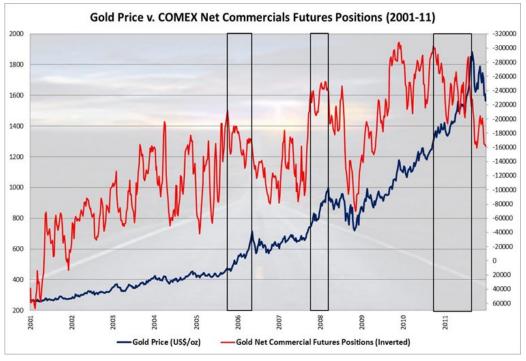
"This would never be allowed in a stock. If you call up your stockbroker and say 'Hey, buy me 200 shares of Coca Cola' and your broker's firm just simply created 200 shares of Coca Cola and put them in your account, just created them out of the thin blue sky. They'd never be allowed to do that...they have to go out on the market and find a willing seller of 200 shares of Coca Cola. But that's not how it works (in gold and silver)"

The best way of illustrating the impact of adding paper gold supply is show how the price of gold has reacted on previous occasions when paper gold supply has not expanded elastically in response to a rising gold price.



While there is a lack of transparency in gold trading volumes in London, we can use the COMEX gold futures market in the US as a proxy for the gold market in general.

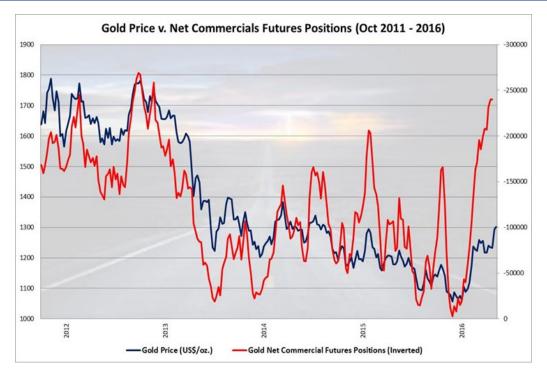
If we look at the net positions in COMEX gold futures of the Commercials (mainly banks) during the bull market from 2001-11, you can see how on the three occasions when the Net Commercials stopped increasing their net short position into a rising market, the gold price went parabolic.



Source: ADMISI, Bloomberg

During the 2001-11 bull market, gold rose from about US\$260/oz. to US\$1,920/oz., a net increase of approximately US\$1,660/oz. From the chart above, the gold price rose by approximately US\$1,126 in aggregate during these three periods. This amounted to a substantial 68% of the net rise from the beginning to the end of the bull market.

Following the gold price peak in September 2011, the following chart shows how the Commercials have merely increased net short positions into every rally in the gold price since. When the buying was exhausted, the Commercials were able to cover their net short into the declining price.



Source: ADMISI, Bloomberg

The scale of the current battle being fought by the Commercials to contain the recent price rise is only too obvious—the instability is obvious.

This is the biggest battle seen in the gold market for nearly 5 years.

But let's not forget...

Having shown how the supply (or not) of paper gold contracts has dominated price discovery in the gold market, the status quo can only be maintained for as long as those investors who wish to take delivery of physical gold can be accommodated.

Otherwise, the whole illusion will become obvious...

This takes us to the critical pre-condition for the orderly functioning of the gold market - an adequate "float" of physical gold in London. Understanding how this float might have diminished to critically low levels, a pre-requisite is an understanding of the LBMA/London Bullion Market.



# London Bullion Market - lacking regulation and transparency

When people think of the gold market, they generally think of London and the LBMA. Our expectation for the gold market's death and resurrection focuses on the London Bullion Market and the trading of unallocated gold by LBMA members.

This is the heart of the gold market chimera.

The gold market is full of misunderstandings and it's worth clearing up some major ones with regard to the LBMA.

The LBMA is essentially a trade body, which merely sets out best practices for its members. It is not:

- the London Bullion Market;
- an exchange; or
- a regulatory body.

In its prospectus, the SPDR Gold Trust (the well-known gold ETF with the GLD ticker) comments that the LBMA.

"sets out good practices for participants in the bullion market, the LBMA is not an official or governmental regulatory body. In addition, while the Custodian is subject to general banking regulations by U.S. regulators and is generally regulated in the U.K. by the Financial Conduct Authority, or FCA, such regulatory provisions do not directly cover the Custodian's custody operations in the U.K. Accordingly, the Trust is dependent on the Custodian to comply with the good practices of the LBMA"

The London Bullion Market is an OTC market which means that transactions are conducted between principals rather than on an exchange, which means less regulatory oversight.

While gold is traded continuously on the OTC market, the so-called "LBMA price" is only set twice each day by the ICE Benchmark Administration. The twice daily setting of the LBMA gold price replaced the historic twice daily "London Gold Fix" on 20 March 2015. The LBMA gold price has been regulated by the UK's FCA since 1 April 2015. This followed an investigation which resulted in Barclays being fined US\$44m for manipulating the London fix during 2004-13.

Aside from the two price settings, the OTC gold market is very lightly regulated, somewhat reminiscent of the self-regulatory/gentleman's club style of the London Stock Exchange prior to "Big Bang" deregulation in 1986.



In its 1996 "Gold Survey", the industry consultant, GFMS, commented that the advantage of the OTC gold market for some of its participants was:

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

According to the World Gold Council in its 2010 report "Liquidity in the Global Gold Market."

"As the gold market is largely over-the-counter, there is little visibility to the many thousands of transactions that take place every day. Given this opacity..."

The OTC gold market, based in London, has not kept up in an era of greater transparency and regulatory oversight.

The Bank of England has some regulatory oversight of the gold market via "The Non-Investment Products Code" which applies to gold and other – now infamous (for rigging) - wholesale markets, such as LIBOR and forex.

Gold is both money AND an investment product, so its classification as a "non-investment product" is incorrect. Furthermore, a cursory reading of the code raises red flags regarding the limited regulation and investor protection vis-à-vis the major financial institutions which dominate the gold market. For example.

"Its provisions are intended only as guidance on what is currently believed to constitute good practice in these markets. The Code has no statutory underpinning"

The Bank of England has acknowledged that there is very little regulation. In a speech, "The Role of the Bank of England in the Gold Market", the Senior Manager of the BoE's Foreign Exchange Division, Graham Young, commented on 3 June 2003.

"I would like to say a word about the Bank's role in the regulation of the gold market in the UK. This is, in fact, a very limited one...The wholesale bullion market is considered to be an inter-professional market, or, in the distinctive parlance of the UK regulatory framework, a 'non-investment products' market."

And the key line...

"This means that, in general, the principle of caveat emptor applies and the market is expected to be self-regulating."

We've learned to our cost that this is not enough.



He immediately goes on to make a very (with hindsight) poorly judged remark in terms of his support for the other markets subject to the code which were left to regulate themselves.

"The same is true, as it should be, of the foreign exchange and cash money markets in the UK."

Unfortunately since his speech, reams of evidence obviously came to light regarding misconduct in foreign exchange and cash (LIBOR) money markets.

On 13 April 2016, Deutsche Bank admitted guilt for manipulating the gold market in a lawsuit filed in the Southern District of New York. Deutsche has agreed to turn over communications to help plaintiffs pursue claims against other banks.

The manipulation of the gold market was obvious to us for a decade, not least from the patterns of intra-day trading of the gold price, concentrated net short positions and their relationship with the gold price and the gold carry trade in its shifting form (e.g. the June 2014 report "Long Nikkei/Short Gold: Profitable, dangerous and missed by everybody" has 278,000 reads on Zero Hedge).

The second rule of the gold market is...you do not talk about market abuse in the gold market.

We've been outlining the investment case for gold and gold mining stocks as well as market abuses and the need for LBMA/COMEX gold reform since the January 2006 report "Remonetisation of gold: Start hoarding."



Source: Credit Agricole Cheuvreux



It's been a long and sometimes tortuous road and, while our views are based on objective market and industry analysis, at times the reports have made us unpopular with some investors/colleagues and popular with others. Approaches made to regulators and mainstream journalists were basically ignored.

Truth, it seems, really can navigate the proverbial three stages outlined by Schopenhauer.

"First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident."

Gold was and is a very emotive subject in financial markets and we had little idea what we'd taken on.

"How long have you been a goldbug?"

"What's a goldbug?"

In this report, our focus is the unsustainable market structure of paper gold instruments versus physical gold bullion, the need to reform gold trading by LBMA members due to the growing risk of market failure and the prospect of finding a true price for gold bullion.

The regulation of the London Bullion Market is inappropriate and inadequate and reform is overdue. The regulators can be pro-active (preferably) and embrace reform or, alternatively, will probably be forced into action as a result of a crisis. Sadly, we expect the latter at this point. The acknowledgement of guilt on the part of bank(s) for abusing the current market structure is another potential catalyst for reform.



# LBMA and unallocated "gold"

London remains the hub of global gold trading even though Shanghai's influence is growing rapidly (see below). This quote is from the LBMA's "A Guide to the London Precious Metals Markets."

"the loco London price has become the common denominator amongst dealers around the world...a credit balance on a loco London account with an LBMA member represents a holding of gold or silver in the same way that a credit balance in the relevant currency represents a holding of dollars on account with a New York bank or yen with a Tokyo bank. In fact, because of these advantages, nearly all global OTC gold and silver trading is cleared through the London bullion market clearing system."

Please note: "loco London" refers to settlement in gold that is, or is believed to be, stored in London vaults.

The London Bullion Market is not quite what it seems and all gold transactions are not created equally...far from it.

- In an **allocated gold** account, specific gold bars are held in clients' names with full title and the bank is not permitted to use the gold for its own purposes; and
- In contrast, the overwhelming majority of LBMA trading is via unallocated gold accounts.
   These are settled via nothing more than debits/credits in "metal accounts" with bullion banks.

The assumption that the London-based LBMA members are primarily trading physical gold is inaccurate. In reality, LESS THAN 5% of gold traded on the LBMA is settled by the delivery of physical metal into what are known as "allocated" gold accounts.

Meanwhile...

Holders of unallocated gold accounts are **unsecured creditors of the bank** with general claims on an unspecified volume of gold in the bank's vault. Any gold which is backing unallocated gold accounts is legally part of the bank's working capital, to do with it as it wishes.

The most succinct explanation of the LBMA's structural flaw was penned by Adrian Ash of BullionVault.

"Imagine you could sell someone something, but keep ownership of it, and then use it your-self. You could lend it out for interest, say, or raise loans of your own by pledging it as collateral. Or even sell it to raise cash when things get tight. And if your business fails entirely, the 'owner' will just have to queue up with all of your other creditors, and be thankful with whatever small change is paid out by the courts. This is pretty much what big banks get away with in gold"



Like us, you could easily be forgiven for asking why investors hold unallocated gold on the long side when they have no entitlement to specific metal and are nothing more than the most junior of bank creditors. All the more, when one of the factors supporting the investment case for gold is that gold bullion is the *only* financial asset which has zero counterparty risk.

As the global debt bubble grows (estimated at US\$199 trillion by McKinsey in 2014), this becomes ever more relevant. In testimony to Congress in 1912, J.P. Morgan made the observation that.

## "Gold is money. Everything else is credit."

It's about counterparty risk and "credit" includes paper instruments purporting to be physical gold.

To its credit (pun intended), the LBMA is starting to tell it like it is, although more than \$100bn of gold buying In London every day is not listening.

For example, the slide below is from a presentation by LBMA Chief Executive, Ruth Crowell, on 15 June 2015. It emphasises the paper gold versus physical gold of unallocated versus allocated.

# METAL ACCOUNTS

### Unallocated



- Equivalent to a current account at a bank
- The metal is the bank's asset: the customer's holding is its liability
- Used by many investors
- Account maintenance fees are charged

Page 17 The LBMA & The London Bullion Market

Allocated



- Segregated bars are held in the name of individual depositors
- Storage fees are charged
- Used by ETFs and central banks
- More expensive to hold than unallocated

LBMA

Source: LBMA

Like traditional bank deposits, unallocated gold trading – more than 95% of all gold traded in London – is merely a fractional reserve system.



What the bullion banks keep secret (we've tried asking them) is the ratio of physical gold underpins unallocated gold accounts?

The current structure of the London Bullion market rests on confidence, i.e. that buyers of unallocated gold believe that they can convert into allocated gold on demand. With traditional bank deposits, the central bank can always print bank notes if required. Physical gold is obviously different.

A substantial imbalance in the trading of unallocated gold versus the fractional reserve, or gold float, would increase instability and probability of system failure.

As we'll show, we doubt that there is much, or any, gold left in London vaults which is not already subject to existing ownerhip claims. On the other side of the ratio, the daily average trade in unallocated gold is truly mind boggling as we'll explain.

Indeed...

We've been arguing for years that a breakdown and bifurcation in the gold market between physical and paper gold substitutes would be necessary for accurate price discovery of physical gold bullion.

There has been a development. It's likely that this process has reached an advanced stage when the lead article of the LBMA's own magazine in January 2016 was titled "Wholesale Physical Markets are Broken."



Source: LBMA



In the article, Seamus Donoghue of Allocated Bullion Solutions commented.

"All is not well in the wholesale markets. Despite the significant growth in the physical precious metals market and the strong outlook for continued demand growth, particularly in Asia, the wholesale physical markets that service that demand are broken."

Let's delve into the structure of the London Bullion Market in detail.

We've said that the gold market is just a chimera due to the dominance of paper gold...it's a VERY, VERY large chimera.

In 1997, the LBMA released data on the amount of gold "cleared" through London for the first time. The first data point – for October 1996 – showed that the daily average of gold cleared through trading in London ("loco London") was 27.5m oz. With an average gold price of US\$379.05/oz., this amounted to US\$10.4bn each day.

Previously nobody had a clue and commentators were stunned by the size of the gold trade in London. This was one response at the time which we found on the internet.

"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."

They weren't stunned enough...by a long way.

The clearing statistics seemed large, but they substantially understated the true volume of gold traded.

The key thing to note about the Clearing Statistics is that they represent **NET RATHER THAN GROSS** volumes moved between accounts held with clearing members.

Here are a couple of examples of what the clearing statistics exclude from the LBMA's "Alchemist" in-house magazine:

"if one participant buys and then sells 10,000 ounces of gold with the same counterparty for the same value date, although 20,000 ounces of gold have traded, there will be no movement of metal (actually debits/credits in unallocated accounts, Ed), and no impact on the clearing statistics."

#### And:

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



In Q1 2011, the LBMA conducted a survey of gold trading volumes, "The LBMA Gold Turnover Survey". The findings of the survey were startling.

The 173.7m oz. of gold traded daily in London was 9.2 times the 18.8m oz. the daily average number of ounces cleared of 18.8m oz.

In dollar terms, the average daily turnover on the London Bullion Market was a surprisingly large US\$240.8bn.

	Q1 2011 Turno	ver*				
	'ooo ounces		Number of trades		Total Value (Sales)	Total Value (Purchases)
	'Sales	'Purchases	Sales	Purchases		
London Turnover	5,593,743	5,350,183	201,713	184,140	\$7,754,438,081,578	\$7,416,798,373,170
Total Loco London Turnover	10,943,926		385,852		\$15,171,236,454,748	
LPMCL Clearing Statistics	1,183,459		122	,303	\$1,640,68	9,519,546
London Daily Avg	173,	713	6,1	125	\$240,813	3,277,059
Spot	89%	91%				
Forwards	5%	4%				
Other	6%	5%				

Source: LBMA

Based on 2013 BIS data, this made gold the fifth most heavily global forex trade after the dollar versus Euro, Yen, Pound and Aussie dollar.

With over 95% of trades settled by nothing more than paper debits/credits, there was more than US\$228.0bn of daily trading in paper gold. Dividing by two for buying and selling gives US\$114bn.

If we take the February 2016 monthly number of ounces transferred of 21.1m – multiply by 8.9, then multiply by 95% (for unallocated proportion of the total), then multiply by the average gold price (US\$1,232.07/oz.), we get US\$219.8bn of trading. Dividing by two gives US\$109.9bn - which is still comfortably over US\$100bn of "gold" which has been bought in London each day.

So to emphasise...

Every day there is over US\$100bn of "gold buying" which if the market reflected the fundamentals of physical bullion would see the subsequent withdrawal of gold, either temporarily (sometimes very temporarily) or permanently, from the "float" of gold available in the market place.



However...

Because of the current structure of the gold market, more than US\$100bn of daily "gold buying" has zero impact on the float of available physical gold. For years banks have been able to sell almost unlimited quantities of unallocated "gold" without risk of being called upon to deliver physical bullion.

This has provided a boon for banks acting as market makers and clearers in the London Bullion Market at the expense of gold investors and gold mining companies.

Let's put the US\$109.9bn of daily gold buying in context. It is equivalent to 184.0m oz. or 5,724 tonnes. The latter figure amounted to 182% of the 3,186.2 tonnes of gold output from all of the world's gold mines in 2015.

Having estimated the (mind boggling) volume of gold trading on the London Bullion Market, the next step is to estimate the "float" of available gold stored in London vaults.



# Calculating the London gold "float"

Our calculation of the "float" of physical gold in London vaults is based on excellent work by Ronan Manly of Bullionstar and Nick Laird of Sharelynx and we strongly recommend visiting their websites.

Before analysing the data, we should point out that the LBMA's CEO has commented that in the London Bullion Market.

"Almost all gold is held in the form of Good Delivery bars"

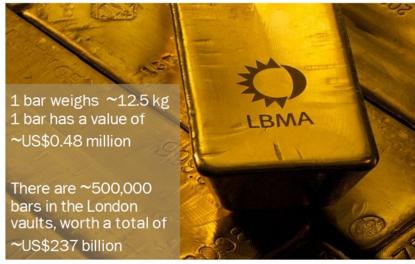
LGD bars are +/- 400oz.

In terms of estimating the float of physical gold stored in London, we are fortunate in having a relatively recent data point from the LBMA, data from the BoE and monthly net export data courtesy of the UK government's HMRC.

In June 2015, the CEO of the LBMA delivered a presentation in which she stated that there are approximately 500,000 London Good Delivery 400 oz. bars of gold in London.

# GOOD DELIVERY GOLD

In London Vaults







Source: LBMA

Converting bars to tonnes, 500,000 LGD bars weighing an average of 400 oz. amounted to 6,220 tonnes.



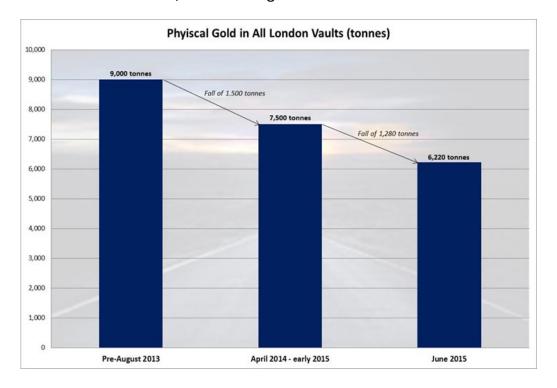
Gold bullion stored in London has been on a declining trend. In early 2015, Bullionstar noted that the LBMA's website contained the following statement on its vaulting page.

"In total it is estimated that there are approximately 7,500 tonnes of gold held in London vaults, of which about three-quarters is stored in the Bank of England."

Accepting that these are "ballpark" numbers, this statistic seems to have been accurate at some point between April 2014 and early 2015 since the same webpage contained the following comment in April 2014.

"In total there is approximately 9,000 tonnes of gold held in London vaults, of which about two-thirds is stored in the Bank of England."

From further research, we have found references to the 9,000 tonne gold figure as early as August 2013 in an article attributed to Goldcore on The Market Oracle website. However, it could relate to a still earlier point in time. Some commentators believe that it first appeared in 2011, but we can't be certain. However, the declining trend is clear.



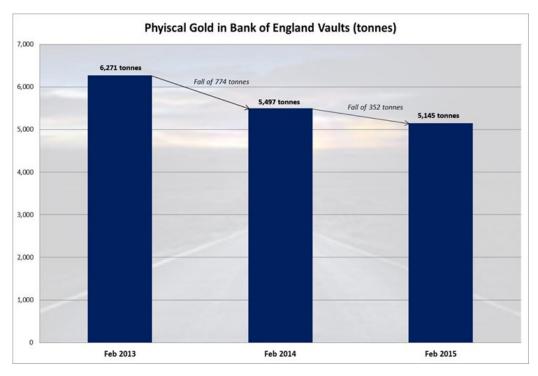
Source: LBMA

The BoE provides an indication of the gold in its custody in its annual reports. The BoE's annual reports for 2013-15 reported gold held in custody by the bank on 28 February in each year as £210bn, £140bn and £130bn, respectively.

Using the closing gold price and US\$/£ rate, this translates into gold tonnages held at the BoE of approximately 6,271, 5,497 and 5,145 tonnes at the end of February 2013, 2014 and 2015, respectively.



As with total gold in London vaults, gold stored at the BoE has also been on a declining trend.



Source: BoE

It's not surprising that the trajectory of the decline in BoE vaulted gold has been shallower than the gold in London vaults overall.

- The amount of private sector gold held at the BoE was/is relatively small;
- The central bank gold is not available for sale (obviously) and most is not available for lending/leasing; and
- Central bank gold which is loaned/leased to the market often remains in the BoE vault (see below).

So...summarising what we know about the gold float in London.

- In June 2015, the total volume of gold in London vaults was 6,220 tonnes. It had been on a declining trend since mid-2013 or earlier.
- Of this 6,220 tonnes, about 5,145 tonnes or probably slightly less (because it had been declining) was held in the BoE's vault.
- The vast majority of gold in the BoE vault is owned by central banks (see below) and is, therefore, not available to the private market except for short-term loans/leases; and
- Subtracting 5,145 tonnes from 6,220 tonnes left approximately 1,075 tonnes of gold in non-BoE vaults, primarily JPMorgan Chase and HSBC, which dominate physical gold trading in London.



Of the 1,075 tonnes of gold in London outside the BoE vault, we can subtract gold held in ETFs which hold physical bullion and see what the remaining float is.

## This is where the maths starts to get interesting...

There are at least eight physical gold ETFs which hold their gold in London. The eight that we know of are listed below, together with their latest physical gold holdings.

ETF	Ticker	Custodian	Tonnes
SPDR Gold Trust	GLD	HSBC	824.9
iShares Gold Trust	IAU	JPMorgan Chase	117.1
ETF Securities	PHAU	HSBC	120.5
ETF Securities	GBS	HSBC	94.5
Source Physical Gold Trust	SGLD	JPMorgan Chase	76.8
ABSA NewGold ETF	GLD SJ	Barclays	29.2
DB Physical Gold ETC	XGLD	DB/JPM Chase	15.2
Van Eck Merk Gold Trust	OUNZ		2.6
Total			1280.8

Source: ETF factsheets

We should point out that the BoE is listed as a sub-custodian of the largest ETF, the SPDR Gold Trust. According to the prospectus, however, this is only when the gold is in transit.

"The Custodian may employ subcustodians to provide temporary custody and safekeeping of gold bars until transported to the Custodian's London vault premises."

It becomes clear that there is a potential problem with the float of physical gold in London.

Subtracting 1,280.8 tonnes of physical gold in ETFs from the 1,075 tonnes of gold in London outside the BoE, we immediately have a problem as it suggests a deficit of 205.8 tonnes.

Remaining Gold in private vaults	(205.8)
Less: Est. Gold in London ETFs	(1280.8)
Est. Gold outside BoE vault	1,075.0
	Tonnes

Source: ETF factsheets



This seems somewhat larger than might be attributable to a "rounding" error relating to 2015 data given by the BoE and LBMA.

It obviously raises concerns.

- It implies that some of the physical gold which is claimed to be held in the physical gold ETFs might not actually be there, is loaned/leased central bank gold (probably stored at the BoE which is being double-counted), or has been loaned/leased by ETFs.
- It also invites the question what happened to other holdings of allocated gold belonging to institutional investors and high net worth individuals which is stored outside of the BoE; and
- It also implies that there is nothing supporting the \$200bn per day of unallocated "gold" trading on the London Bullion Market.

An obvious pushback on the calculation would be...

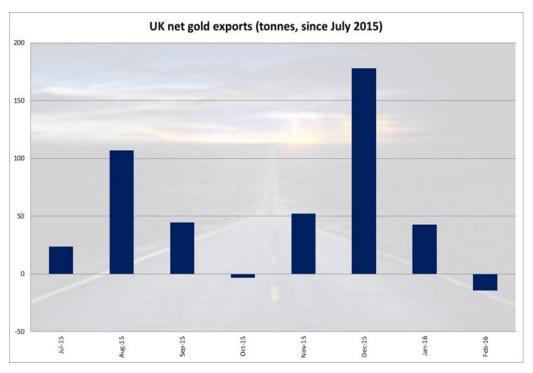
It was possible that gold was imported into the UK from overseas since the 2015 data BoE and LBMA data points which has made up the shortfall?

It would seem not...the opposite in fact.

The UK – via HM Revenue & Customs - publishes export and import data for non-monetary gold, i.e. gold which is not owned by the official sector (governments/central banks) on a monthly basis. The data tracks all non-monetary gold movement, whether there is a change in ownership or not (in contrast to balance of payments data).

The next chart shows the UK's net gold exports since July 2015, the month following the most recent LBMA data point.

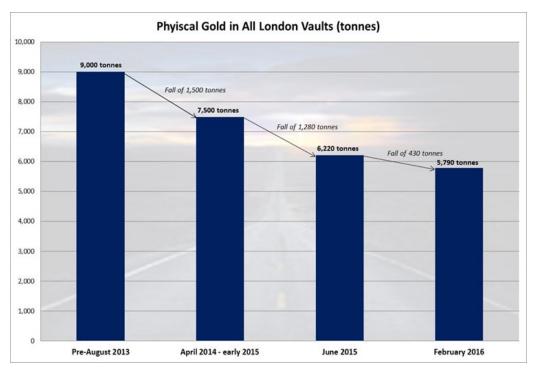




Source: HMRC

In aggregate, a net 430 tonnes of gold was exported from the UK since the beginning of July 2015. While this relates to non-monetary gold, it's not clear whether it was gold held at the BoE or in other London vaults, or (most likely) both.

Subtracting 430 tonnes from the aforementioned 6,220 tonnes left in London suggests that there was approximately 5,790 tonnes of gold left in London at the end of February 2016 (excluding net additions/substractions of central bank "monetary" gold).



Source: LBMA, HMRC

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This might be a good estimate of the current gold float in London vaults.

But...

What really matters is the gold "float" - how much gold is available in London *excluding* ETFs, the gold which has been exported from the UK since June 2015 and...

...the gold which is owned by central banks and stored at the BoE.



## Gold in the BoE vault and the float ex-central banks

The LBMA's June 2015 data point (i.e. 500,000 LGD bars or approximately 6,220 tonnes) did not, unlike the others, mention the proportion of London's gold held at the BoE.

As noted above, the most recent data point that we have is the 5,145 tonnes at the end of February 2015. It might be lower now in keeping with the declining volume of gold in London overall and the BoE itself in recent years.

We don't know but...

Our next step is to calculate how much of the 5,145 tonnes was/is owned by central banks and, therefore, not available for sale and merely available to the market, in some cases, in the form of loans/leases.

Because...

Bullion loaned/leased to the market by central banks is not a sustainable source of physical gold to maintain the function of the London Bullion Market.

In Graham Young's speech, referred to earlier, he confirmed that the vast majority of gold stored at the bank is owned by central banks.

"we are a very significant custodian of physical gold. Primarily this is gold that belongs to other central banks, but we also store gold in our vaults on behalf of a number of commercial firms that are active in the market."

The LBMA website states.

"Those clearing members without their own vault operations - Scotiabank and UBS - will utilise their accounts with the Bank of England or one of the other custodians."

Compared to the major physical gold players, especially JPMorgan Chase and HSBC which dominate physical trade in London, Scotia and UBS are significantly smaller and, it seems from the statement, might also hold gold at other vaults besides the BoE.

### So...how much of this 5,145 tonnes can we attribute to central banks?

A combination of central bank disclosures, work by Bullionstar (which sent questions to most of the central banks) and Sharelynx and some of our analysis/estimates allow us to make what we think are fairly high conviction estimates for gold held at the BoE by 31 central banks. We refer to the estimate for these 31 central banks as:

"Gold stored for central banks in BoE (1)"



Please refer to Ronan Manly's blog report:

## "Central bank gold at the Bank of England"

at the Bullionstar website, which also references data on Nick Laird's Sharelynx website. We agree with the vast majority of their estimates, which are largely based on central bank publications and replies to specific questions regarding the location of their gold reserves.

There are only three central banking institutions, the IMF, the Reserve Bank of India (RBI) and the Bank for International Settlements (BIS), where our estimates differ in anything other than a minor way.

#### 1. IMF

We have taken the 898 tonnes (19%) of IMF reserves stored at the BoE in 1976 as our starting point (like Bullionstar), since this was the last time it was publicly disclosed.

The IMF subsequently made two disposals of 25m oz. each (777.6 tonnes), one of which was to ostensibly private sector buyers and the other in the form of distributions to its member countries.

Of the former, Bullionstar notes that 3.74m oz. (116.3 tonnes) was delivered at – and probably withdrawn from - the BoE.

With respect to the other 25.0m oz, we have assumed that 19% (in keeping with the last known ratio of IMF gold at the BoE) of the 25.0m oz., i.e. 4.75m oz. (147.7 tonnes) was originally stored at the BoE. Conservatively, we estimate that all was removed apart from that received by the UK, i.e. 2.396m oz. (74.5 tonnes). This leads to the following calculation.

IMF gold changes	Tonnes
Starting point 1976	898.0
Private sector purchases	(116.3)
Distributions to member countries	(147.7)
Add back: distribution to UK	74.5
Sub-total	708.5

Source: IMF, ADM ISI est.

The next change In IMF gold reserves was the sale of 403.3 tonnes during 2009-10. Of this, we know that 200 tonnes was sold to India, 10 tonnes to Sri Lanka, 10 tonnes to Bangladesh and 2 tonnes to Mauritius.



We are fairly sure that the 200 tonnes relating to Indian sales was gold at the BoE and remains there (see below), the same with Bangladesh – we add these back to their respective central bank holdings at the BoE. Give that the vast majority of IMF gold is in NY, we assume that the gold sold to Sri Lanka and others was non-BoE gold.

IMF gold changes	Tonnes
Sub-total (from table above)	708.5
Less: India	(200.0)
Less: Bangladesh	(10.0)
Total	498.5

Source: IMF, ADM ISI est.

### 2. India

India's central bank, the RBI, has commented that 65.5 tonnes has been held outside the country since 1991 and a further 200.0 tonnes (obviously the gold purchased from the IMF) since 2009. Indian gold held overseas is stored at the BoE and BIS, but the BIS is not one of the repositories for IMF gold, hence we assume that the 200.0 tonnes is at the BoE. Bullionstar found a 2013 article in the Indian Business Standard which referred to gold loan of 46.9 tonnes which involved gold being transferred to the BoE. In aggregate, therefore, we assume India has 246.9 tonnes at the BoE.

### 3. Bank for International Settlements (BIS)

Bullionstar assumes that one third of total BIS gold (the total including 108 tonnes of its own gold and 443 tonnes of custody gold) is held at the BoE. However, we think that the percentage should be higher. The BIS is very active in gold loans/leases and gold market interventions, e.g. Zero Hedge expose of LinkedIn profiles of BIS traders (the second rule of the gold market), so it makes sense that the majority— we assume 50% - of gold is held in London.

The estimates for these 31 central banks are summarised in the table below which, in aggregate, amount to 3,774.2 tonnes.



Country	Gold reserves in BoE	Source	Tonnes
Germany	13%	Bundesbank	438.0
IMF	19%	IMF, ADM ISI	534.7
Italy	<1%	BullionStar	12.0
Switzerland	20%	SNB	208.0
Netherlands	18%	DNB	110.3
India	44%	RBI/BullionStar/ADM ISI	246.9
Portugal	49%	BdP	186.3
Venezuela	14%	BullionStar/Sharelynx	50.0
UK	100%	ВоЕ	310.3
Austria	80%	OeNB	224.0
Belgium	88%	VTM-niuws/BullionStar	200.0
Philippines	95%	BSP/BullionStar/ADM ISI	186.1
Sweden	49%	Riksbank	61.4
Mexico	94%	BdeM/BullionStar/ADM ISI	118.3
Greece	20%	MoF/BullionStar/ADM ISI	22.5
BIS	50%	BIS/BullionStar/ADM ISI	275.5
South Korea	100%	BoK/BullionStar	104.4
Romania	59%	BullionStar	61.2
Poland	100%	NBP/BullionStar	102.9
Australia	99%	RBA	78.8
Brazil	100%	BullionStar	67.2
Denmark	94%	Danmark Nationalbank	62.7
Finland	51%	BoF	25.0
Bolivia	39%	BCB/BullionStar	16.6
Bulgaria	60%	BNB	24.1
Peru	50%	BCRP/BullionStar/ADM ISI	17.5
Bangladesh	84%	СВоВ	11.8
Ghana	39%	BoG	3.4
Latvia	100%	Latvijas Banka	6.6
Ireland	95%	BullionStar	5.7
Iceland	100%	Bol/BullionStar	2.0
Total			3,774.2



We know from a diagram in the Bank of England's Q2 2014 Quarterly Bulletin that there were 72 central banks holding gold in the BoE's vault at that time and it's unlikely to have changed much.

Chart 2 Number of central bank customers, by

(a) This includes a small number of official sector financial organisations.

account

Source: BoE

However, this still leaves gold holdings of 41 central banks at the BoE unaccounted for. We refer to the estimate for these 41 central banks as:

"Gold stored for central banks in BoE (2)"

Fortunately...

We can make some educated guesses for another ten...

### 1. South Africa

In a question for written reply submitted to the National Assembly, South Africa's Finance Minister commented on 16 June 2015.

"The SARB holds a large percentage of South Africa's gold reserves in vaults of official sector institutions at offshore bullion centres, while a smaller amount is held locally. It is operationally efficient to store gold at offshore bullion centres should the need arise to conduct gold transactions."

The fact that London has been the hub of the gold market and South Africa was a British colony suggests that the majority of South Africa's gold is held at the BoE. We have assumed 70% of the total.



#### 2. France

France was a member of the London Gold Pool in the late-1960s, so there is a historic precedent of holding gold at the Bank of England. Reports in the media suggest that approximately 9% of France's gold is stored overseas and the far-right leader, Marine Le Pen, called for French gold overseas to be repatriated in November 2014. In 1968, France removed its gold from New York, so it's logical to assume that whatever French gold is held outside Paris is located in London.

## 3. Turkey

Historically, Turkey has held gold reserves in London and the central bank states that.

"The CBRT's gold reserves consist of international and non-international standard gold held at CBRT vaults, foreign banks and Borsa Istanbul (BIST)."

Foreign banks are likely to be based in either London (most likely) or the US and our assumption is that 25% of Turkey's gold reserves are held at the BoE.

### 4-7. Saudi Arabia, Kuwait, UAE/Qatar, Bahrain

Historians of the gold market remember that Middle Eastern nations, notably Saudi Arabia, were large purchasers of gold during the IMF and US Treasury sales in the late-1970s. The recycling of petro-dollars in the wake of the 1973 oil crisis was based in London, which was the logical place to store gold. We assume that 20% of the gold reserves of Saudi Arabia, Kuwait, UAE/ Qatar and Bahrain are stored at the BoE.

#### 8. Taiwan

In Asia, Taiwan is a large holder of gold. The following quote is from an FT article "Taiwan: we'll hold on to our gold, thanks" on 20 October 2010.

"Taiwan's relatively large gold holdings, however, are not the result of canny buying by Perng (Fai-nan, central bank governor) ahead of the recent rise in gold prices. Instead, their provenance date much further back, to when the Kuomintang party fled mainland China for Taiwan after losing the civil war with the communists. Chiang Kai-shek, then leader of the Kuomintang, was said to have transferred China's entire gold reserves to Taiwan, physically taking much of it out of China to be deposited in other countries."

When Chian Kai-shek fled to Taiwan in 1950, the logical places to have deposited the gold reserves would have been in the UK and US. We assume that a small percentage of current gold reserves, say 10%, are in the BoE vault.



### 9. Spain

Spain presents a problem give the secretive nature of the central bank regarding its gold, e.g. refusing to answer questions from Bullionstar. While it would be surprising if it didn't store some gold in London at the BoE, we are reluctant to assume that this is more than a minor percentage, say 5%.

#### 10. China

We have a slightly different view from BullionStar regarding China and are prepared to believe that at least a small amount of China's gold is stored in London for several reasons.

Firstly, while we won't go into it in this report, the evidence suggests that the PBoC does not acquire gold on the Shanghai Gold Exchange. If that's the case, the obvious place is London.

Secondly, the Yuan has joined the SDR and China has aspirations for it to be a reserve currency. Not only that, but on 19 April 2016, the Shanghai Gold Exchange launched a new benchmark physical gold price denominated in Yuan. In this regard, it makes sense to have the capability to mobilise gold in London.

We wonder if this is what Peter Mooslechner, an executive director of the Austrian central bank was referring to in October 2015 when he commented.

"It's quite different, I think, for central banks in Asia, for example, where they are increasing their reserves a lot and they are much more active in using also their reserves in trading in the market and intervening into the market."

It sounds like he was referring to China. There is strong logic for China keeping some of its gold at the BoE but we have assumed only 5%.

From South Africa to China, we have estimated the gold reserves at the BoE for an additional nine nations. This still leaves some very large holders.

Country	Tonnes
US	8,133.5
Russia	1,447.0
Japan	765.2
ECB	504.8
Total	10,850.5

Source: World Gold Council



Given the strategic importance (something which passes by most commentators) of the gold market and London's role, it's realistic to assume that some of this gold resides at the BoE.

## To be conservative, we'll assume that the US, Russia and the ECB hold no gold at the BoE.

In the case of the US, the latest report from the US Treasury states that all of the US gold reserves are stored on US territory at Fort Knox, West Point, Denver and the NY Fed. We'll ignore activities of the Exchange Stabilisation Fund (and evidence that it mobilised gold in the relatively recent past) and our suspicion that it undertakes "location swaps" in the gold market.

We have also assumed that the ECB does not holding any of its gold at the BoE although, once again, our suspicions are to the contrary.

Russia has been active in the London gold market in days gone by but, in the current geopolitical environment, we think it's unlikely that it would take the risk of storing any of its 1,447 tonnes of gold in the BoE. Ditto other nations that might be considered as part of the Russian "bloc", e.g. the Stans (including Kazakhstan, Tajikistan, Uzbekistan and Kyrgyzstan) and Belarus.

Excluding all of these nations, this leaves an additional 31 of the 72 nations unaccounted for. We have conservatively assumed that these 31 nations store an additional 100 tonnes, or approximately 3.0 tonnes each.

Country	Gold reserves in BoE	Source	Tonnes	
South Africa	60%	ADM ISI	87.6	
France	9%	ADM ISI	243.6	
Turkey	25%	ADM ISI	119.9	
Saudi Arabia	20%	ADM ISI	64.6	
Kuwait	20%	ADM ISI	15.8	
UAE/Qatar	20%	ADM ISI	4.0	
Bahrain	20%	ADM ISI	0.9	
Taiwan	20%	ADM ISI	42.3	
China	5%	ADM ISI	89.4	
Spain	10%	ADM ISI	28.2	
Other 31 nations		ADM ISI	100.0	
Total			796.3	

Source: World Gold Council, ADMISI



## Now to calculate the gold float in London...

Starting with the LBMA's figure of +/-500,000 LGD bars or 6,220 tonnes, we can subtract gold held in ETFs in London, net UK gold exports and gold stored for central banks at the BoE.

### Gold float in London vaults—calculation:

	Tonnes	Tonnes
Gold in London in June 2015		6,220
Less:		
Gold held by ETFs		(1,281)
Gold stored for central banks in BoE (1)	(3,774)	
Gold stored for central banks in BoE (2)	(796)	
Central bank gold stored in BoE		(4,570)
Net UK gold exports Jul 15-Feb 16		(430)
Gold float/(deficit)		(61)

Source: ADM ISI estimates

From the calculation, we are left with a deficit of 61 tonnes.



If this is close to being correct..

- It's possible that there has— effectively been a hidden default in the London Bullion
   Market which has been obscured by loans/leases of central bank gold;
- Based on BoE and LBMA data, there is insufficient gold bullion merely to cover gold owned by ETFs and our estimates for central banks - never mind allocated gold owned by institutional investors and high net worth individuals;
- Some of the gold held in London vaults may be subject to multiple ownership claims.
   This could be obscured by dual ownership of central bank gold via gold loans/leasing contracts;
- With the UK being a net exporter of non-monetary gold, the situation could get worse not better; and
- To reiterate, there is no gold float supporting more than US\$200 Billion per day of trading of unallocated gold In London.

## Intuitively...

We think that central bank gold lending/leasing might be maintaining the apparent status quo in the London Bullion Market. Rather than being lent to the market to provide liquidity, central bank gold loans/leases are probably being expanded and rolled over to preserve the illusion.

In the Graham Young speech referred to above, he explained how central banks can "mobilise", i.e. undertake loans/leases, in the gold market.

"What the Bank provides is an account management service on an allocated basis. That means that those holding gold at the Bank, particularly other central banks, have the reassurance of knowing that they have title to specific bars; but they are also able to mobilise those gold holdings conveniently by making or receiving so-called 'electronic book entry transfers' between their account at the Bank and the account of their counterparty. Such a transfer does not require gold to be physically moved within the Bank's vaults; rather, title to the bars in question is transferred within the Bank's IT systems."



When the Danish central bank wanted to begin gold lending, it moved gold to the BoE. Bullion-star found these quotes by the Nationalbank from 1999.

"In 1987 the Nationalbank began to lend gold to foreign banks against interest paid in gold... This made it necessary to move the gold to London. In August 1999, 62.7 tonnes of the Nationalbank's gold was in London, corresponding to a share of 94%."

And.

"Gold deposited with the Bank of England is not necessarily physically moved when it is lent."

This is significant as it is effectively confirmation that gold in the BoE's vaults is subject, in some cases, to more than one ownership claim.



## China and a two-tier gold market

The structural flaws in London leave the gold market's integrity vulnerable to increasing offtake of physical gold.

## In other words, an old fashioned "run".

As noted above, the article "Wholesale Physical Markets are Broken", from the LBMA's Alchemist magazine, suggests that the break down in the current structure of the London Bullion Market is well advanced.

We obviously agree.

The caveat is that vulnerability can remain masked indefinitely unless or until a run actually occurs and/or central banks cease/reduce supplying more gold to the market - as happened with the collapse in the London Gold Pool in 1968.

Given the 92:1 imbalance between paper/physical, a shift in the balance in gold trading from paper instruments towards physical could quickly destabilise the market.

This is especially true when there is an average of more than US\$200bn of trading in unallocated gold every day.

If an increasing number of investors understand the fragile structure of the gold market vis-à-vis physical gold, it would be an incentive for them to take delivery of bullion instead of holding paper contracts.



Source: LBMA



In the Alchemist article, Seamus Donoghue explicity addressed the risk from such a shift.

"The OTC market dwarfs the physical market in terms of size. Any shift in flows from the OTC market to the physical market as a result of a more efficient physical market could have an outsized impact on physical premiums."

There are two key takeaways from that comment:

- He tacitly acknowledged that the price of physical has been suppressed by the dominance of paper gold instruments; and
- It raises the possibility of a two-tier market emerging in gold between prices for paper gold instruments and physical gold itself.

Donoghue then pursued the theme of supply constraints for physical gold leading to higher prices.

"There are supply constraints in physical markets that do not exist in OTC markets, and given the near-term inelasticity of supply, the way to accommodate higher demand would be higher premiums."

In other words...

#### ...a two-tier market.

Ironically, new bank regulation could also help to drive the migration from paper to physical gold trading. Basel III, for example, puts tighter restrictions on the leverage of bank balance sheets. Gold is treated differently depending on whether it is unallocated gold (a bank liability so on balance sheet) or allocated gold (customer asset so off balance sheet). Donoghue explained.

"The banks are already encouraging their investor accounts to migrate their unallocated positions to allocated, given the more favourable capital treatment for the bank"

If this is happening, it really strikes us as ironic given the ability of banks to influence the gold market via the dominance of paper instruments for more than two decades.

A recent – and very significant move – by China is also likely to promote a shift towards physical gold and a two-tiered price structure. On 19 April 2016, the Shanghai Gold Exchange launched a new Yuan-denominated benchmark price for PHYSICAL GOLD.



The settlement process is centrally cleared – it's an exchange unlike London - and the price is for physically delivered 1-kilo 99.99 bars which is quoted in Yuan per gram. Delivery can take place at any of the SGE's registered vaults in 36 cities with settlement T+2.

There are some stark contrasts with London where the settlement process is not centrally cleared, settlement is by book entry rather than in physical metal (unless allocation is specifically requested) and the contracts are for 99.5% 400oz. "bars."

The lack of central clearing in London necessitates the need to set up bilateral credit lines between market participants and also means CREDIT RISK, since there is no exchange acting as counterparty. As Chinese banks have found, setting up bilateral credit lines with LBMA bullion banks is not necessarily straightforward.

Mimicking London, however, the Shanghai benchmark will have twice daily a.m. and p.m. prices which are fixed via auction processes beginning at 10.15am and 2.15pm respectively.

Important point...

In London, the twice daily LBMA prices are fixed at 10.30am and 15.30pm. Because of the eight hour time difference, the Shanghai benchmark prices will front run the London prices.

This was Simon Mikhailovich of Tocqueville Bullion Reserve commenting to the Epoch Times last year about the new Shanghai contract.

"I think the Chinese have a problem. The LBMA auction price is achieved by a group of banks. Price for physical gold is determined in markets where you don't have to have physical gold to affect the price...I think what the Chinese are trying to do is creating a real market that reflects supply and demand for physical gold."

Agreed.

The SGE's white paper on the new benchmark price notes that the new benchmark contract should be be "non-competitive" and complement loco London. However, the same document is fairly clear in its explanation of why and how China is planning to wrest control of the gold market from London.

Here are some illustrations from the white paper, beginning with China setting out its gold credentials.

"China is the largest producer and consumer of gold in the world. SGE...has ranked as the world's largest physical gold exchange for nine consecutive years..."



It will support China's strategic desire to internationalise the Yuan.

"The dollar-based gold price in today's market is not able to affect the need of price discovery process in different markets. It has remarkable strategic value for China to introduce its new Renminbi-denominated 'Shanghai Gold Benchmark Price', to influence the power of the Renminbi currency in the global gold market."

First gold then oil?

Damn right...

"If the SGE contract proves successful in its early stages of operation, this could open up further possibilities for renminbi pricing of commodities heavily traded and used by China in the Chinese currency, as part of the currency's gradual move to full international status."

China is clearly developing a policy to be the centre for price discovery in the gold market.

"There is a strong rationale for an international effort to shift price discovery to China, since this country will be responsible for a large share of future growth in world gold consumption."

As a brief aside to the contents of the white paper...

On the same day that the new Shanghai benchmark gold price began trading, Russia Today published an article "Moscow & Shanghai seek to dominate gold trade."

"The Bank of Russia and the People's Bank of China want to create a joint platform that would unite gold trading by the world's two biggest gold buying countries...BRICS countries are large economies with large reserves of gold and an impressive volume of production and consumption of this precious metal. In China, the gold trade is conducted in Shanghai, in Russia it is in Moscow. Our idea is to create a link between the two cities in order to increase trade between the two markets," First Deputy Governor of the Russian Central Bank Sergey Shvetsov told TASS."

Six days earlier on the 13 April 2016, Reuters ran the following story.

"The Dubai Gold & Commodities Exchange (DGCX) said it had agreed to collaborate more closely with two of China's biggest banks in a move that could pave the way for transactions to be cleared in the yuan and attract more interest from Chinese investors...The DGCX did not elaborate on what yuan products it might develop...The exchange also launched spot gold contracts in December, enabling investors to buy and sell physical 1 kilogramme bars."



Back to the white paper...

China is seeking to encourage further gold investment, which has been taking off domestically.

"After the global financial crisis in 2008, institutional and individual investors are more concerned the function of gold as asset allocation. The launch of Shanghai Gold Benchmark Price is expected to active (sic) the willingness of investors in gold investment."

So greater offtake of physical gold instead of paper alternatives.

Towards the end of the white paper is a section "SGE Contract and its Role in Price Discovery." This gets to the heart of how the SGE benchmark price should lead to better price discovery for physical gold.

"The new renminbi-denominated gold benchmark offered by the Shanghai Gold Exchange is a necessary addition to the international gold market and should make the pricing of physical gold more open to the play of market forces."

While the London market is a fractional reserve system...

"The SGE is the world's largest spot gold exchange, with all trades denominated in renminbi and backed by physical gold held in SGE accounts."

The white paper even highlights how dollar gold prices in the west are dominated by paper gold instruments and how China differs.

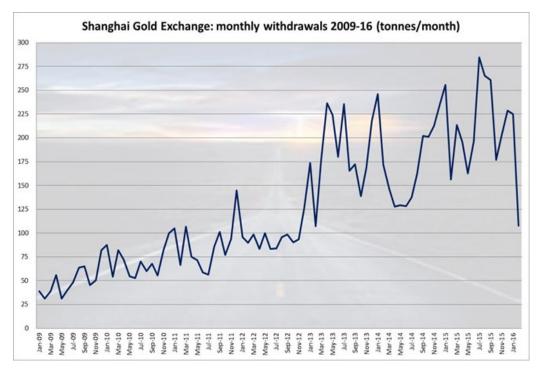
"However prices are still derived from dollar-based benchmarks set by trading venues in London, New York and other locations far from China. The majority of trading on these venues is made up of 'paper' contracts, in contrast to China, where consumption is comprised mainly of demand for gold bars, coins, jewellery and manufacturing inputs, as well as central bank purchases."

It is confident that Chinese demand will continue to grow.

"This demand is expected to expand in coming years, boosted by rising average incomes (especially in China's interior provinces and 'third-' and 'fourth-tier' cities) and the rebalancing of China's economy towards greater private consumption. The relatively small portion of gold holdings in Chinese households' large overall savings —and the uncertain outlook for investments in property or the stock market —create opportunities for gold product development, boosting demand for physically-backed gold products."



SGE withdrawals are a good proxy for Chinese gold purchases (excluding PBoC purchases) since bars have to be recast if they are to be re-sold and this rarely happens. SGE withdrawals have been on a strongly rising trend (with thanks to Koos Jansen).



Source: Koos Jansen, SGE, ADM ISI

In 2015, aggregate withdrawals during the year were 2,597 tonnes, which was equivalent to more than 80% of all of the gold mined worldwide during the year.

In our opinion, the shift to a two-tiered market will be one of the stepping stones to reforming the London Bullion Market and the convention of LBMA members to trade in unallocated gold accounts.

These things take time...

There have been signs that we've been taking tentative steps towards a two-tier gold market for some time...



The gold lending market moved into semi-permanent backwardation in mid-2013 as indicated by a negative GOFO rate (GOFO = Gold Forward Offered Rate).



Source: ADMISI, Bloomberg

In an efficiently functioning market, this should not have happened.

GOFO was the interest rate to borrow dollars using gold as collateral. If you were in possession of gold bullion, a negative GOFO meant that the market was prepared to lend you dollars AND pay you interest to borrow them in return for the use of your gold for the duration of the loan. It implied stress in the system with regard to the availability of physical gold – in this case 400 oz. London Good Delivery bars on the LBMA.

The negative GOFO rate which emerged in 2013 was only the third occasion since 2001 when GOFO had been negative. On the other occasions, the negative GOFO rates only lasted two days and coincided with lows/turning points in the gold price in 2001 and 2008.





Source: ADMISI, Bloomberg

GOFO went "dark" on 30 January 2015 when the LBMA stopped publishing GOFO rates.

Ironically, on the very same day that the LBMA went dark on GOFO, it responded to the Bank of England's "Fair and Effective Markets Review" with an 11 page letter in which it said it would "welcome further transparency."

"The LBMA would also welcome further transparency through post trade reporting, providing the industry with data that at the moment does not exist for the bullion market."

Change its tune, even if it hasn't changed its modus operandi. In an October 2009 report, we quoted the LBMA's website which made a virtue out of the lack of transparency.

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

This sentiment is impossible to reconcile with the reality of gold trading by LBMA members. If it welcomes further transparency, why hasn't the LBMA done something about it?

#### The LBMA's

"it is important that the Review does not implement any new measures which will impact the liquidity of the markets. We would like to reinforce the message presented by the FIA that the Review should prioritise liquidity, as greater liquidity results in markets which are less easily manipulated"



Instead, besides GOFO, we don't have any data on "gold" trading volumes and the positioning of traders, as is customary with more effectively regulated exchanges.

The LBMA's assertion in its letter to the Bank of England...

"Gold is traded widely, and provides many banks, trading houses, refiners, and investors with the opportunity to invest confidently."

...has a hollow ring.

A "run" on a financial asset tends to develop slowly before transitioning to the acceleration phase which is the essence of the word.

In gold, we can demonstrate how we are in the first phase of the run which will create a two-tiered gold market. However, there are clear signs of acceleration in physical gold purchases.

Before we outline what's happening in the gold market, it's vital to outline how analysing supply and demand for gold market differs markedly from commodities and physical goods with the exception of silver.

Even ignoring the dominance of paper instruments, it's actually impossible to model supply and demand for gold. The reason for this is the extreme stock/flow ratio in gold (and silver). New mine supply each year is about 2,800 tonnes, which is only a small fraction of the existing (official figure) inventory of about 185,000 tonnes. Whether newly mined gold next year is 2,800 tonnes or 2,900 tonnes has a very minor impact on the gold price.

By not selling their gold inventory, gold holders (e.g. owners of gold bars, jewellery, coins, etc) are effectively demanding it at the prevailing price. This is sometimes termed "reservation demand."

Gold is not consumed like normal commodities/goods, which makes it similar to other financial assets which are also held as "inventory". There is no way to calculate the supply and demand within the existing gold inventory. In the same way, you can't calculate the "demand" for Coca Cola shares or 10-year Treasury bonds.

Consequently, the gold price is effectively dependent on portfolio adjustments vis-à-vis other financial assets such as bonds, equities and cash...notwithstanding the elasticity of paper gold supply which has had such a profound impact on the gold market for many years.

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Although it's impossible to model gold supply and demand, it never stops the institutions, like the World Gold Council, banks and industry consultants, from doing just that. Data from the World Gold Council and others is nothing more than best guesses of incremental gold supply in terms of newly-mined gold and scrap together with best guesses as to where the incremental bars, coins and jewellery ended up.

While it's impossible to model supply and demand for gold, we can gauge the aggregate strength of net physical gold buying from four major sources of identifiable purchases/sales:

- Gold withdrawals on the **Shanghai Gold Exchange** (data from the SGE);
- Gross gold imports into India;
- Net change in gold holdings of all-known ETFs (Bloomberg); and
- Net change in **central bank gold holdings** (WGC, quarterly data weighted on a monthly basis according to the WGC's incomplete data for the latter).

Please note that the charts understate the actual purchases from these sources as we lack data on two additional sources of buying.

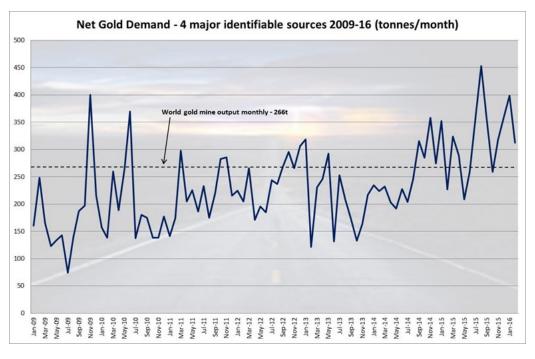
- There was a well-documented surge in gold smuggled into India after import duties were imposed during 2012-13.
- Net SGE and central bank demand do not include PBoC purchases until July 2015. The
  PBoC does not purchase gold on the SGE and, until July 2015, did not report monthly additions to its gold reserves. Prior to July 2015, the PBoC reported gold reserves at approximately 6-year intervals.

Between April 2009-June 2015, the PBOC added 604 tonnes to its reserves. This would have added an average purchase of 8.2 tonnes per month to the data in the above charts before July 2015.

Please also note, we can only calculate the aggregate net purchases by these four sources up to February 2016 and it is somewhat clear whether the data will be available going forward.

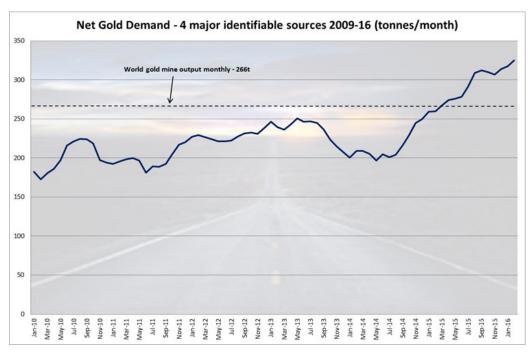
However...

In aggregate, these four sources alone were exceeding the output of all the world's gold mines in most months since late 2014 as shown in the chart below.



Source: ADMISI, Bloomberg

While the data can be volatile on a month-to-month basis, it's clear that aggregate net purchases from these sources has been on a rising trend. Here is the same data based on a 12-month moving average, which gives a clearer idea of the trend.



Source: ADMISI, Bloomberg

It's vital to emphasise that the these two charts exclude ALL other Asian and western sources of retail and institutional gold buying.



## Untapped – vast western pools of capital

Rising purchases of physical gold represent a serious threat to a fractional reserve system like the current gold market, for it to actually break down, we need this gold buying to accelerate into a run on physical gold.

We are not there yet, even if we are moving in that direction.

In gold's case, it might require an escalation of geopolitical/economic tensions between the US and China/Russia, for example.

It was economic tension between the US and France over the value of the dollar which smashed the London Gold Pool of gold price management in 1968.

Or...

It might require the vast pools of western capital to dip their toes into the physical gold market. To say that gold as an asset class is under-owned by the vast pools of western capital is to understate the situation in the extreme.

It is not as though they are "underweight", it is more that they are almost zero weight.

Across the centuries of financial history, western prejudice towards gold is a recent and atypical phenomenon.

The prejudices which have built up in the minds of the modern day custodians of western capital essentially parallel the era of hyper-interventionist central banking since the 1980s, when Greenspan took over the Fed.

Our view is that we are travelling a long and winding road – certainly longer than we expected when we first began analysing the gold market and gold mining companies in 2005 - which sees gold recover its former role as an investible asset for western investors.

An increase in the current tiny allocation of the vast pools of western capital into physical gold would have a disproportionate impact on the market.



There are some signs of this emerging with the recent increase in gold held by ETFs.



Source: ADMISI, Bloomberg

But we need a catalyst for this process to accelerate.

One catalyst for western capital to enter the physical gold market could be some exhaustion of buying in other major asset classes due to a combination of one or more of:

- Loss of faith in central banks and other policy makers;
- Overvaluation;
- Unacceptable credit risk; and
- Deteriorating fundamentals.

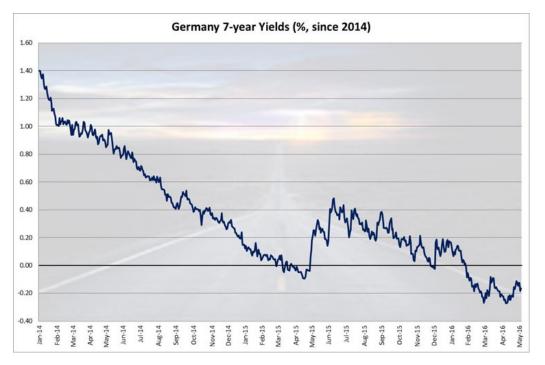
We argued earlier how even mainstream commentators are starting to question the credibility of central banks. Equities and long-term sovereign bonds in many developed world markets are still close to all-time highs, credit risk is being re-priced in a bearish manner and global growth is deccelerating.

While the set-up for western funds to reassess gold as an investable asset is VERY POSITIVE, it's worth looking at the investment case in more detail. Specifically, in terms of yield and credit risk.



The oft used push back against investing in gold down the years has been "Gold has no yield". While it was no impediment to the 2001-11 bull market, even this argument has lost its validity as yields on the highest quality credit instruments move towards and into negative territory.

There is currently some US\$7 trillion of government bonds now trading with negative yields. Swiss sovereign rates are negative out to ten years and German out to seven years.



Source: ADMISI, Bloomberg

It is creating the remarkable situation in which **investment in physical gold can increasingly be justified on a yield basis** relative to the highest quality sovereign and (European/Japanese) corporate borrowers



Sovereign/Corporate	2-yr Yield (bp)	CDS
US	76	20
UK	48	36
Nestle Finance (Eur)	3	26
Siemens Finance (Eur)	2	39
Gold	0	0
Italy	-4	122
Toyota Finance (JPY)*	-5	38
Spain	-7	90
Japan	-23	46
Republic of Ireland	-34	64
Denmark	-35	22
France	-41	37
Finland	-43	26
Belgium	-46	49
Netherlands	-47	26
Germany	-49	18
Sweden	-55	20
Switzerland	-84	30
*5 year		

Source: ADMISI, Bloomberg

This is a reflection of the "bizarro" financial system in which central banks have aggressively distorted asset prices.

### Then there is credit risk...

Gold has one advantage that sets it apart from EVERY other financial asset, not just credit instruments.

Gold, and we are specifically referring to physical bullion – not the multitude of paper gold instruments - is the only financial asset which has no counter-party risk.

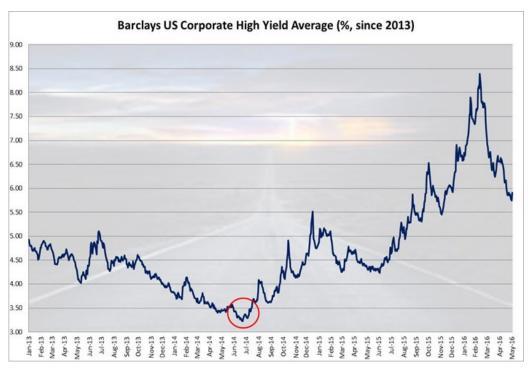
This is becoming increasingly important (again).

A key theme in financial markets is the re-pricing of credit risk as credit markets are bifurcating between the "bad" and "good" ends of the credit spectrum.

High yield and indicators relating to the banking system have been flashing warning signs about the sustainability of the central banks' ZIRP - QE - NIRP driven bubble.



Barclays High Yield Average is currently almost 6.0%. This is more than 250bp higher than the low in June 2014.



Source: ADMISI, Bloomberg

Japan has joined the Eurozone, Sweden and Denmark in the NIRP zone which, as our Chief Economist, Stephen Lewis argued, could prove to be counter-productive both for bank earnings and economic growth.

"The most obvious problem arising from a negative rate regime is that it tends to squeeze bank profits. Mr Kuroda was right to point out that BoJ's measure would affect only a small proportion of Japanese banks' assets, and would, therefore, have only a minor impact on their earnings. However, when bank managements feel themselves under the regulators' cosh, as they do at the moment, even a small additional penalty may have a disproportionate impact on their willingness to take risks. In other words, there is a real danger that the BoJ's negative rate on banks' excess reserves will turn out to be counter-productive in terms of its effect on bank lending."

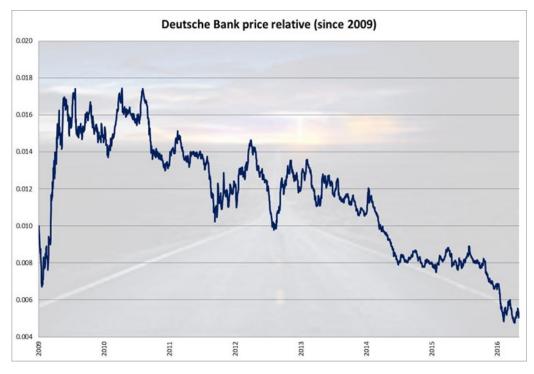


Japanese bank stocks have fallen more than 40% since last Summer.



Source: ADMISI, Bloomberg

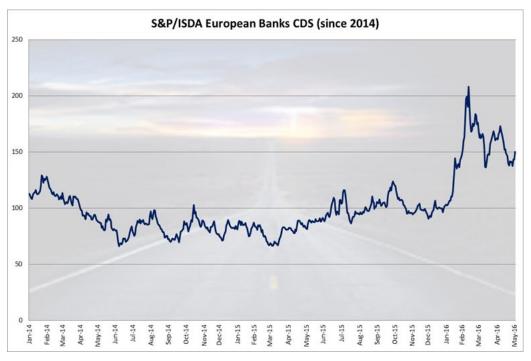
We first heard feint rumblings about solvency issues at Deutsche Bank 2-3 years ago. The market seems to be taking them somewhat seriously, although the situation remains largely opaque to outside observers.



Source: ADMISI, Bloomberg

One might liken Bank sector analysts to the inhabitants of Plato's Cave – and that is not meant to be a derogatory remark, more an empathetic one.

It's not just DB as markets are significantly re-pricing credit risk across the banking system in general.



Source: ADMISI, Bloomberg

It's worth reiterating that the vast majority of "gold investors" are holding paper gold instruments. While their investment rationale might be because they don't trust the financial system or require portfolio diversification, their counterparties are banks in which they are on the lowest rung of creditors.

The irony.

The key question for us is:

Could the physical gold market accommodate even a modest allocation of western capital near the current gold price?

We doubt it.

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