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Open Letter to LBMA Board of Directors

Price gold bullion, not gold credit

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Price gold bullion, not gold credit

Open letter to:

The Board of Directors, London Bullion Market Association

Dear Sir/Madam,

This is gold's chance to shine, if you'll pardon the pun, more than seven years after the price reached its all-time high, before plunging into the prolonged bear market.

Numerous factors are converging to cement gold's investment case at this time.

Catalysts for the explosive gold bull market of 1968-80 were a loss of US monetary and fiscal policy discipline, tensions between major economic powers and a wave of gold buying, led by central banks. We are seeing a **repetition of similar events,** with:

- the capitulation in hawkish Fed rate policy and resumption of QE/unconventional monetary policy;
- trillion-dollar US budget deficits in prospect for at least the next decade, if not indefinitely;
- periodic US/China trade tensions and a schism in economic thinking (Trump-style nationalism vs. globalism); and
- central banks purchased the most gold in 2018 since 1967, with another strong year expected for 2019, when the final data are released.

There are other, equally important, factors in today's global macro and geo-political picture – aside from the recent US/Iran flare-up – which are very gold-positive:

- gold has **always outperformed in the late stages of previous debt cycles** – all of the way back to the late 18th century and the Industrial Revolution;
- the current debt bubble is unprecedented, with global debt surpassing $250tr and more than 320% of global GDP; and
- when we look at financial markets, we see QE/ZIRP-driven asset bubbles in bonds, stocks and real estate, and the US economic expansion is now the longest in the post-war period.

Historical drivers for the gold price **dovetail with today's risks,** since gold is the **only financial asset** that:

- has no counterparty risk; and
- outperforms in both deflation and inflation – resolution of this global debt cycle will require an intensification of one, or perhaps both (sequentially).

Gold should function as a signalling device, acting as a **warning sign and stabilising influence for a global financial system that has overstretched itself.** This one has, with the need for unconventional monetary policy passing the point of no return.

The gold price is being held back – potentially increasing moral hazard across the entire global financial system – which is where reforms by the London Bullion Market Association (LBMA) can play a role.

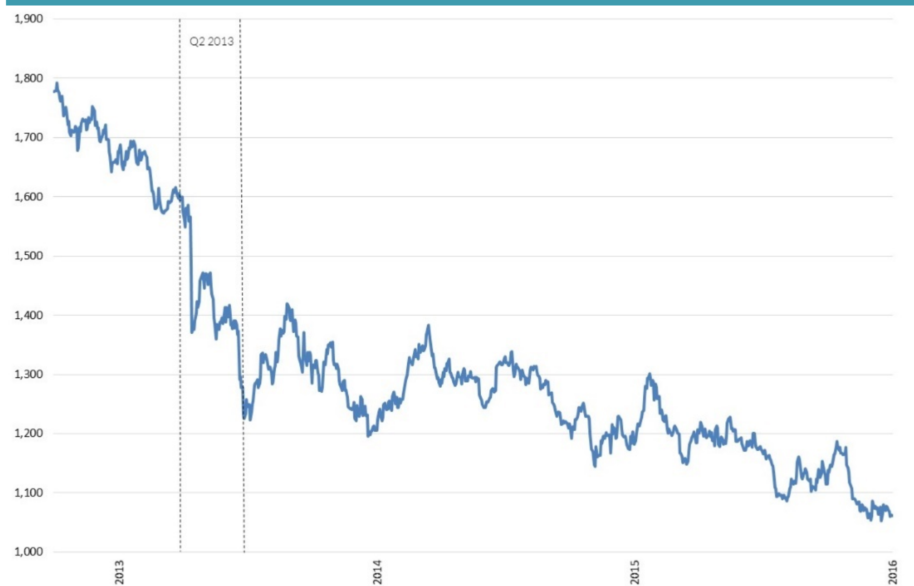
As we show you in the report attached to this letter, the **structure in London's OTC gold market** – the hub of the global market – is frustrating the ability of the gold price to function as it should. We demonstrate how this has been the case for many years.

Longstanding structural issues in regulation, transparency and, most importantly, trading practice, are acting against the interests of key stakeholders, e.g. gold mining companies, investors and, directly or indirectly, all participants in financial markets.

We believe that gold should, and could, play an enhanced role in the global financial system, if a small number of issues were addressed.

In the report, we show **how the link has been broken between market fundamentals for gold bullion and the gold price for long periods**.

Gold bear market of October 2012 to December 2015 (price $/oz)



Source: UK ONS

Our detailed case study of the period October 2012-December 2015 (the ***False gold bear market***) shows that the *41% crash in the gold price (above chart) was in precisely the opposite direction to identifiable fundamentals* for gold bullion:

- a run on London's gold inventory of more than 2,000 tonnes of gold bullion, which was exported, mainly to Asia (see chart below) – this volume was equivalent to more than two thirds of the inventory;
- flat/down gold supply in terms of new gold mine production and gold recycling;
- a market-based indicator (GOFO rate – explained in the report), which was clearly signalling a lack of available gold bullion before the LBMA ceased reporting it, under pressure from the banks in January 2015; and
- reports from gold refineries, which hadn't reported such strong demand in more than four decades.

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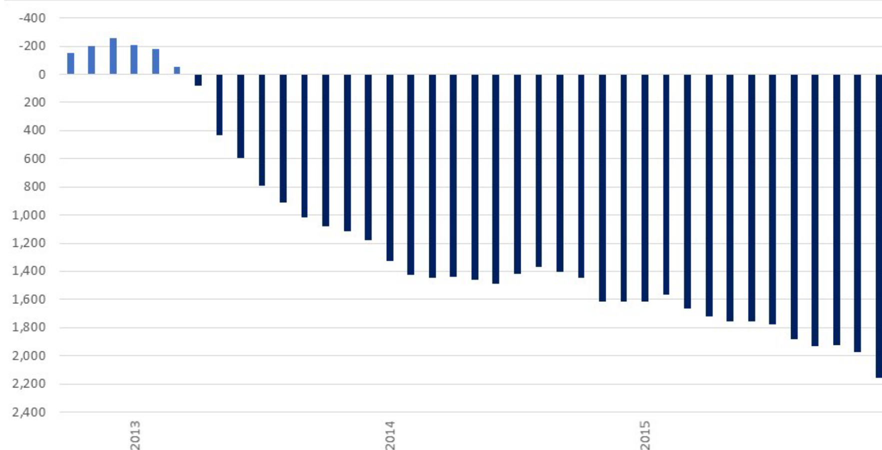
Cumulative net gold exports from UK, October 2012 to December 2015 (tonnes)



Source: UK ONS

Inexplicably, the **biggest quarterly decline in the gold price** – 25.4% in 2Q 2013 – coincided with the **biggest quarterly supply shortfall** reported by the World Gold Council for any quarter since reporting began in 2010.

We believe that the reason the price of gold can defy fundamentals is due to structural trading practices in London. The LBMA estimates that 95% of trades are in unallocated gold contracts, which are "gold credit", not gold bullion, meaning that the London OTC market has been almost entirely **derivative-*ised.*** This has virtually eliminated the need to deliver gold bullion.

With only 5% of gold trades requiring metal delivery, demand for actual gold bullion is diluted by a factor of ca.20. On the supply side, therefore, the number of short contracts can theoretically be expanded in an almost elastic fashion without commensurate bullion delivery risk.

It's logical that diluting bullion demand by substituting it with gold credit, in combination with an elastic supply of this gold credit, will lead to a "gold price" disconnected from bullion fundamentals.

Consequently, the source of gold mining company revenue and value of investors' assets has been crowded out of price setting by the sheer volume of gold credit.

Some will see this derivative-*isation* as creating an uneven "playing field", since **it dramatically increases the capacity to sell/short unallocated gold**. Commentators might conclude that the main beneficiaries are major banks/short sellers.

We estimate that the aggregate loss in cashflow to gold mining companies worldwide from the fall in the gold price during October 2012-December 2015 was **more than $157.5bn**. Many mining executives and investors remain unaware of their plight.

We acknowledge that the LBMA has played a crucial role in the gold market for over 30 years, ensuring certain minimum standards and creating codes to be observed. For example, as recently as 6 February 2019, the Bank of England confirmed its endorsement of the LBMA's "Global Precious Metals Code" with a "Statement of Commitment". Indeed, the Bank of England is itself a market participant.

However, while the LBMA's purpose may have been to underpin trust, one can argue that market practices and regulation are constantly evolving and there is opportunity to go further. The market might improve its attractiveness to a wider range of investors if it were to adopt a governance regime that seemed commonplace in other established capital markets. For example, many would find a market where there are twice-daily price "fixes" in a matter of minutes a little "quaint". They would most likely question whether the LBMA could qualify for "Recognised Investment Exchange" status (recognised by the Financial Conduct Authority, that is), which would tick a lot of governance boxes.

On transparency, the LBMA has made progress in line with the Bank of England's *Fair and Efficient Markets Review* in 2015. The LBMA now publishes the physical holdings of precious metals held in London vaults. However, there is a lag with data published three months in arrears, which limits its usefulness.

The LBMA's adoption of "trade reporting" falls well short of what this means in other markets in two respects. Firstly, there is no reporting of volume and price of individual trades after execution. Secondly, and more importantly, we believe that the **LBMA's data on total trading volumes might understate the actual figure substantially**.

Current LBMA data on "total" trade volumes **exclude** trades by non-LBMA members. When the LBMA previously published gold trading volumes for 1Q 2011, the data included these trades. The daily average trading volume in 2011 is **5x higher** (about 4,000 tonnes/day or $150bn) than the daily average since the LBMA restarted reporting in November 2018 – even though the current data include Zurich trades and gold leases/loans/deposits, which were not included in 2011.

Difference in daily average trading volume, 2011 vs. 2018

	2011	2018	Difference
Volume (tonnes)	*5,403*	*939*	**4,464**
Volume (million oz)	173.7	30.2	**143.5**

Source: LBMA

If the difference between LBMA member volume and total gold trading volume is several thousand tonnes and well over $100bn daily, that would be remarkable. An LBMA director said, in a telephone conversation, that the LBMA would respond to our concerns on this matter if we submitted them in writing, which we duly did. However, we are still waiting for the response.

Besides the 12 market makers, the LBMA's 146 members include banks, securities traders, commodity traders, exchanges, bullion dealers, mining companies, mints, refineries and vault companies. The LBMA membership list is, to say the least, fairly exhaustive. Nevertheless, a large group of players in the gold market is missing – **central banks**. Despite not being members, they are LBMA clients, as you have acknowledged: "The LBMA has a global client base. This includes the majority of the gold-holding Central Banks."

After analysing trading volumes, **we conclude, at this time, that, for much of the typical trading day, central banks might be heavily influencing London gold trading**. This has been widely speculated in the past, but perhaps not the scale.

While some commentators have argued that market practice causes gold to be structurally under-priced, we would highlight an inherent potential for price asymmetry, e.g. if there were another strong wave of bullion demand like in 2013-15.

If, for example, **gold bullion settlement becomes problematic in London,** due to a shortage of available gold bars meeting LBMA "good delivery" standard, the gold price could be re-based to a much higher level.

On the subject of gold bullion settlement…

…it's not the amount of gold in London's vaults that is key, but the **"float" of gold, i.e. unencumbered bullion** excluding, for example, "official" (central bank) and ETF gold.

Our calculation below suggests that the float of gold in London's vaults is around 1,000 tonnes, i.e. similar to what it was in the "supply crunch" of late 2015.

Current estimate for gold "float" in London (tonnes)	
Total gold in London vaults	8,228.4
Less:	
Official gold (95% x gold in BoE)	*-4,894.2*
Less:	
ETF gold held in London	*-2,041.6*
Less:	
Est. held by institutions (incl. SWFs) and HNWs	*-300.0*
Equals	
Gold float supporting London OTC trading	*992.6*

Source: LBMA, BoE, World Gold Council

This level is only a FRACTION, about 20%, of the actual DAILY average London OTC trade in unallocated and allocated gold, as we speculated above. Absent the convention of trading gold credit/derivatives, London could run out of bullion in a matter of hours.

It **leaves London's vaults ill-prepared** to withstand another wave of bullion buying, even one that is less than half the strength of 2012-15, when about 2,000 tonnes left London vaults.

No doubt some parties believe that current arrangements in London work well, and should be left as they are. Nevertheless, we hope that you will agree that there is a strong case for **reform** of the London OTC gold market.

We would welcome being part of this debate and, in short, our recommendations for reform would include, but are not limited to, the following, with the goal of transitioning to accurate price discovery for gold bullion:

- the LBMA should be reformed from a trade body into an exchange;
- regulation should cover the entire London trading day and have statutory backing;
- level the playing field by removing the advantages to banks/short sellers by eliminating the convention of trading gold credit/derivatives in the form of unallocated gold;
- volume and price of all trades should be reported shortly after execution; and
- vault data should be provided not later than one month in arrears.

Regards

Paul Mylchreest

Gold and debt cycles

Gold's risk/reward is improving

The trade-off in the risk/reward for the gold price and gold mining equities is improving, as central banks push the current iteration of the post-world War II Bretton Woods financial order towards its limits.

Bretton Woods 1.0 began as a gold exchange standard, which pegged the US dollar to gold until 1971. The framework had to be modified after monetary discipline was jettisoned by the US, policy coordination between the US and other nations broke down and the cap on the gold price became unsustainable.

The underpinnings of the status quo

The subsequent modification to the financial order, sometimes termed the "Petrodollar" or "Bretton Woods 2.0", is a free-floating system supported by the US dollar's dominance in global trade and reserve balances. It necessitates a framework in which coordinated policies are implemented by the global banking establishment, as well as there being no serious financial and/or geopolitical threat to US dominance.

Looking at today's "big picture", the current economic expansion is the longest in post-World War II history. Meanwhile, even the Federal Reserve has scrapped its attempts to "normalise" monetary policy, with the reversion to rate cuts and QE (sorry Chairman Powell, but it is QE). Trade tensions between the US and China continue and the debt burden, which is a good place to begin, is unprecedented.

Gold and the unfolding of a classic debt cycle

The global debt cycle is key for gold

Our position in the current global debt cycle is important because:

- gold performed strongly vs. other asset classes in the final ("Winter") stages of the three previous debt cycles since the Industrial Revolution (see table below);
- gold has no counterparty risk, which increases in loans/credit instruments as the debt carried by the financial system increases; and
- debt has a time function – bringing forward consumption from the future into the present – in a sense "buying time". Rising debt ultimately acts as a tax on growth.

The table below shows the relatively strong performance of gold and bonds vis-à-vis other assets in the final ("Winter") stages of the past three debt cycles. Whether this cycle is resolved by deflation, inflation, or deflation followed sequentially by inflation, remains to be seen. The three previous cycles ended with **debt deflations** of varying lengths and intensities. Consequently, we have also noted the "real" (adjusted for inflation) change in the gold price. Obviously, central bank policies in previous debt cycles were far more constrained, especially in terms of credit creation.

Gold vs. other asset classes in final phase of debt cycles

Debt cycle	Final "Winter" stage	Gold act./real	Stocks	Bonds*	Commodities
1788-1843	*1825-1843*	*0%/+26%*	*-78%*	*3.54% to 3.17%*	*-27%*
1844-1896	*1873-1896*	*-10%/+20%*	*-22%*	*5.49% to 3.61%*	*-44%*
1897-1933	*1929-1933*	*+69%/+122%*	*-89%*	*4.73% to 4.49%*	*-46%*

** Change in long-term interest rate*
Source: Hardman & Co Research

Identifying key characteristics of a debt cycle

A detailed examination of previous debt cycles – reflecting years of research, which has included reviewing several centuries of data and numerous academic studies – is beyond the scope of this report. However, we have concentrated some of that research into idealised representations of a "classic debt cycle", which include:

- typical progression of a long rise followed by more rapid fall in debt;
- the general trend in other key economic variables, i.e. inflation/price level, interest rates and the rate of GDP growth, during a typical cycle;
- the four phases ("seasons") in a typical cycle and brief characteristics;
- the approximate timing of each phase during every debt cycle since 1788; and
- which of five asset classes – equities, government bonds, real estate, commodities and gold – have outperformed or underperformed in each phase (note: back-testing we found that expected outperformance/underperformance for each asset class in each phase of every cycle worked an estimated 90.1% of the time).

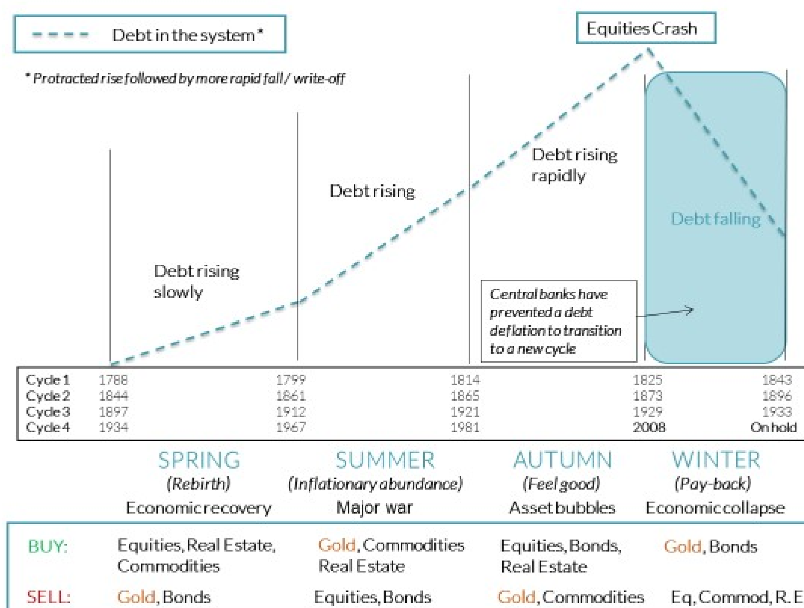
Central banks extended the current cycle

The timeline of the current cycle was extended by unprecedented central bank interventions, which rescued the global banking system from insolvency after the 2008 crisis. Lehman's collapse put the system at the mercy of simultaneous crises in Eurodollar funding and subprime assets, along with the disintegration of the repo market. Absent this intervention, the crash would have been a prelude to a prolonged debt deflation. Instead, central banks put the resolution/end to this cycle on hold.

Trend in debt

The chart below shows the progression of the rise and fall in debt across a typical cycle. There is no scale to the charts, and they are primarily indicative of the general direction over a period of years.

Classic debt cycle – showing the idealised trend in debt

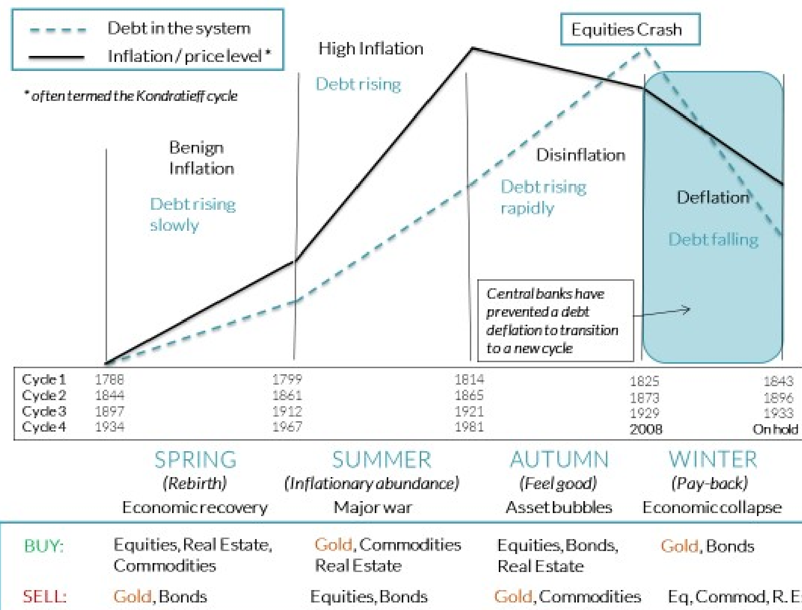


Source: Hardman & Co. Research

The Kondratieff Cycle of the rate of inflation/price level

The typical progression of the rate of inflation/price level across a debt cycle is shown below. This is known to economists as the "Kondratieff cycle". While it unfolds across the duration of a debt cycle, the peak is generally midway through the latter.

Classic debt cycle – adding the idealised trend in inflation/price level

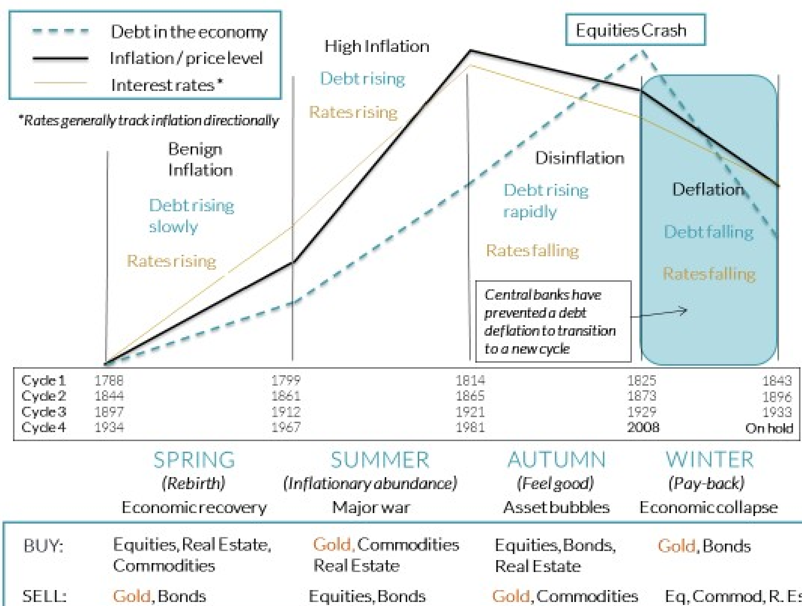


Source: Hardman & Co. Research

Rates broadly track the Kondratieff Cycle

The trend in interest rates tends to track the direction of inflation.

Classic debt cycle – adding the idealised trend in interest rates

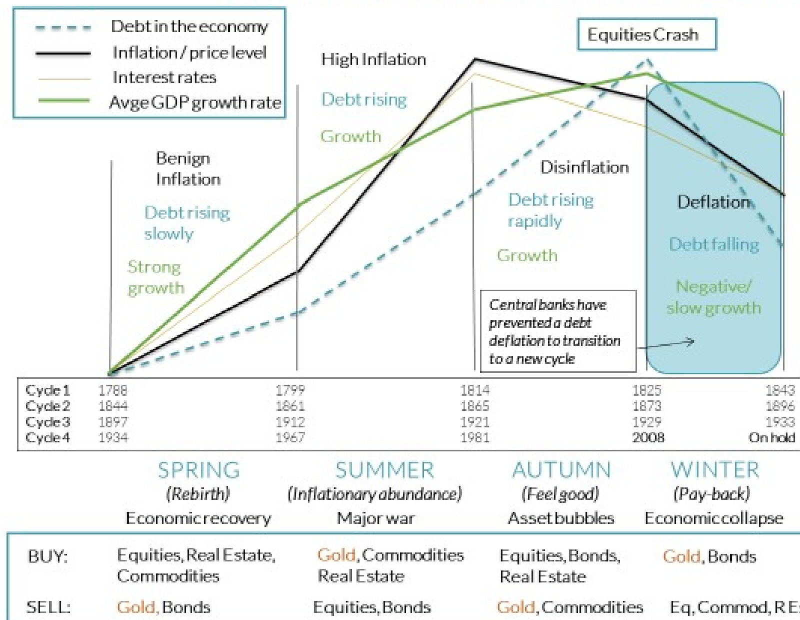


Source: Hardman & Co. Research

GDP growths tends to slow as the cycle progresses

The average rate of GDP growth tends to be relatively higher in the earlier phases of a cycle with the accumulation of debt eventually acting like a tax on economic growth.

Classic debt cycle – adding the idealised trend in GDP growth



Source: Hardman & Co. Research

Current global debt cycle – bubble territory

Global debt has risen from $84tr to ca.$250tr since 2000

Global debt was $84tr when the "tech bubble" burst in 2000. Without Greenspan's aggressive rate cutting, the cycle might have come to an abrupt end… **but not in the era of hyper-interventionism on the part of central banks**.

By the 2008 crisis, global debt had risen by a further $89tr to $173tr and central banks circumvented the typical cyclical progression again.

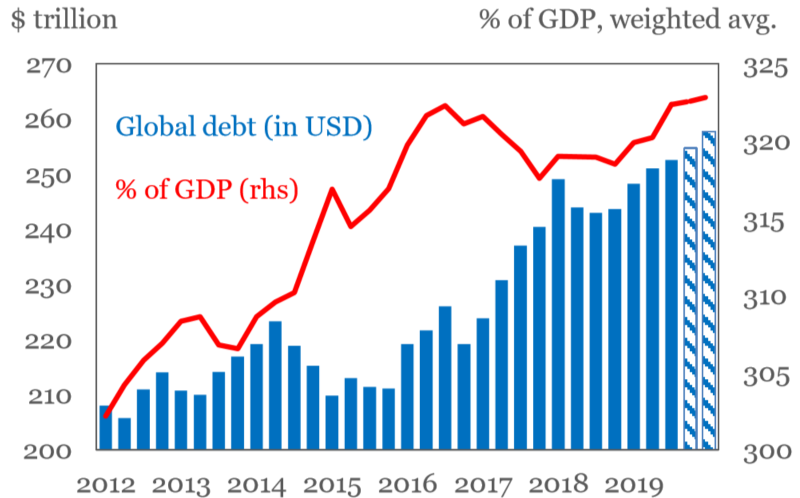
Is it sensible to argue that debt no longer matters?

We think that that it would be a naïve view to have.

The excesses carried by the system have exploded

While zero interest rates and QE saved the system a decade ago, excesses in the system – specifically debt – are substantially greater. For 1Q 2019, Washington-based International Institute of Finance estimated that global debt rose to $246.5tr, or nearly 320% of global GDP. In comparison, the peak in the debt/GDP ratio in the US during the Great Depression was 275%.

Global debt bubble



Source: IIF

Central bank interventions have been based on distorting financial markets

Central bank policies that fermented the latest surge in the current debt cycle are founded on distortions to financial markets on a scale never previously attempted.

These distortions have focused primarily on manipulating interest rates so that they are lower in money and sovereign credit markets, although the knock-on effects have been felt strongly elsewhere, especially in the equity and corporate debt markets.

In *Fix What Broke, Building An Orderly And Ethical International Monetary System (Cato Journal, 2015)*, gold advocate, economic advisor to President Trump and nominee for the Federal Reserve board of governors, Judy Shelton, argued:

"In truth, the experiment with floating rates since the end of Bretton Woods has brought about (Milton) Friedman's worst nightmare: It has empowered central banks - particularly the Fed - and strengthened government control over the private sector."

Speaking to the *Financial Times* in 2019, she noted:

"How can a dozen, slightly less than a dozen, people meeting eight times a year, decide what the cost of capital should be versus some kind of organically, market supply determined rate? The Fed is not omniscient. They don't know what the right rate should be. How could anyone?" Ms Shelton said. "If the success of capitalism depends on someone being smart enough to know what the rate should be on everything…we're doomed. We might as well resurrect Gosplan," she said, referring to the state committee that ran the Soviet Union's planned economy."

Can this heavy-handed central planning have an enduring benefit?

Using the financial crisis as cover, the world financial order was introduced to a far more heavy-handed version of central planning. Two questions for investors are:

- will the impact of this intervention, beneficial as it has been so far, be enduring?
- is this time different and have policy makers successfully eliminated the "bad stuff" associated with previous debt cycles?

The alternative view is that central banks are obscuring profound structural weaknesses, and, in hindsight, might be seen as overreaching themselves? Instead, their interventions are enabling a higher level of debt to be carried for a longer period of time.

If the latter scenario is correct, the corresponding remedy for the monetary system will, by necessity, need to be larger and perhaps beyond the capability of individual central banks as it was in 2008.

The unprecedented central bank stimulus has led to all-time highs in most financial assets. In stark contrast, the gold price plunged into a prolonged bear market and remains significantly below its all-time of $1,920/oz. This reinforces gold's position as the "anti-central bank" asset *par excellence*.

Gold's stronger performance since early 2019, in conjunction with a renewed wave of central bank easing in response to the global slowdown – especially by the Federal Reserve – suggests markets might once again be nervous about their stewardship of the global economy.

From our perspective, a threshold has been crossed. Central banks are locked into policies that have a permanent bias towards monetary easing with gold reverting to a bull market.

Beyond the point of no return

Prologue to a gold bull market…here we go again

Bretton Woods 1.0 fell after a two-stage loss in US monetary discipline

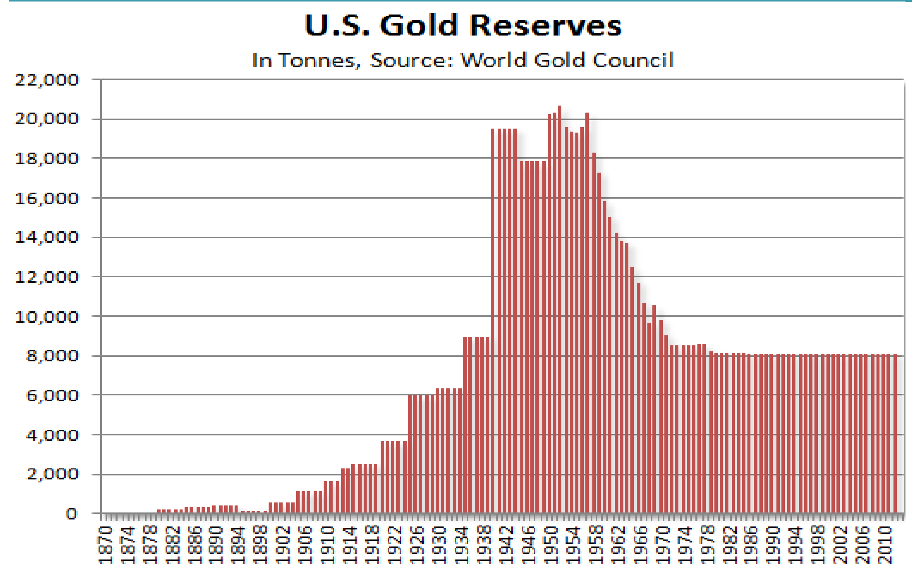
The investment case for gold is reinforced by parallels between the factors that led to the initial failure of Bretton Woods 1.0 in 1968-71 – and catalysed a 12-year bull market in gold – and those emerging to challenge the financial system again. Bretton Woods 1.0 did not die overnight, but failed as a result of a **two-stage loss in monetary discipline by the US** over a period spanning roughly a decade.

US started running deficits in the late-1950s

The first stage began when the US moved from close to a balanced budget into significant deficits in 1959 and 1961. Gold reserves fell 22% during these years, as the US was forced to sell gold to maintain the dollar peg at $35/oz, which was the bedrock of the exchange system. All currencies were pegged to the dollar, which was pegged to gold.

About to become the longest economic expansion since World War II

US gold reserves collapsed in the 1960s



Source: World Gold Council

Concerns about the dollar had mounted in the run-up to the 1960 US election. The gold price rose to over $40/oz, and the Bank of England (BoE) and Fed were forced to sell gold again to maintain the peg. In early 1961, a formal agreement was reached between the US and eight European nations (including the UK, Germany and France) to create the "London Gold Pool" to maintain the $35/oz price. Thanks to gold selling by these nations, the gold price was successfully capped for seven more years.

Major nations cooperated to cap the gold price

In the second stage, deficits surged due to the Vietnam War

The second stage saw a renewed surge in budget deficits, which was triggered by the escalation of US spending to finance the Vietnam War in the mid-/late-1960s. This led to another rush to convert US dollars into gold and, this time, included nation states. By 1968, gold buying was beginning to overwhelm the London Gold Pool. France, under the direction of President de Gaulle, withdrew from the Gold Pool and was the most aggressive among the nations converting their dollar reserves into gold bullion.

The Gold Pool was disbanded on 15 March 1968, after the US Government requested the closure of London's gold market to combat the heavy demand for gold. Immediately prior to this, the Chairman of the Federal Reserve stated that he would defend the US dollar "down to the last ingot". The gold price was freed and US gold reserves had fallen 52% from their 1957 level when capitulation came.

Another two-stage loss of US monetary discipline?

Fast-forward to the current era, and a case can be made that a two-stage loss of US monetary discipline is in progress:

- the first stage was 2008-15 with the imposition of ZIRP (zero interest rate policy), QE1, QE2, QE3 and the Fed's balance sheet expanding to $4.5tr; and
- we moved into the second stage in late-2018 as the Fed abandoned measures to "normalise" monetary policy, joining the majority of central banks in accommodation mode.

Fed capitulates as fiscal discipline evaporates

From gold's perspective, the challenge facing central banks in sustaining the debt bubble is becoming more difficult. A key issue is the convergence of an over-extended debt cycle with an over-extended economic expansion since the Great Financial Crisis. While the debt bubble is decades in the making, the current economic expansion is slightly over a decade long, having begun in the US in June 2009 (National Bureau of Economic Research). It is now the longest in post-World War II history.

Longest US economic expansions since WWII

Period	Duration (months)	Average annual GDP growth
Jun 2009 –	*127*	*+2.3%*
Mar 1991 – Mar 2001	120	+3.6%
Feb 1961 – Dec 1969	106	+4.9%
Dec 1982 – Jul 1990	92	+4.3%
Nov 2001 – Dec 2007	73	+2.8%
Mar 1975 – Jan 1980	58	+4.3%

Source: Hardman & Co Research

The table above also shows how average annual GDP growth in the current economic expansion is lower than all of the others – with the greater debt load increasingly acting like a "tax" on growth. The next lowest average GDP growth rate being the cycle before the current one (brought to an end by the bursting of the Technology bubble).

Yield curve inversion signals deteriorating economic outlook

In the current expansion, inversions in the yield curve have flashed warnings about the deteriorating economic outlook. On 3 December 2018, Bloomberg highlighted the first inversion in a portion of the US yield curve – the three-year/five-year spread.

Yield curve inversion in December 2018

Source: Bloomberg

A recession within two years has followed an inversion in the US yield curve in every case, except one, since 1995. The closely followed 2s10s (two-year/10-year) yield curve followed the 3s5s into inversion nine months later on 14 August 2019, although it is currently 22bps away from inversion.

The notion that central banks can resist the ever-growing pressures of the global debt cycle and "normalise" monetary policy has begun to evaporate. While the ECB, for example, has been in easing mode since November 2011, a key turning point was December 2018, with the capitulation in the Fed's policy of raising rates. This has obviously been followed by rate cuts and the recent re-launch of QE.

In the run-up to the FOMC's December 2018 meeting, the market was expecting two things. Firstly, to raise the target Fed Funds rate from 2.00%-2.25% to 2.25%-2.50%, which it did. Secondly, it expected Fed officials to signal three more rate increases in 2019 via the so-called "Dot plot". Instead, the number of expected increases in 2019, based on the median projection, was cut back to two, neither of which happened.

"Dot plot" – Fed reversed hawkish policy at December 2018 meeting

Source: Bloomberg

The likelihood that the tightening cycle had ended was signalled in the FOMC's January 2019 statement. The previous outlook of "some further gradual increases" was altered to being "patient" regarding increases. Furthermore, the FOMC indicated that it might adjust the plan to normalise the size of its balance sheet, potentially opening the door to a new phase of quantitative easing (QE):

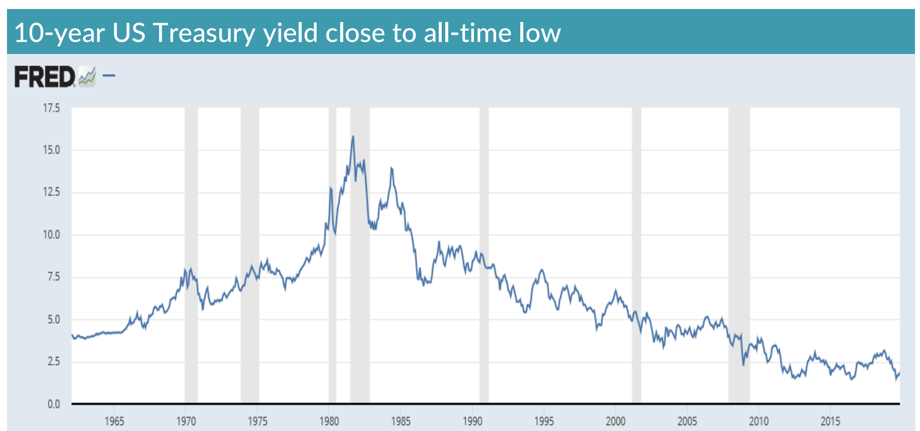
"…the Committee would be prepared to use its full range of tools, including altering the size and composition of its balance sheet, if future economic conditions were to warrant a more accommodative monetary policy than can be achieved solely by reducing the federal funds rate."

At the time, the FOMC's more dovish tone was at odds with its comments that economic activity was rising at a solid rate, the jobs market was strong and inflation remained near target. To what extent the U-turn in policy was driven by concerns about future economic slowdown, the sharp sell-off in the Dow Jones in December 2018 or criticism of rate hikes by President Trump was unclear.

The capitulation of the Fed's "hawkish" policy was completed with the first in a renewed series of cuts in the Fed Funds rate, from 2.25%-2.50% to 2.00%-2.25%, on 1 August 2019. Since then, there have been two further cuts, taking the rate down to 1.50-1.75%. On 8 October 2019, Fed Chair Powell announced the resumption of QE, although he chooses not to term it "QE", for obvious reasons.

The renewed fall in US rates is another driver of the gold price since the relative attraction of "risk free" US Treasury debt declines. A key argument for not owning gold, i.e. its lack of yield, is diminished. The 10-year US Treasury yield is the benchmark yield at the long end of the yield curve. The chart below shows its trend over the last nearly six decades. We expect the 10-year yield to fall to 1.0%, or possibly less, with real yields simultaneously tracking lower and supporting the price of gold.

10-year US Treasury yield close to all-time low

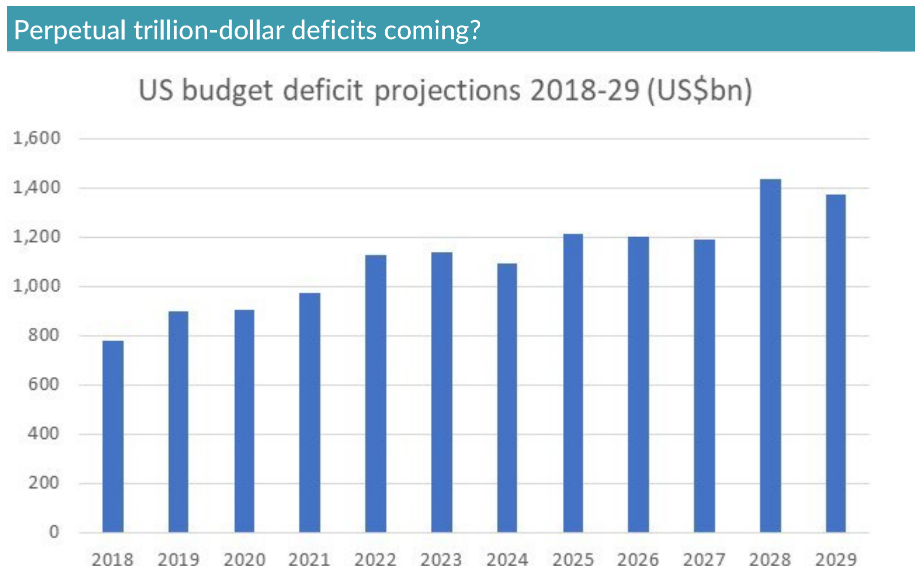


Source: St Louis Fed

Trillion-dollar US budget deficits will become the "norm"

The reversal in rate policy is only one part of a renewed loss of US monetary discipline – the other part being fiscal. The Congressional Budget Office (CBO) forecasts for 2018-29 project trillion-dollar budget deficits in every year from 2022-29.

Perpetual trillion-dollar deficits coming?



Source: Congressional Budget Office

Since fiscal 2018, US national debt has (already) been increasing by more than $1.0tr p.a., but accounting adjustments reduce the "official" deficit numbers reported by the US Administration. Furthermore, these budget projections assume a steady rate of economic growth. The likelihood that the forecast period will be blighted by one, or possibly more, recessions has the potential to make even these projections wildly optimistic.

While the global economic outlook is becoming more problematic, risk is compounded by a schism in economic policy thinking. **This threatens future cooperation between major economic powers** (another throwback to the breakdown of Bretton Woods in the 1960s) and the longstanding march towards globalism.

A split in the prescribed economic model

The current political and financial order changed markedly in November 2016 with the election of President Trump. For decades, the choice in a US election was essentially between two candidates with slightly different ideas about the same economic model. Now we have polar opposite models in conflict:

- on one side is "Trump-style" **nationalism**; and
- on the other is **globalism** and the entrenched liberal global banking establishment.

The global banking establishment is rattled

There are signs of growing influence of the former in the likes of the UK, Italy, Brazil and elsewhere. The trend is also alarming the global banking establishment. The latter, represented in this case by the IMF, issued a warning at this year's Davos meeting. According to *The Telegraph* on 24 January 2019:

"The International Monetary Fund has warned that the system of global cooperation that saved world finance in the 2008 crisis may break down if there is another major shock or a deep recession. David Lipton, the IMF's second-highest official, said it is unclear whether the US Fed would again be able to extend $1 trillion of dollar "swap lines" to fellow central banks - the critical measure that halted a dangerous chain-reaction after the collapse of Lehman Brothers and AIG."

Reading between the lines, the IMF was questioning whether the Fed's loyalty still lies with the central banking network under the IMF and Bank for International Settlements, or whether the Trump White House is taking away control. The rapid reversal in the Fed's hawkish policy following repeated criticism from President Trump, along with the ongoing trade tensions between the Trump Administration and China, makes this issue more poignant. Indeed, besides the loss of US monetary discipline, the other factor behind the failure of Bretton Woods 1.0 was the breakdown in cooperation between major economic powers of the day, notably the US and France at the time.

Introducing London's OTC gold market

It's not just about gold's investment case

Gold's investment case dovetails with current financial risks...

In investment terms, gold has unique properties, which dovetail with risks associated with the current stage of the extended economic, debt and asset price cycles. For example, gold is:

- positively correlated with **declining real interest rates**;
- the only financial asset that outperforms in either **inflation or deflation** (cf. Roy Jastram's detailed study covering a timeline of several centuries in his famous 1977 book, *The Golden Constant*);
- the only financial asset that has **no counterparty risk,** since it is the only one that is not the liability of a third party; and
- **insurance** against waning confidence in policy makers, sharp declines in the prices of other major asset classes and disruption to the status quo in the world's financial order.

The fundamentals for gold are arguably better now than they have been for more than a decade, if not several decades, dating back to the period before the collapse of the London Gold Pool in 1968.

But it's not that simple.

It's not just about gold's investment case...

The dynamics affecting the "gold price", however, are considerably more complex than the investment case for gold.

...but the mechanics of the London gold market

They are also dependent on the mechanics of the gold market and trading practices of major players participating in it.

Specifically, the strength and duration of the next gold bull market will be heavily dependent on events in London's OTC gold market, which remains the hub of global gold trading.

The key is how long the float of unencumbered gold in London vaults can sustain the outsized volume of gold trading in London's OTC gold market – especially if there is another run on the vaults as we saw during 2012-15.

From the London OTC gold market perspective, the extended debt cycle, extended economic expansion and the timing of the renewed loss of monetary discipline in the US is significant:

- when the Federal Reserve launched QE3 in September 2012, conditions in London's gold market were different – namely there was a significantly higher level of inventory in the gold vaults than currently; and
- the subsequent run on London's gold vaults – between September 2012 and December 2015 – was accommodated but only by a narrow margin given the volume of trading in London's OTC gold market (see Case study: False gold bear market below).

Next time, this may not be the case.

However, we should emphasise that it's not the total amount of gold in London vaults that is critical to the functioning of the London's OTC gold market, but the gold "float".

The gold float in London is critical…

This is the volume of unencumbered gold that can accommodate the small minority of gold buyers who, in the vast melee of daily London gold trading, currently opt to take gold bullion delivery.

Because the London gold market is almost entirely "derivative-*ised*"

London's gold market has long been *"derivative-ised"* and, for the most part, facilitates the exchange of gold credit notes, which purport to represent gold bullion, back and forth.

As we explain, this massively dilutes the buying pressure on London's inventory of bullion, while simultaneously eliminating most of the risk to sellers of sourcing bullion to satisfy delivery.

It follows that:

- **much of the time, the gold price is set by supply and demand of what are effectively gold "credit notes", instead of gold bullion;**
- **the gold price can move in the opposite direction to supply and demand fundamentals for gold bullion over relatively long periods (as our analysis will suggest);**
- **one can argue that the gold market is an uneven playing field and sellers, especially short sellers, are granted an advantageous position;**
- **there might be a structural downside bias to the gold price unless and until the "float" of vault gold becomes worryingly low; and**
- **in that case, the gold price could possess asymmetrical upside potential – not dissimilar to what happened when the London Gold Pool collapsed in 1968.**

…otherwise the "derivative-ised" market will be exposed

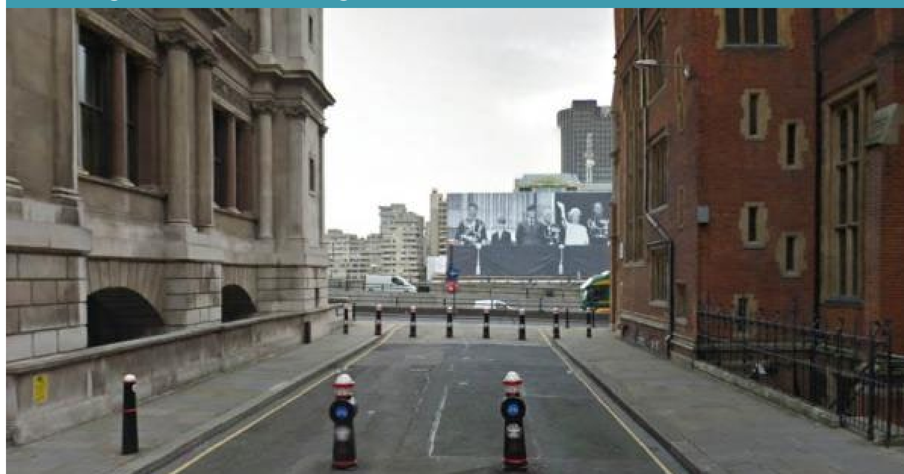
When there is an "adequate" float of gold in London vaults the status quo can be comfortably sustained. If not, the "derivative-*isation*" of the market might become obvious in fairly short order.

We estimate, for example, that at the end of December 2015, which marked the end a prolonged bear market in the gold price, the float in London's vaults had declined to about 1,000 tonnes. **This, we believe, was a mere fraction – less than 20% – of gold's *daily* average trading volume in the London OTC market**.

We need to emphasise that detailed analysis later in the report shows how the LBMA's current trade reporting only includes trades by LBMA members and, we believe, probably understates the actual trading volume by a wide margin.

In London, there are the two main vaults that service the gold market aside from the one located beneath the BoE. These belong to JPMorgan Chase and HSBC. The former is located on John Carpenter Street, close to Embankment and we believe that HSBC's gold vault is located in Queen Street Place in the City of London.

London gold vault at JPMorgan Chase on left side of road



Source: Hardman & Co.

Estimating the current gold float in London vaults

The key question is where do we stand now with respect to London's vaults and the float of gold?

Our calculation of the float in London is as follows:

Total held in London vaults

Less:

Central bank gold held for the UK and other nations at the Bank of England

Less:

Physically-backed ETF gold held in London

Less:

A small amount of gold held in London vaults on behalf of sovereign wealth funds ("SWFs") and high net worth investors ("HNWs")

Equals:

Gold float in London vaults

The sources for this data include:

- the LBMA, which publishes the total volume of gold in London's vaults (including gold held by the Bank of England) on a monthly basis three months in arrears;
- the BoE, which publishes the gold held in its vaults on a monthly basis; and
- the World Gold Council, which publishes the gold held by all of the physically-backed ETFs worldwide on a monthly basis.

Price gold bullion, not gold credit

The vast majority of gold held at the BoE is official gold, held on behalf of the central banks of other nations. When last reported, the BoE stated that it acts as gold custodian for 72 other central banks. Our estimate is that 95% of reported gold at the BoE is official. Using the latest estimate for gold held in its vaults (September 2019), the volume of official gold is:

95% x 5,151.8 tonnes = 4,894.2 tonnes

With regard to the more than one hundred gold ETFs, we have sought to identify the location of the custodian for each ETF, which holds more than one tonne of gold. The table below shows that slightly over 70% of this gold is held in London:

2,041.6 / 2,896.8 tonnes = 70.5%

ETFs with gold stored in London (October 2019)

ETF	Ticker	Tonnes
North America:		
SPDR Gold Shares	*GLD*	*915.3*
iShares Gold Trust	*IAU*	*356.9*
SPDR Gold Minishares Trust	*GLDM*	*22.9*
Graniteshares Gold Trust	*BAR*	*12.3*
ETFS Physical Precious Metal Basket	*GLTR*	*5.4*
VanEck Merck Gold Shares	*OUNZ*	*3.6*
Europe:		
ETFS Physical Gold	*PHAU*	*163.3*
Invesco Physical Gold ETC	*SGLD*	*152.8*
iShares Physical Gold ETC	*SGLN*	*142.2*
Gold Bullion Securities Ltd	*GBS*	*80.9*
Xtrackers Physical Gold ETC Eur	*XAD5*	*67.3*
Xtrackers Physical Gold Euro Hedged ETC	*XAD1*	*50.2*
Xtrackers Physical Gold ETC	*XGLD*	*23.3*
Amundi Physical Gold ETC	*GOLD*	*13.7*
ETFS GBP Daily Hedged Physical Gold	*GBSP*	*8.9*
Xtrackers Physical Gold GBP Hedged ETC	*XGLS*	*3.8*
ETFS Physical PM Basket	*PHPM*	*1.3*
Rest of World:		
New Gold Issuer Ltd	*GLD*	*17.6*
Total ETF gold in London		***2,041.6***
Total gold in ETFs worldwide		***2,896.8***
Ratio		***70.5%***

Source: World Gold Council, Hardman & Co Research

We can only estimate the current amount of gold held in London vaults by SWFs and HNWs and we assume a nominal figure of 300 tonnes.

On the basis of our analysis, we estimate that the current gold float amounts to ca.1,000 tonnes.

Current estimate for gold "float" in London (tonnes)	
Total gold in London vaults (Sep'19)	8,228.4
Less:	
Official gold (95% x gold in BoE)	*-4,894.2*
Less:	
ETF gold held in London (Oct'19)	*-2,041.6*
Less:	
Held by institutions (incl. SWFs) and HNWs	*-300.0*
Add:	
UK net imports (Jun'18)	
Equals	
Gold float supporting London OTC trading	*992.6*

Source: Hardman & Co Research

As we show later in this report – see False gold bear market: October 2012-December 2015 – there was a run on London's gold vaults during this period, which saw **more than 2,000 tonnes** of gold leave London vaults for overseas buyers, mainly for Asia.

As things stand, London's gold vaults are ill-prepared to withstand another wave of bullion buying, even one that is only half of the strength of that seen in the 2012-15 period referred to above.

Obviously, the official sector might be prepared to lend gold to the market initially – but for how long if it became clear that there was little chance of getting it back?

The situation would be even more challenging if western investors were encouraged to participate this time by a bull market. This would see them add significantly to ETF and physical gold holdings in contrast to 2012-15 when they were significant net sellers.

In the meantime, it's ironic that central banks have become major gold buyers themselves, as we saw in the run-up to the gold bull market of 1968-80.

We're watching…

New wave of gold buying led by central banks

It seems that the renewed loss of monetary discipline by the US, or a general nervousness regarding the economic outlook, has not been lost on other sovereign nations. Amongst others, this applies to geo-political challengers to the US, major holders of dollar reserves and those having heavily overleveraged financial systems. China, for example, ticks all three boxes.

…December 2018 saw the first increase in China's gold reserves for more than two years

The way forward for the world financial order is hardly clear; nevertheless, China's central bank has been building up the nation's gold reserves for more than a decade and a half.

We believe it is very significant that, after a hiatus lasting from October 2016 to November 2018, China announced its first increase in gold reserves in December 2018 – precisely corresponding with the Federal Reserve signalling its policy reversal.

China's purchase of about 10 tonnes of gold was followed by almost identical purchases in January and February 2019. The buying continued for 10 months before pausing again in October 2019. The nation's gold reserves now stand at 62.64m oz, as shown in the next chart, which is equivalent to ca.1,948 tonnes. This puts China in sixth place behind the US, Germany, Italy, France and Russia.

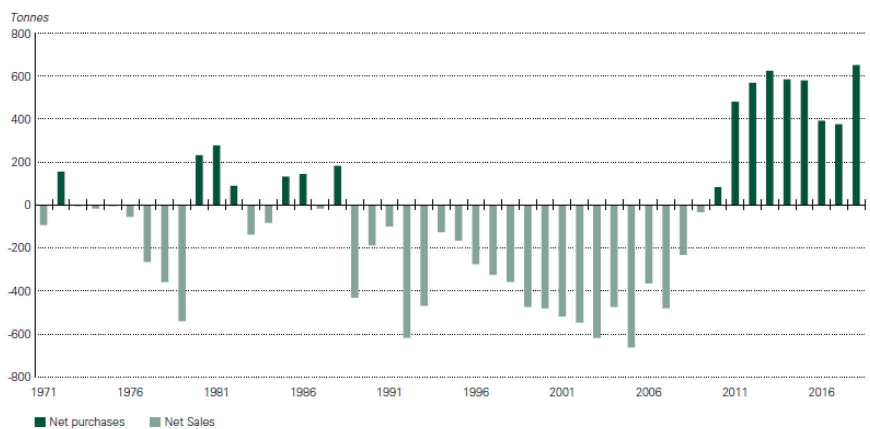
China gold reserves since 1980

Source: Bloomberg

Last year, central banks bought the most gold since 1967

China's recent gold buying, while significant, is swamped by the recent buying by other central banks in aggregate. In all, they bought 651.5 tonnes of gold in 2018, 74% more than in 2017, and the highest level for more than half a century. This echoed the collapse of Bretton Woods 1.0, since the last time this level of annual buying was exceeded was the year prior to the former's failure – a total of 1,404 tonnes in 1967.

Central bank net gold purchases 1971-2018



Source: World Gold Council

While Poland and Hungary unexpectedly added to their gold reserves in 2018, countries like Russia, Turkey and Kazakhstan continued to accumulate heavily. Russia purchased 274.3 tonnes, according to the World Gold Council, a fourth successive year of more than 200 tonnes. Hungary increased its holdings tenfold to 31.5 tonnes, and the MNB's (Hungarian central bank) press release noted (with our emphasis):

"Gold is not only for extreme market environments, **structural changes in the international financial system, and deeper geopolitical crises**. Gold also has a confidence-building effect in normal times, that is, gold can play a role in stabilizing and defending."

The aggregate value of global financial assets is more than $500tr, while gold assets (bullion and associated equities) account for less than 2% of this figure, with much of it held by central banks and Asian citizens, in India for example.

Western capital is not participating in the gold market in a meaningful way...

In stark contrast, the vast pools of western capital, both institutional and retail, are still reluctant to participate in gold investing. Indeed, the investment case for gold and gold equities is not something on which the vast majority of investment managers in western nations spend much time (if any).

The efforts to reduce gold's profile in the investment landscape (cf. Bernanke's comments that US holdings of 8,000 tonnes of gold reserves were based on "tradition") were a **necessary part of the transition to Bretton Woods 2.0** and the subsequent – now more than four-decades-long – "financialization" of the global economy.

...and has been wrong-footed by gold before.

We should note that western capital has been wrong-footed by gold bull markets before. This comment, sourced from LBMA literature, relates to the 1970s'/early 1980s' bull market:

"...the bullion market was characterised by rising gold prices, with a then record gold price of $850 an ounce, the explosion of western investor demand, the dramatic dishoarding from Asia and the birth of bullion banking."

Currently, the GDXJ index of small cap. gold mining stocks – the most geared to a gold bull market – remain depressed, as the chart shows. There is very limited interest from the investment community and few signs of that foundational principle of investing, going against the herd.

GDXJ Index – VanEck Junior Gold Miners ETF (since 2010)

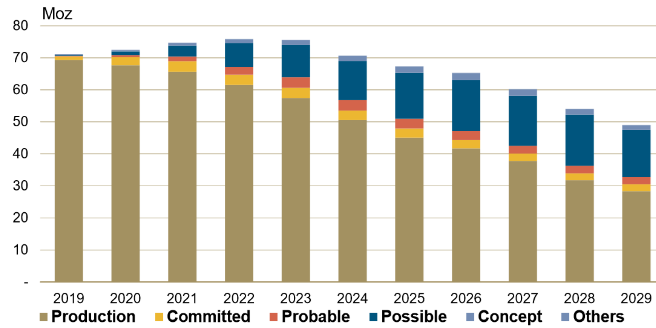
Source: NASDAQ

The prolonged period of low gold prices in recent years meant that less capital was allocated to exploring for new gold deposits and developing new gold mines. This will lead to a hiatus in gold minoutput and the prospect of a decline in the early years of this decade.

Gold production set to decline in the next decade

Global gold mine supply…2019 - 2029 BARRICK

- Industry facing production precipice
- Very few companies able to deliver value growth in this environment

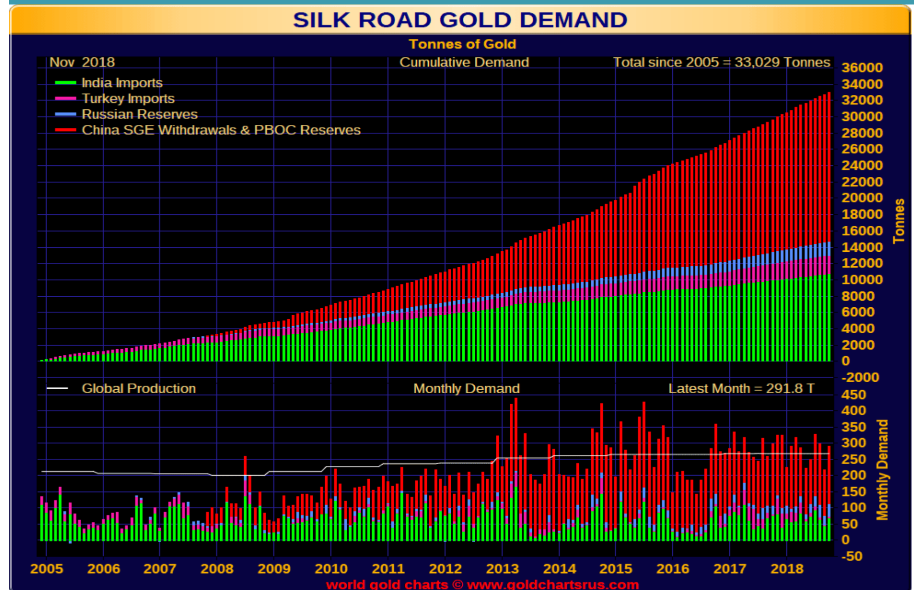


Source: Barrick Gold

Asian investors continue to accumulate gold

Furthermore, we suspect it's unlikely that the next bull market in gold will be characterised by Asian dishoarding. Indeed, central banks aside, Asia has been in long-term accumulation mode where gold is concerned. We expect to see the continuation, maybe even acceleration, in the trend shown in the chart below.

Cumulative gold demand: China, Russia, India and Turkey (since 2005)



Source: goldchartsrus.com

Why reform London's gold market?

Getting further behind on regulation?

When people think of the gold market, they generally think of London, which remains the hub of global gold trading. The following quote is from *A Guide to the London Precious Metals Markets*, published by the LBMA:

London is the hub of the gold market

"…the loco London price has become the common denominator amongst dealers around the world…nearly all global OTC gold and silver trading is cleared through the London bullion market clearing system."

Note: "loco London" refers to settlement in gold that is stored in London bank vaults.

What is the LBMA and what is it not?

The LBMA is a trade body that sets standards and provides services for the OTC gold market. However, we believe that regulation, transparency and market integrity would benefit from the market being as an exchange. As a trade body, some commentators believe that major banks that trade gold and the other precious metals can exert excessive influence (and we note some evidence of this below).

The LBMA has catching up to do on regulation and transparency

The market remains off limits to retail investors, whose gold trades are referenced to the LBMA price. Onboarding retail investors (e.g. albeit say trading in kilo bars as a minimum) would also be a step forward in the democratisation of gold price discovery.

Scandal after scandal has made greater regulatory oversight and transparency a necessity in this era. Gold trading in London has lagged progress in this field. The following quote about the market is from a 1996 *Gold Survey*, by consultants, GFMS:

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

In the intervening period, a case can be made that change has been less substantive than is being portrayed. Some commentators view it as a self-regulating "club", which is opaque and too heavily influenced by banks.

London's gold market has a reputation of being "clubby"

Source: LBMA

The first code had little in the way of "teeth"

Under-regulation of London's OTC gold market dates back decades. Prior to the publication of the LBMA's "Global Precious Metals Code" in 2017, London's OTC gold market was covered by the Bank of England's "Non-Investment Products Code" (NIPs), which applied to gold and other, now infamous for rigging, wholesale financial markets, LIBOR and forex.

The BoE acknowledged the minimal regulation in a speech dating back to 2003, *The Role of the Bank of England in the Gold Market*, by the then senior manager of the BoE's Foreign Exchange Division, Graham Young.

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

Caveat emptor is inadequate, and a cursory reading of the NIPs raised red flags:

"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."

Consequently, it had little in the way of "teeth".

The second also lacks statutory backing

We learned to our cost from scandals in LIBOR, forex and gold that its naïve to rely on markets being left to regulate themselves.

In gold, Barclays was fined $43.8m on 23 May 2014 for market rigging of the London gold "fixes", a day after it had been fined for rigging LIBOR along with other banks. The gold fixes were twice-a-day (10.30am and 3pm) price settings, which served as benchmarks during normal London trading. The FCA stated that there had been failings by Barclays for about a decade during 2004-13.

The scandal prompted a response by regulators. Since 2015, the renamed "LBMA Gold Prices" are set by auctions supervised by the FCA and administered by Intercontinental Exchange. That said, these auctions are really a quaint anachronism. They only cover a matter of minutes during 24/7 trading in London and elsewhere, from the Asian market open on Monday to the New York close on Friday evening.

In 2016, Deutsche Bank agreed to pay $60m to settle a lawsuit filed in the US District Court in Manhattan for manipulating prices of gold, gold futures, options and the gold fixes.

As a reaction to the scandals in LIBOR, forex and gold, UK regulators, the FCA, UK Treasury and the BoE published the *Fair & Effective Markets Review* (FEMR) in 2014. In response to the FEMR, the LBMA published its *Global Precious Metals Code* (the Code) on 25 May 2017, albeit three years later.

The Code set out a "common set of principles to promote the integrity and effective functioning of the global market". According to the LBMA's Chairman, the Code would contribute to maintaining "an effective, fair and transparent market".

However, it merely laid out what the LBMA deemed best practice and, once again, was **lacking in "teeth" from a legal, or even regulatory standpoint – as it even acknowledges**:

"(It is) not intended to be a comprehensive guide to doing business in the Precious Metals market…This Code does not impose legal or regulatory obligations on Market Participants."

The codes have essentially provided cover for the status quo

Looking at the big picture in London, we don't believe that the code represents the full-scale overhaul needed with respect to:

- **regulation;**
- **transparency; and**
- **market practices – and pricing of gold bullion.**

Instead, it maintains an unsatisfactory status quo for gold mining companies, gold investors and the other stakeholders in the market. Given the importance of gold as a signalling mechanism, the latter includes all financial market participants.

We note, in regard to regulation, that in September 2019, LBMA director, Michael Nowak, was forced to resign from the LBMA board. Nowak, the head of JPMorgan Chase's global precious metals business, and two other JPM employees, were charged by the US Department of Justice with **multi-year market manipulation and racketeering conspiracy in precious metals futures** in the US on 16 September 2019.

Questioning an LBMA director about this lawsuit, we suggested that it might justify an investigation into whether the London OTC market has also been subject to long-term manipulation and not just manipulation (noted above) during the fixes? The case for an investigation would seem to be strengthened since Nowak was responsible for his bank's global precious metals operation.

The LBMA director replied that because the LBMA is not a regulatory body, such an investigation is not within its remit. We are unhappy with this response, especially as a similar argument was used as an excuse not to publish aggregate trading volumes as we'll highlight in a moment.

Still moving "Towards transparency"

Forward and backward steps together with contradictory data

When it comes to being genuinely transparent, progress has been unduly slow since the LBMA first published its "clearing statistics" in 1997. As anybody familiar with London gold trading knows, the clearing statistics represented very understated (most likely by a factor of 9-10 times – see below) data on trading volumes.

We will highlight areas where we think further progress on transparency can be made. This is because data is not timely enough, falls short of the transparency in other financial markets or, alternatively, continues to understate the true picture.

We are not alone in this view. In a 2016 presentation on the issue, *The Gold Market – Where Transparency Means Secrecy*, BullionStar's Ronan Manly commented.

> *"…this newly found sense of duty by the LBMA for transparency is hard to believe when you realise that the gold market today is even less transparent than it was 20 years ago. In January 1997, the LBMA published Issue 6 of its magazine 'The Alchemist' and devoted the entire issue to the theme of Transparency, even going so far as to title the cover page* "Towards Transparency"*. The very title of the publication, 'Towards Transparency', conceded that the London Gold Market was not transparent at that time and admitted that the bullion market was secretive and lacking in information and data."*

"Where transparency means secrecy"

Manly's presentation included the slide below summarising his views on LBMA transparency:

BullionStar's view on LBMA transparency

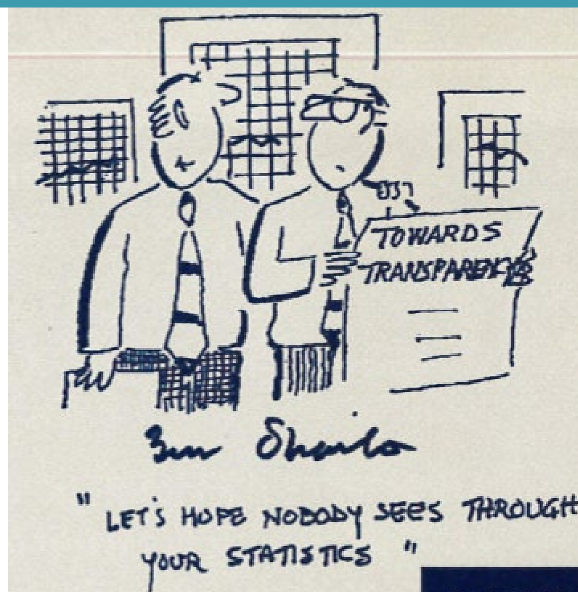
Source: BullionStar

One and a half steps forward and one step back

When change has occurred, as we'll show, it has consisted of one backward step and two forward steps, one of which (trade reporting) is only partial.

This cartoon below is from the LBMA's own *The Alchemist* magazine. It suggests that the LBMA was poking fun at its own initial attempt at transparency after it began publishing the "clearing statistics".

LBMA mocks its own transparency efforts



Source: LBMA

Let's examine the actions the LBMA has taken with regard to transparency since 2015.

GOFO was a major step backward in transparency…and the timing was critical

The backward step was **discontinuing the publication of GOFO rates in early 2015**. This followed a long period when they had remained negative. Briefly, a negative GOFO rate, which implied severe pressure on physical gold supply, was not something that banks trading gold in huge volumes and seeing dwindling inventory in probably wanted advertising to financial markets, the same for central banks.

They say "timing is everything" and, as we discuss in more detail later, the abolition of GOFO coincided with:

Banks pressured the LBMA to stop reporting GOFO rates

- surging demand for gold bullion during 2013-15; and
- pressure on the LBMA from the major banks to discontinue GOFO reporting.

The influence of the banks could be inferred from the LBMA's statement:

> *"GOFO…was discontinued with effect from 30 January 2015, following discussions between the LBMA and the contributors to the dataset, the LBMA Forward Market Makers."*

For the benefit of non-bank stakeholders in London's OTC gold market, we recommend that the LBMA re-starts publication of GOFO rates immediately.

Now let's turn to **vault data**, where the most progress has been made, although it remains unsatisfactory, in our opinion.

The LBMA has published the volume of gold held in London vaults since 31 July 2017. This includes gold held in the BoE, along with the other LBMA-registered vaults, notably JPM and HSBC.

Vault data delayed by 90 days

We were pleased with this step, although our enthusiasm is tempered by the data being for gold in vaults three months in arrears. Since it is certain that security at the vaults is such that banks know to the ounce how much gold is in their vaults 24/7, it's reasonable to ask why is there such a long delay?

This is a rhetorical question.

Asymmetric information in the market

One could surmise that it's about portraying transparency, while keeping the market partially in the dark, or at least sufficiently behind the curve. For example, if there were a run on gold in the vaults, the information provided to the market would obviously be 90 days out of date. This would be another example of the asymmetric nature of information in the gold market, between banks and non-bank stakeholders.

Let's turn to what we think is the biggest transparency issue for the LBMA, which is **adequate trading reporting**.

The LBMA was welcoming trade reporting prior to the publication of the FEMR in 2014…

Before the publication of the Fair and Efficient Markets Review in 2014, the LBMA published a letter in which it stated:

> *"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…Post trade reporting…is the material barrier preventing greater transparency in the bullion market."*

…as an aid to price discovery and liquidity

This was the "material barrier" that had been ignored for decades. The LBMA stated that trade reporting would not only improve transparency, but would also make price discovery more efficient and increase liquidity.

> *"An obligation to trade report would create greater price discovery and also allow market users to deal with a wider range of institutions due to simplifying the credit system."*

We agree that sufficiently detailed trade reporting could have provided these benefits.

The July 2016 Implementation Report of the FEMR noted that the LBMA was focusing on "trade reporting as a priority". In a speech at the LBMA Annual Conference

on 17 October 2016, the LBMA's CEO promised that trade reporting would begin in 1Q 2017:

> *"Phase One will focus on reporting and will launch in 1Q 2017. This reporting covers all Loco London Spot, forward & option trading. The decision to start with reporting comes directly from our on-going consultation with the market, primarily through the Market User Group. Reporting will not only make us more transparent and professional as a market place…It will also demonstrate of the size and liquidity of the market for clients, investors and regulators."*

Three years later…and it became clear that true trade reporting was not going to happen

At the same event a year later, however, trade reporting had been downplayed to "work in progress", according to the LBMA's Chairman. It also became clear from a presentation by the LBMA's general counsel that trade reporting in the transparent sense of immediate (or short delay) publication of all trade sizes and prices after execution was not what the LBMA had in mind.

Firstly, instead of real transparency, the tone of the statement from the LBMA's general counsel emphasised secrecy in the gold market. Secondly, it noted that "trade reporting" would merely consist of aggregating trade data, removing most of the value it might have had, and that the timeline was slipping.

"So today, we are reporting on all loco London and loco Zurich trades for all 4 precious metals, in spot, forward and options. No client specific data is being requested, so to protect confidentiality. Therefore, the data is sufficiently anonymous without giving away the underlying client. The data will then be aggregated and published but not until Q1 2018."

The outcome was disappointing

There was the word "confidentiality" again and this outcome was not what we understand by "trade reporting", i.e. the reporting of prices and volumes of all individual trades with short delays following execution.

How these outcomes supported the LBMA's original claim that it would "make price discovery more efficient and increase liquidity" has not been addressed.

Publication was delayed again until 20 November 2018, when the LBMA began publishing aggregate volume and value of trades on a weekly basis. This was followed by a recent move to daily data, via subscription – another barrier to transparency.

When reporting began, average daily turnover was 939 tonnes

The 20 November 2018 data showed that, for the previous week (12-16 November 2018), the daily average volume of gold traded in London was 30.2m oz, or 939 tonnes, worth $36.9bn.

LBMA average daily turnover – week of 12-16 November 2018

	$ bn	m oz	Tonnes
Spot	23.2	19.0	591
Swap/forward	11.4	9.3	289
Option	1.0	0.8	25
Loan/lease/deposit	1.3	1.1	34
Total	**36.9**	**30.2**	**939**

Source: LBMA

The data are, frustratingly (and inexplicably), not available as a time series. However, we have noticed that volumes have generally been slightly above or below the 20 November 2018 data. For example, the daily average for the 12 weeks to 26 April 2019 was 29.3m oz, or 903 tonnes.

Why actual trading volumes might be 5x reported

The next step is to compare the current data with the only other time the LBMA was "transparent" about trade reporting.

This is an important exercise because, as far as we can tell, the data sets don't tally.

The LBMA also reported trading volumes once before, for 1Q 2011

The prior attempt at trade reporting was the one-off **"Loco London Liquidity Survey"** on volume and value of gold trading in 1Q 2011. Merely publishing aggregate trading data in 2011 was clearly a problem for banks then, so it was no wonder that they blocked further publication until they were forced to publish in 2018.

"The LBMA has endeavoured to conduct annual gold trading surveys since its one-off Q1 survey in 2011. The survey was conducted in order to give further clarity as to size of daily turnover in the London market. Unfortunately, the LBMA was unable to make this an annual requirement unless requested by the regulator."

Since nothing happened, it **suggested strong influence of banks vis-à-vis effective regulation**.

The 2011 survey has taken on much greater significance since the advent of "trade reporting" in November 2018, due to the enormous divergence in the data sets.

Compare daily average trading volumes in 2011 and 2018…why are the 2011 data more than 5x those for 2018?

We make the case below that there are sound reasons for expecting the daily average trading volume reported in November 2018 to be higher than in 1Q 2011.

Inexplicably, however…***the daily average trading volume reported in 2011 was greater than in 2018 by a factor of greater than five.***

Let's consider the 2011 data in detail. In 2011, 36 of the 56 LBMA full members responded to the survey, although it included all market-making firms, who would have the broadest access to trade data. The most surprising aspect of the 1Q 2011 survey was the scale of average daily turnover in London OTC gold trading.

Nearly a quarter of a trillion dollars and over 5,000 tonnes traded on average each day

The table below from the 1Q 2011 survey shows that the **daily average volume of gold traded in London was 173.7m oz (5,403 tonnes), worth the equivalent of $240.8bn…**almost a quarter of a trillion dollars daily, for "loco London" trades only.

1Q 2011 daily average turnover was $240.8bn and 5,403 tonnes

Figure 1 - LBMA Survey of Loco London Gold Turnover

Q1 2011 Turnover*

	'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		$1,640,689,519,546	
London Daily Avg	173,713		6,125		$240,813,277,059	
Spot	89%	91%				
Forwards	5%	4%				
Other	6%	5%				

*Source: LBMA, Comprised of data from 36 LBMA Members, including all spot and forward Market Makers, for spot and forward Loco London transactions

Source: LBMA

Startling difference between 2011 and 2018

We have summarised the difference between the trade data from 1Q 2011 and that from November 2018 in the next table:

Difference in daily average trading volume, 2011 vs. 2018

	2011	2018	Difference
Volume (tonnes)	*5,403*	*939*	**4,464**
Volume (million oz)	*173.7*	*30.2*	**143.5**

Source: LBMA

The differences were far too big…it made no sense

The difference in trading volumes was remarkable…*the 2011 average daily volume was 5x that in 2018 and amounted to over 4,000 tonnes of gold*.

Adjusting the 2011 data for the average gold price for 12-16 November 2018 of $1,221.60/oz, the difference in the daily average value of gold traded was $175.3bn. It did not make sense.

We concluded that the two data sets cannot have been calculated on the same basis. We were right. Moreover, if the data sets had been calculated on the same basis, we could make a strong case for the 2018 trading volumes being higher than in 2011, not the other way around.

Since 1996, the LBMA has published monthly "Clearing Statistics", as mentioned above. The data show the "daily average of net transfers" between books of the LBMA's five clearing members, HSBC, JPMorgan, ICBC Standard Bank, Scotiabank and UBS. The key point about the Clearing Statistics is that they represent net, rather than gross, volumes moved between accounts held with clearing members. Consequently, they substantially understate actual trading volumes. For our purposes, however, they provide a useful indication of relative trading volumes when comparing daily average trading volumes in different periods.

Clearing Statistics confirmed it

The evidence from the LBMA's "Clearing Statistics" showed that trading volumes published on 20 November **2018 should have been almost identical to the 1Q 2011 trading data**. The Clearing Statistics showed that the average daily number of ounces cleared in 1Q 2011 was 18.8m oz, i.e. almost identical to the 18.4m oz average daily number of ounces cleared during November 2018. Consequently, the difference between the 2011 and 2018 data – by a factor of five – made no sense.

Not comparing apples with apples

On reflection, we concluded that it meant one thing: these LBMA data were not **"comparing apples with apples" in calculating the data. Indeed, we identified three reasons why the 2018 data should have been higher than 2011 not lower**:

- The 2011 data were for loco London trades only, whereas the 2018 data included loco London *and* loco Zurich (the second-largest gold settlement location) settled trades.
- The 2011 data were based on responses from 36 LBMA members, compared with 43 for the 2018 data. While we do not know the identities of these members, all 13 market makers participated in both data sets.
- The 2011 data excluded gold loans/leases and deposits, which are included in the 2018 data (in their own category, as shown in the table above).

2011 data were probably conservative, according to the LBMA

We would also note the LBMA's CEO in 2011, Stewart Murray, stated, in the Loco London Liquidity Survey, that the 2011 data were likely to be conservative:

"…the figures provided for trade between members were divided by two in order to avoid double counting. This is rather conservative in that many of the trades reported with members would be with members that were not themselves reporting."

Explaining the difference

So, how do we explain the difference in trading volumes between 1Q 2011 and November 2018? We looked very carefully at what the LBMA said about the two data sets. According to the LBMA, the trading volumes in 1Q 2011 were:

"Comprised of data from 36 LBMA Members, including all spot and forward Market Makers, for spot and forward Loco London transactions."

In contrast, the LBMA's website states that the 20 November 2018 data (our emphasis again) included:

"…the **size of the LBMA membership's share** of the Loco London and Loco Zurich OTC market…a breakdown of the volume in spot, forward, swaps and loans/leases and deposit."

It is not difficult to work out a big category of missing trades – the "elephants in the room"

You could easily miss the nuance, but the 2018 data ***exclude trade by non-LBMA members.*** Once we've identified major organisations on the LBMA membership roster, a ***major missing category*** of major players in the London gold market becomes obvious.

LBMA membership includes most of the big players in the gold market. This includes major bullion banks that are also LBMA market makers.

LBMA market-making banks	
Citibank	Bank of Nova Scotia
Goldman Sachs	BNP Paribas
HSBC	Toronto-Dominion Bank
JPMorgan Chase	ICBC Standard Bank
UBS	Bank of America Merrill Lynch
Morgan Stanley	Standard Chartered

Explaining the difference

In total, there are 146 firms that are LBMA members. Besides the 12 market makers, there are commercial banks, securities traders, commodity traders, affiliated exchanges, mining companies, mints, refineries, bullion dealers and vault companies. The next table shows some of the better-known names on the membership list.

Some LBMA members	
Bank of China	ANZ Banking Group
Bayerische Landesbank	Blackrock
Glencore	Johnson Matthey
CME Group	Maquarie Bank
AngloGold Ashanti	PAMP
Royal Mint	Commerzbank
Morgan Stanley	BullionVault
Argor-Heraeus	Pictet & Cie
Borsa Istanbul	G4S
Credit Suisse	Perth Mint
Mitsubishi Corp.	Metalor
Valcambi	Crédit Agricole
Rand Refinery	Umicore
ICAP	Brink's
Sumitomo Corp.	Westpac

Source: LBMA

Who's missing from the LBMA membership's share?

It is a fairly exhaustive list, and the LBMA's client base will include other banks and some hedge funds, etc. However, one very large and active group of players in the gold market is missing and we question whether they account for a significant proportion of the difference between the 2011 and 2018 data? We suspect they do…

Central banks…

"Elephants in the room"

Central banks are almost always the "elephant in the room" when it comes to the gold market. The next comment is from the guide to the London Bullion Market Association in May 2017, and bear in mind that the number of "gold-holding Central Banks" is well over one hundred.

> *"The LBMA has a global client base. This includes the majority of the gold-holding Central Banks."*

Central banks are trading billions, if not tens of billions, of dollars daily

In order to reconcile the 2011 and 2018 data on trading volumes, we can formulate some speculative conclusions:

- gold trading in London is heavily influenced by central banks, which are trading billions, if not tens of billions, of dollars per day of gold in the market;
- the question of whether central banks trading gold are likely to be biased to the short side or the long side is self-explanatory; and
- excluding non-LBMA members from the trading data published since November 2018 onwards makes it misleading, lacking in transparency and is contrary to the spirit of the FEMR.

What facilitates this?

This discussion prompts a question – without discussing the motivation for why central banks might be trading billions of dollars of gold on a daily basis; the question is how might they do this without risking their gold bullion reserves?

Which brings us back to the subject of derivative-"*isation*".

Gold credit notes

"Derivative-isation" is a shackle applied to the gold price

The LBMA was formed in 1987, giving rise to market practices that remain in existence today even though, as we'll demonstrate, they are detrimental to the interests of non-bank stakeholders, i.e. gold mining companies and investors.

The possibility of hidden domination of gold trading by the central banks, about which we speculated above, was facilitated by a longstanding shackle applied to the gold price, the "derivative-*isation*" of London's OTC gold market.

The derivative-*isation* of gold trading **increases the attraction of selling/shorting gold contracts** for central banks, commercial banks and other trading houses, e.g. hedge funds. Why? Because it reduces the risk of being called upon to deliver gold bullion.

Conventional thinking that gold trading in London is primarily trading actual bullion is almost 100% inaccurate

We find it curious that many financial commentators and market professionals still assume that LBMA-accredited traders in London are, for the most part, trading physical gold. This is almost 100% inaccurate.

The reality is that almost all of London OTC gold trading is accounted for by **derivatives masquerading as physical bullion.** These derivatives do not:

- involve the purchase and sale of actual gold bullion;
- result in sellers of gold or LBMA market makers being called upon to deliver gold bullion; or
- affect the "float" of gold bullion (see above) available in London gold vaults.

It's all about unallocated gold

The focal point of the derivative-*isation* of the London OTC gold market is the LBMA convention of trading:

Contracts for "unallocated" gold

Gold traded by LBMA members is not created equally – far from it. To be clear, a relatively small volume of gold bullion is traded by LBMA members via "allocated" gold accounts. This requires the delivery of specific gold bars into the client's account, which are held in custody under the client's name with full title.

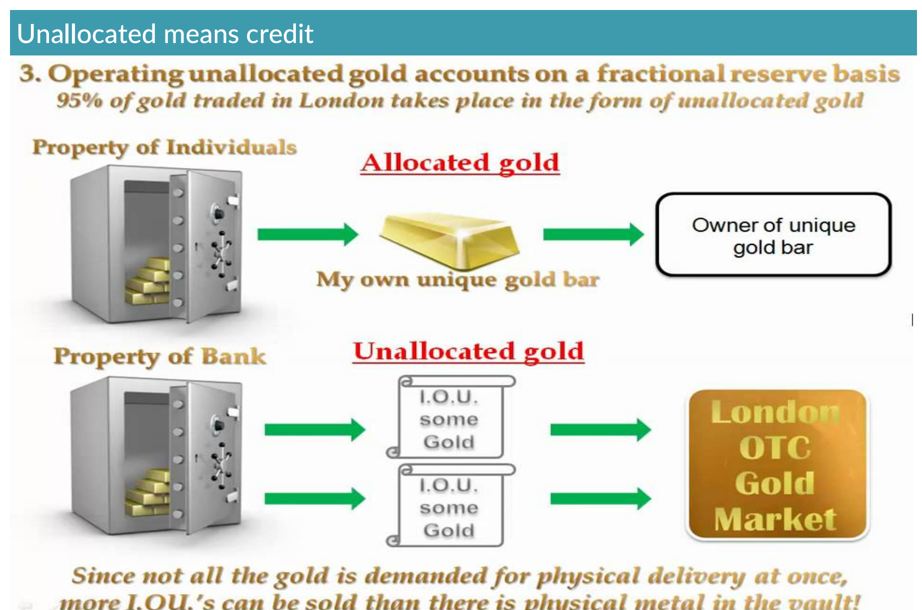
In contrast, the overwhelming majority of LBMA gold trading is via unallocated gold accounts. These are **gold credit notes**, in which the overwhelming majority of the gold, as we'll show, doesn't exist.

If a higher proportion of gold buyers suddenly opted for allocated bullion, **London's gold vaults might be exhausted in a few hours – since daily average trading volumes are perhaps 5x the gold float, as we've demonstrated**.

Arguably, such circumstances might establish a **true and fair price for gold bullion – which is frustrated by such a high proportion of derivative trading.**

BullionVault has produced a good slide explaining gold credit notes ("I.O.U.'s").

Unallocated means credit



Source: BullionVault

It is all about unallocated gold…

In theory, a client with an "unallocated gold" contract has a general claim on gold held for the benefit of holders of unallocated gold contracts in a vault. However, this convention has created a fractional reserve system favouring banks and short sellers. Maintaining the "fraction" as low as possible minimises banks' cost of capital.

...which is merely a monetary credit

The following slide, from a presentation by LBMA Chief Executive, Ruth Crowell, in June 2015, acknowledges that **unallocated gold is no more than a monetary credit – like a normal bank account**.

LBMA: a more diplomatic explanation of allocated vs. unallocated gold

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

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

Page 17 The LBMA & The London Bullion Market

Source: LBMA

Allocated gold accounts for less than 5%

It was disturbing many years ago to discover that **less than 5% of gold traded in the London OTC market is settled by the delivery of actual gold bullion in "allocated" gold accounts**.

How do we know? The source is the LBMA.

In April 2013, the LBMA, in conjunction with the London Platinum and Palladium Market (LPPM) and HM Revenue and Customs (HMRC), drafted a VAT treatment document for the London precious metals markets. It revealed that, in the London precious metals market,

"in 95% of trades, trading (is) in unallocated metals."

More confirmation of this percentage

This ratio of ca.95% unallocated gold trading, vs. only 5% in allocated, seems to have been stable for more than a decade. The following quote is from a 2002 speech by the chairman of the LBMA Physical Committee, titled *The Physical Side of Liquidity*.

> *"Many of these transactions end up being settled by metal accounts through the six clearing members that interchange in the same way as any bank clearing mechanism. Whilst it is very difficult to get hard, statistical evidence, it is clear that ca.5% of these paper transfers actually relate to a physical delivery."*

The LBMA also justifies derivative-*isation* via unallocated gold in terms of "convenience". In summary, however, the practice of trading unallocated gold means:

- there is no delivery of gold bullion to clients, which merely have a monetary credit assigned to them;
- the monetary credits of "gold buyers" provide free working capital to the banks, which can use the funds to speculate in gold and other markets; and
- in legal terms, clients holding unallocated gold are nothing more than unsecured creditors of the bank, ranking behind customers with normal deposit accounts.

Diluted demand with elastic supply

Given that only 5% of trades are settled by actual bullion delivery, the buying pressure on physical bullion is diluted by a factor that is in the region of 20x – since buy orders are largely channelled into a gold derivative. Simultaneously, gold supply is highly elastic, since sellers can expand supply almost infinitely (at near-zero cost), as they are rarely called upon to deliver gold bullion.

Unallocated gold vs. equities

In a podcast from 2016, Craig Hemke of TF Metals Report contrasted the gold market with the equity market, when it comes to delivering the trading instrument.

> *"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)."*

The investment case for gold is turned upside down

Not only does the practice of trading unallocated gold undermine true and fair price discovery but, since holders are merely unsecured bank creditors, the practice of trading unallocated gold actually turns the investment case for gold "upside down".

Paul Tustain from BullionVault explained:

> *"This means that the 'owner' of unallocated gold in a gold account is more dependent on the financial system's robustness than even the straightforward depositor of cash, a situation which for many gold buyers would be considered upside down."*

The LBMA slide begs the question: for whom is the convention of trading unallocated gold "convenient"? If the London gold market became an exchange, gold buyers could have the option of withdrawing gold, or be charged a small fee for leaving their gold in an exchange warehouse. In our opinion, therefore, the beneficiaries are, once again, the banks, in addition to short sellers. As the team at BullionVault explained:

> *"Imagine you could sell someone something, but keep ownership of it, and then use it yourself. 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."*

Gold price patterns that could be investigated

Unallocated gold means that price discovery is probably skewed to the downside

The gold price is primarily set by derivatives. When demand for physical gold is diluted and supply is elastic due to unallocated gold, it would be logical to conclude that gold price discovery is going to be skewed to the downside.

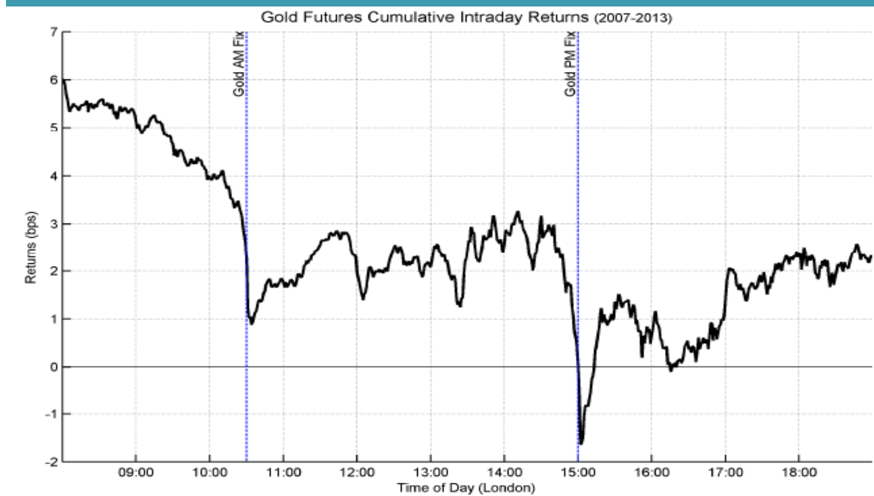
The consequence of the current market structure is that "gold price" discovery has been subverted, with gold trading like a lower-priced *"hybrid"*. The hybrid nature is largely composed of gold credit notes and a comparatively small amount of bullion.

Several analysts have looked into the intra-day movement of the gold price across London, New York and Asian trading hours on a daily basis. **A downside bias during London trading hours, which also overlaps with New York's morning session, has been clearly shown in the intra-day pattern**.

Well-established downside bias during London trading and New York's morning session

Nick Laird, who hosts the "GoldChartsRUs" website, created the time series below for a seven-year period during 2007-13. On an average trading day, the gold price weakness began at around 8am London-time and continued through to the afternoon "P.M. Fix" at 3pm in London.

Gold price – average intra-day pattern, 2007-13



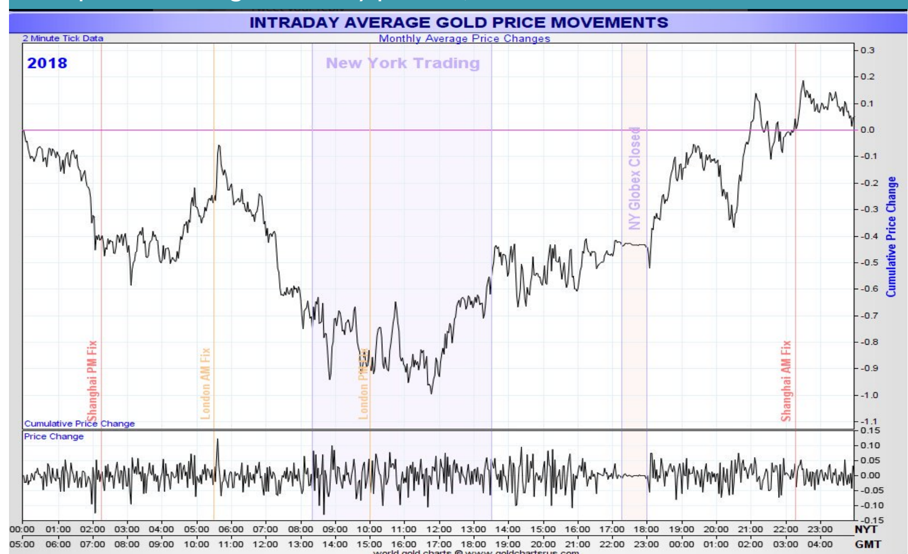
Source: goldchartsrus.com

This remains a well-established pattern.

Similar pattern in 2018

Below is the 24-hour chart for intra-day gold trading in 2018 from the same source, albeit in different format. Looking at the GMT axis at the bottom, the weakness in the gold price shifted slightly from 8am London-time to the "A.M. Fix" in London through the "P.M. Fix" and more than half-way through New York trading.

Gold price – average intra-day pattern, 2018



Source: goldchartsrus.com

There is a more sinister aspect to intra-day gold price patterns.

Repeating algorithms influencing the gold price

A close look at intra-day trading reveals the existence of computerised trading algorithms, which dominate gold price discovery. The chart below shows the gold price on three successive trading days during 13-15 February 2012. The **red and green lines** for 14 February and 15 February suggest that, despite thousands of other random buy and sell orders, an algorithm dominated the price for several hours from before 1pm London (GMT) time though to 8am New York time on successive days.

Gold algorithms in action: 14 and 15 February 2012

Source: Kitco

Look at the green line in the next chart for Thursday (9 February 2012) of the previous week. Now compare it with the red and green lines from the chart above and note how similar it is. This is likely to have indicated the presence of the same algorithm.

Same algorithm a week earlier

Probably the same gold algorithm: 9 February 2012

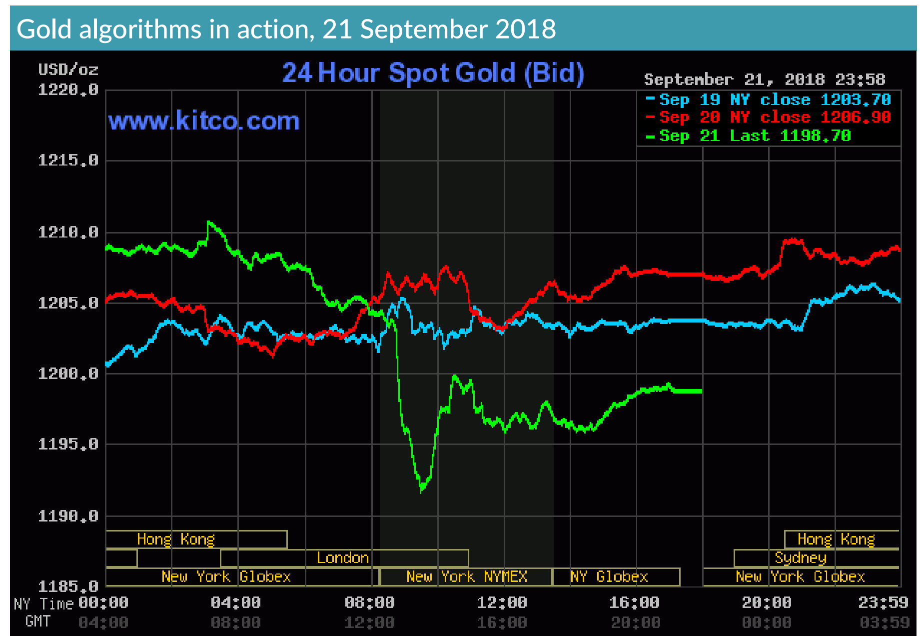
Source: Kitco

HARDMAN&CO.

The next two charts show a different algorithm in operation in recent times. The green line in the first chart is for the gold price on 21 September 2018.

Green line is gold price on 21 September 2018

Gold algorithms in action, 21 September 2018



Source: Kitco

In the next chart, the gold price in terms of the green line is tracing a very similar pattern for 4 January 2019.

Probably the same algorithm in January 2019

Probably the same gold algorithm, 4 January 2019

Source: Kitco

Who is trading these algorithms?

These price patterns raise a question: which entities have the resources, motivation and risk tolerance to have influenced the gold market to this extent?

As we are about to show, however, there are influences on the gold price that have lasted far longer than intra-day. Indeed, like the London Gold Pool prior to its demise in 1968, they lasted for several years.

Case study: False gold bear market of October 2012-December 2015

A three and a quarter-year bear market

In this section, we switch from the intra-day gold price to the more than three-year period from October 2012 to December 2015.

We refer to this as the "False gold bear market" because:

- the gold price collapsed by more than 40%, despite negative real interest rates and central banks launching an unprecedented wave of liquidity creation;
- after showing no correlation in the prior 12 months, the gold price was pegged to the Yen as the Bank of Japan joined the Federal Reserve, and subsequently the ECB, on massive QE programmes of credit creation;
- it moved in precisely the opposite direction to the trend in demand and supply fundamentals for physical gold bullion and a market-based indicator that screamed that a lack of physical gold was available in the market; and
- the anecdotal evidence that the world's largest gold refinery could not cope with the demand for physical gold – a situation not seen in at least four decades.

To begin with, let's look at what happened to the gold price in September 2012 – the month before the bear market began and the (very) top left corner of the chart below. Gold rose in September, as central banks launched a renewed wave of hyper-monetary stimulus (see below). The gold price peaked at $1,791.8/oz on 4 October 2012, as it looked set to challenge the September 2011 all-time high above $1,900/oz.

Gold price $/oz – September 2012 to December 2015

Source: Hardman & Co Research

It then embarked on a more than three-year market in opposition to identifiable fundamentals.

April 2013 crash

By the first trading day of 2013, the gold price had fallen to $1,693.75. Worse followed, as gold's decline accelerated in February, before **crashing** in April 2013. The vast majority of gold's April 2013 collapse in took place in what is now viewed as an infamous two-day trading period in the gold market – Friday 12 April 2013 and Monday 15 April 2013. The price fell from $1,565/oz at the P.M. Fix on April 2013 to ca.$1,350/oz on 15 April 2013, i.e. a fall of approximately $215/oz.

Low reached on 17 December 2015

While gold ended 2013 close to its low for the year, it fared better in 2014, with the price on the last trading day of 2014 only ca.$20/oz lower than it closed on the first day's trading in January. The downward trend resumed in January 2015 and, by 17 December 2015, the gold price had fallen to $1,049.40, a fall of 41.4% vs. the peak on 4 October 2012.

Historically, real interest rates have been an important influence on the gold price

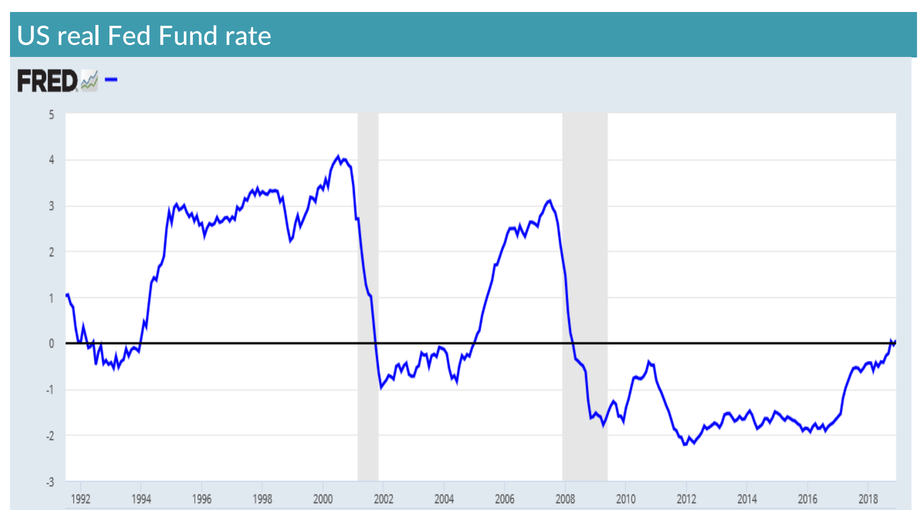
Absent a financial crisis, the major driver of the gold price historically has been real interest rates. The attraction of holding US dollars and dollar-denominated bonds declines as real interest rates fall. In contrast, the attraction of holding gold rises, since gold pays no yield – so the opportunity cost of gold declines. This was summarised by former Federal Reserve Governor, Wayne Angell, in a July 1993 FOMC meeting:

"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 US 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."

Real rates were negative from 2008-18, which, ordinarily, would be good for gold

The chart below from the St Louis Fed shows the prolonged period of negative real interest rates – based on the Fed Fund rate minus the CPI – during 2008-18.

US real Fed Fund rate



Source: St Louis Fed

A renewed wave of central bank liquidity began when the **Fed announced QE3** on 13 September 2012. This was an open-ended commitment to purchase $40bn/month of MBS (mortgage-backed securities) and maintain the Fed Funds rate near zero "at least through 2015."

Less than a week after the Fed announced QE3, the **Bank of Japan (BoJ)** announced its "Enhancement of Monetary Easing" on 19 September 2012. This programme increased the size of its then existing Asset Purchase Program from ¥70tr to ¥80tr, which it expected to reach by end-2013.

The gold price rose unsurprisingly in response to this monetisation

Unsurprisingly, gold initially rose after these announcements of heavy-handed central bank monetisation, but it peaked shortly afterwards. Nevertheless, these events were the **beginning of the new wave of hyper-aggressive monetisation**.

Further programmes followed from the Fed and BoJ: "QE to infinity"

On 30 October 2012, the BoJ increased the size of its Asset Purchase Program from ¥80tr to ¥91tr by end-2013. Several weeks later, in December 2012, the Fed increased purchases by $45bn/month of Treasuries, making $85bn/month in total. The Fed was then creating $1.02tr p.a. via QE3 on an open-ended basis. **Some market participants began referring to Fed policy as "QE to infinity"**.

"Shock and awe" from the BoJ came in April 2014 along with a collapse in the gold price

With the advent of "Abenomics", the BoJ unleashed its own "shock and awe" policy at the 4 April 2014 policy meeting. The new plan was to make asset purchases at an annual rate of ¥60tr to ¥70tr, which aimed to double the monetary base in two years, from the end-2012 level of ¥138tr to ¥200tr by end-2013 and ¥270tr by end-2014. The same day, Reuters commented:

"The Bank of Japan unleashed the world's most intense burst of monetary stimulus on Thursday, promising to inject about $1.4tr trillion into the economy in less than two years...New Governor Haruhiko Kuroda committed the BOJ to open-ended asset buying...The policy was viewed as a radical gamble to boost growth and lift inflation expectations and is unmatched in scope even by the U.S. Federal Reserve's own quantitative easing program."

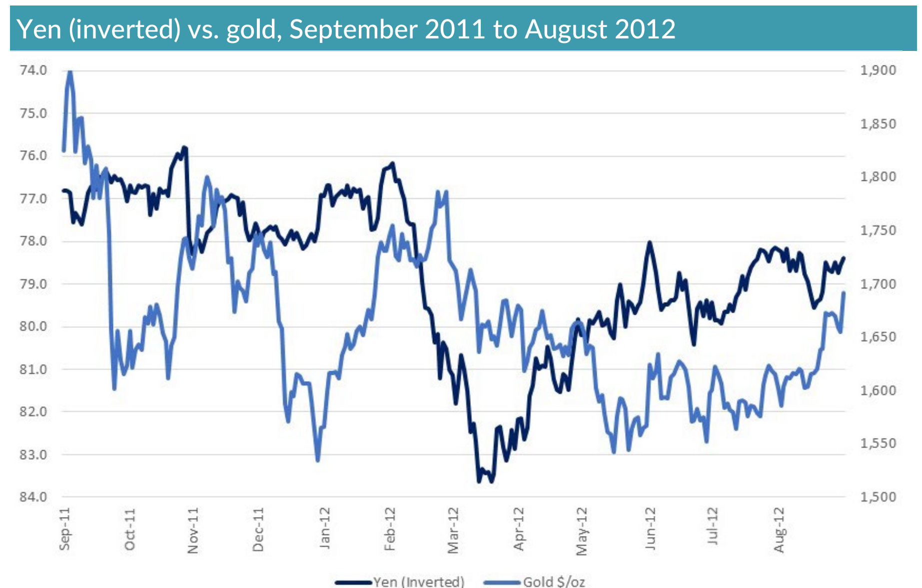
As the Fed wound down monetisation, the BoJ was joined by the ECB

The ECB joined the hyper-credit creation fray in March 2014, purchasing €60bn per month of Euro-area bonds. When the Fed halted QE on 29 October 2014, its balance sheet had reached $4.5tr. This ECB increased its monthly purchases to €80bn in March 2016 by adding purchases of corporate bonds.

No obvious correlation between Yen and gold prior to wave of monetisation

Now we'll establish a link between unprecedented credit creation and what appears to be a prolonged period of gold price abuse when it was pegged to the Yen. Subsequently (see below), we will show how the bear market in gold contrasted with gold's strong fundamentals. The next chart shows the obvious lack of correlation prior to September 2012, with the two frequently moving in precisely opposite directions.

Yen (inverted) vs. gold, September 2011 to August 2012



Source: Bloomberg

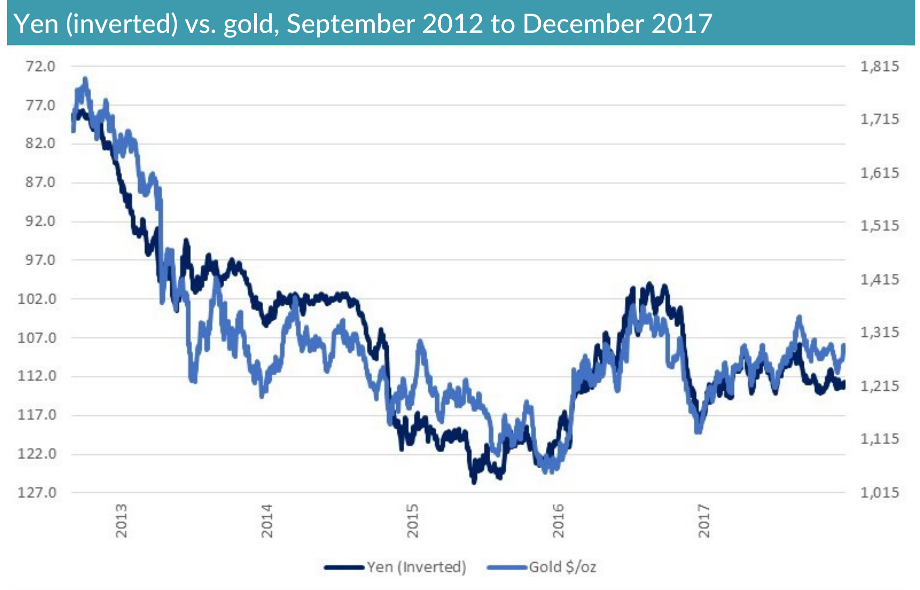
Please note that the Japanese Yen is inverted, so when the Yen and gold charts are rising, Yen and gold are strengthening vs. the dollar.

Now let's focus on October 2012-December 2015...and beyond.

The correlation with the Yen emerges

The chart below shows how trading in the gold market changed dramatically – gold was pegged to the weakest of the major currencies during several years of negative real interest rates in the US and almost unimaginable levels of credit creation globally.

Yen (inverted) vs. gold, September 2012 to December 2017



Source: Bloomberg

What about the fundamentals for gold?

What about demand and supply for gold bullion during this time?

As usual, when it comes to gold, nothing is straightforward. The "official" gold supply and demand data are published quarterly by the World Gold Council (WGC), although the estimates are prepared by a consultancy, Metals Focus. There is a four-page pdf file on the WGC's website explaining its methodology.

Gold supply and demand cannot be modelled in the same way as commodities...

Unfortunately, there is a flaw at the heart of these calculations. It is simply not possible for the data to accurately reflect all gold bullion supply and demand. We have to emphasise that we have no wish to single out Metals Focus, since it is in good company with almost all other gold market analysts. Almost all of them overlook a fundamental difference between supply and demand for gold vs. other commodities.

Most analysts make the implicit assumption – without stating or likely realising it – that gold also has a low stock-to-flow ratio like other commodities, such as oil or copper. This is incorrect.

...due to very low stock-to-flow ratio

In simple terms, a low stock-to-flow ratio means that inventories are low in comparison with annual production. The annual demand that is consumed is sourced almost entirely from annual supply. Relatively small changes in either production or inventories, therefore, can significantly affect price – since the market can rapidly shift from surplus to deficit and vice versa.

Gold is almost unique, having a very high stock-to-flow ratio, meaning that:

- unlike other commodities, gold is not consumed – a key factor making it the perfect choice for money/store of wealth; and
- almost all the gold ever mined remains in the form of bars, coins and jewellery, and is relatively easy to sell back to the market.

Given gold's high stock-to-flow ratio, the concepts of supply and demand take on a different character from normal goods:

- supply – the WGC's estimate of 187,200 tonnes of gold ever mined can theoretically be seen as potential supply, rising annually with mine production; and
- demand – owners of gold bars, coins and jewellery are effectively demanding gold by withholding their inventory of gold from the market; this is sometimes referred to as "reservation demand".

Since the entire stock of gold held as bars, coins and jewellery is held as inventory, there are obviously substantial flows within this existing 187,200 tonnes of inventory. It is the buying and selling within this existing inventory that is not picked up by the WGC/Metals Focus data. It is not possible to do so, except for estimating the volume of recycled gold "scrap" (mainly old jewellery).

Buying and selling within the existing inventory is hard to pick up

A few other commentators have noted on this unique aspect of gold and, to a lesser extent silver, which is the other monetary metal. For example, the following comment is from Antal Fekete, Professor Emiritus at the Memorial University of Newfoundland:

"…supply and demand in the case of a monetary metal are indeterminate because of the huge speculative flow as it switches its loyalty back and forth between the long and short side of the market…"

Official data capture incremental supply and best guesses for its various categories of demand

It is impossible for even the most sophisticated analysts/consultants to accurately model these speculative flows within the existing inventory. There is an argument that if this is acknowledged by analysts it will partially invalidate their work.

Returning to the WGC/Metals Focus work, its analytical format does capture the incremental gold supply each year in terms of:

- new mine production;
- recycling of scrap gold; and
- producer hedging.

The World Gold Council's website shows its quarterly estimates for the surplus/deficit in global gold supply and demand for the 9-year period 2010-18 (data are not available for earlier years). This is shown in the chart below, which illustrates a remarkable and inexplicable feature of the WGC's data.

We noted above that the biggest quarterly decline in the gold price during October 2012-December 2015 was 25.4% in 2Q 2013. Inexplicably, this coincided with the biggest quarterly supply deficit in gold bullion of 200 tonnes reported by the WGC.

WGC calculates biggest supply deficit was in the quarter that saw biggest crash in the gold price

World Gold Council (WGC) – supply & demand surplus/(deficit) 2010-18 (tonnes)

Source: World Gold Council

This does not make sense, obviously, and begs a question. **Is the WGC's model incorrect, or is the gold price disconnected from supply and demand for actual bullion, or both?** The answer, in our opinion, is "both".

While gold supply and demand cannot be analysed in the same way as normal commodities, **we will show how the gold price between October 2012 and December 2015 moved in precisely the opposite direction from the identifiable global trends in demand and supply for gold bullion**. Our analysis shows the following:

The false bear market of October 2012 to December 2015

- a rising trend in a broad quantitative indicator of global physical gold demand;
- flat WGC estimates for *new* gold supply during the period;
- a "run" on the banks of more than 2,000 tonnes of gold leaving London vaults; and
- anecdotal evidence of gold refiners overwhelmed by demand and lacking supply.

The best quantitative indicator for global gold bullion demand

We can gauge the **level of global gold bullion demand by aggregating the net change in four key quantitative indicators**, which are published on a month-by-month basis.

- net change in central bank gold holdings (WGC);
- net change in gold holdings of all-known gold ETFs;
- gold withdrawals on the Shanghai Gold Exchange; and
- gold imports into India.

It is important to clarify three aspects of these data.

Withdrawals on the SGE are a good proxy for Chinese demand excluding the PBOC

- The net change in gold ETFs and the net change in central bank holdings are based on WGC data.
- Withdrawals on the Shanghai Gold Exchange are a close proxy for Chinese demand, albeit excluding PBOC (People's Bank of China) buying. Under Chinese law, all gold, either mined domestically or imported, has to be sold through the SGE, allowing the monitoring private gold reserves. Once SGE bars are withdrawn, they are not allowed to be re-deposited (Article 23, SGE rule book). Withdrawn SGE bars that are re-sold on the exchange have to be recast and assayed as new bars (so it happens rarely) and are counted as scrap supply. Furthermore, in 2014, the President of the SGE Transaction Department confirmed to CNC Asset Management that the PBOC does not purchase gold through the SGE – so no overlap with central bank purchases.

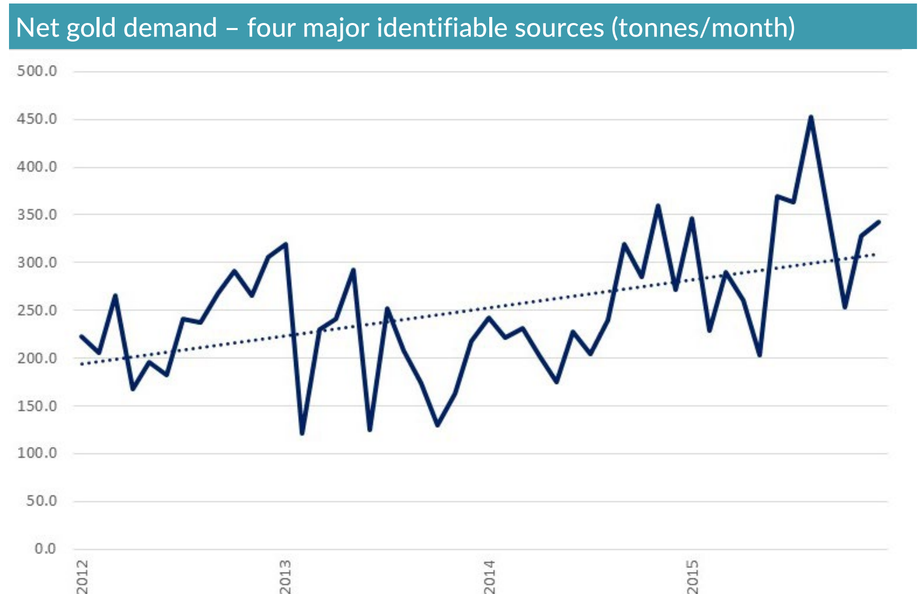
Indian import data understate the actual numbers

- Official data for Indian imports significantly understate the actual numbers. The period October 2012 to December 2015 saw India raise the 4% duty it imposed on gold imports in 2012 by 2% on three further occasions in January, June and August of 2013 to 10%. This led to a sharp rise in illegal gold imports, which some estimates put at about 200 tonnes per year in 2014 (or nearly 17 tonnes per month). We have not made any adjustment to the official figures, which are well-known to understate reality.

Aggregating the four indicators of global gold demand

The chart below shows the monthly aggregate for the four biggest identifiable sources of gold bullion demand and the rising trend line during 2012-15.

Net gold demand – four major identifiable sources (tonnes/month)

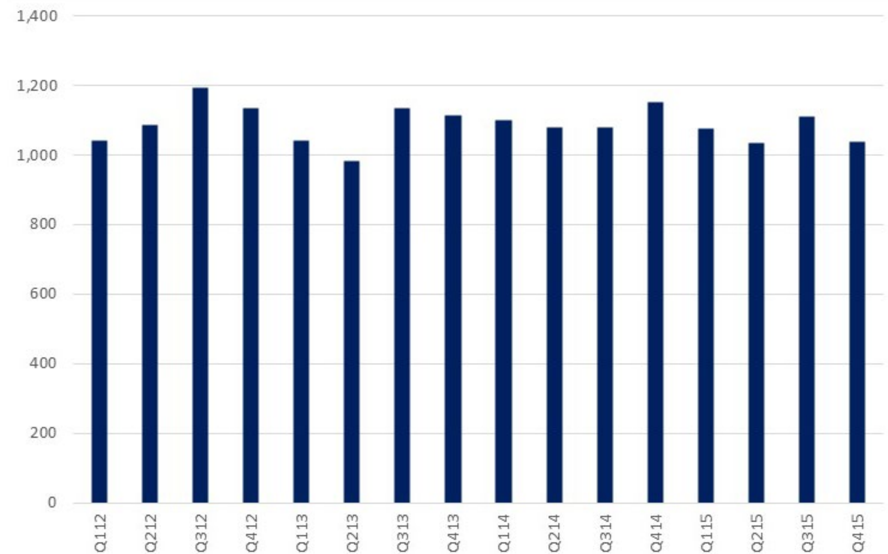


Source: WGC, Bloomberg

WGC's estimate of "supply" was flat/down

During this period, gold supply – calculated using the WGC's data for mine production plus net producer hedging plus recycled gold – was flat or slightly down.

WGC estimate for world gold supply (quarterly/tonnes)



Source: WGC

As we will show, not only was gold demand rising and supply stable during 2013-15, but London's gold vaults were drained of more than 2,000 tonnes of bullion during September 2012-December 2015.

This took the volume of vault gold down to very low levels vs. the scale of London gold trading. Inexplicably, the gold price plunged by more than 40% while this "run" on the vaults was in progress.

The gold float in London is critical…

We reiterate that it is not the total amount of vault gold that is critical to the functioning of London's gold market, but what we term the gold "float", i.e. the volume of unencumbered gold that can accommodate gold buyers who opt to take delivery of allocated bullion. Furthermore, this gold has to be in the form of London Good Delivery bars, which can introduce some supply lags into the system. …otherwise the "derivative-*ised*" market will be exposed.

An adequate float maintains the market's status quo; **otherwise its "derivative-*ised*" nature might rapidly become obvious**.

Our estimate of the float at the end of December 2015 will show how close we came to delivery failures in London.

We can estimate the float at end-December 2015 in two ways and take the average:

We note that, in calculating the float at end-December 2015, we are hampered by the LBMA not reporting the volume of gold in London vaults until July 2016. However, **we can estimate it with reasonable accuracy in two ways before taking an average**:

- estimate total volume of gold in London vaults on 1 October 2012 by grossing up (see below) BoE vault data for end-September 2012 and subtracting net UK exports during October 2012 to December 2015; and
- estimate total gold in London vaults by grossing up the BoE vault data on 31 December 2015.

The starting point for the **first way** is the BoE vault data, which indicated 5,961.2 tonnes of gold on 31 December 2012. The vast majority, although not quite all, of this gold is "official" gold, i.e. belongs to central banks. We need to "gross up" this figure to estimate the total gold in London vaults on that date.

Firstly, by estimating total gold in London vaults using BoE data for October 2012 and subtracting net exports

During July 2016 to December 2018, the ratio of gold held at the BoE vs. total gold in London exhibited a narrow range of 66.4%-69.0%, with an average of 67.8%. Using this average, we can estimate that the total gold in London vaults at midnight on 1 October 2012 was 5,961.2/0.678 = 8,792.3 tonnes.

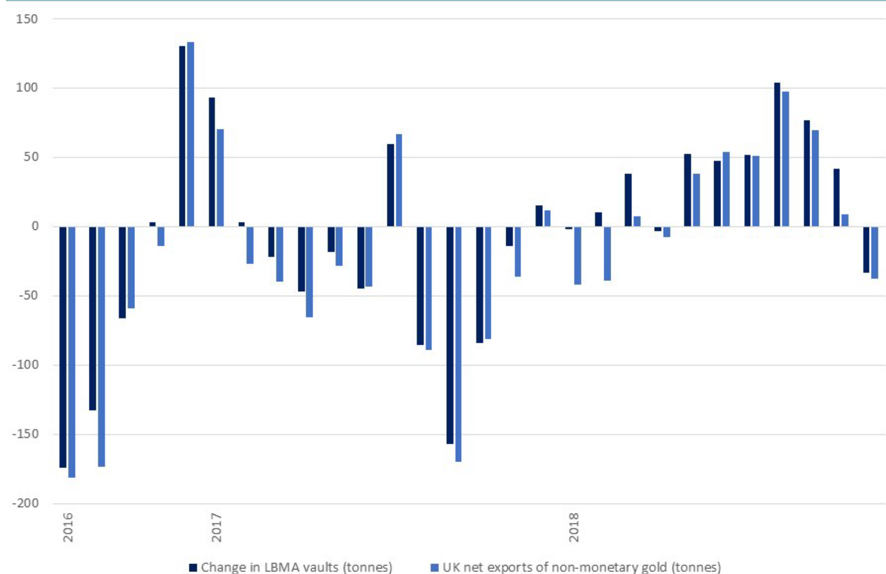
We can demonstrate that this methodology is reasonably accurate, as follows: dividing the gold in the BoE vaults at end-July 2016 by 0.678, we get an estimate of 4,943.5/0.678 = 7,291.3 tonnes. This is close to the actual volume of gold in London vaults at end-July 2016 of 7,283.0 tonnes, being the first time the LBMA reported it.

The UK's Office for National Statistics publishes monthly data on exports and imports of non-monetary gold, i.e. non-official gold. Using our estimate of 8,792.3 tonnes of gold in London vaults on 1 October 2012 as our starting point, we can subtract the UK's net exports of gold from October 2012 to December 2015 of 2,155.3 tonnes (see below), which leaves 6,637.0 tonnes.

Changes in UK net exports have corresponded closely with changes in the total volume of gold in London vaults

Since the LBMA published the volume of gold in London's vaults in July 2016, **the monthly changes have corresponded closely with the data on net UK gold exports**.

Change in LBMA vaults vs. UK net exports (monthly, since July 2016)

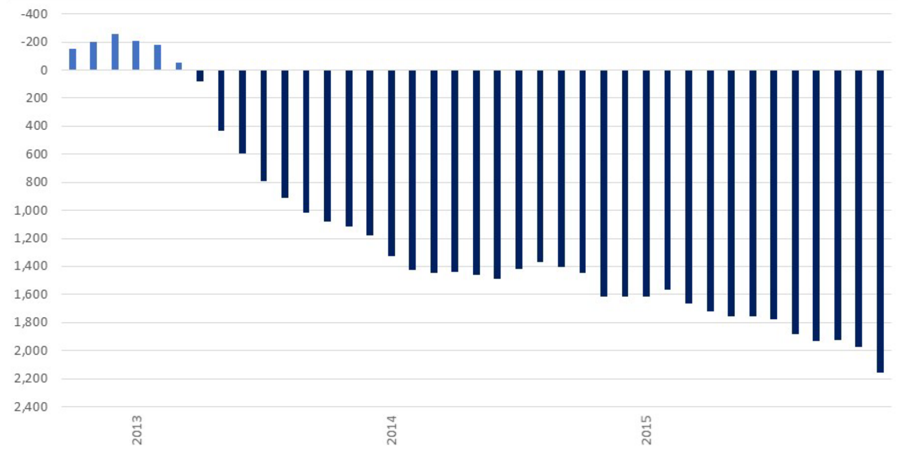


Source: ONS, LBMA

The "bank run" on London's vaults amounted to more than 2,000 tonnes

The chart below shows the "run" on London's gold vaults during the "False Gold Bear Market" of October 2012-December 2015. We estimate that the accumulated loss of gold from London's vaults was 2,155.3 tonnes. The ONS data show that the UK switched from being a net importer to a substantial net exporter of non-monetary gold (i.e. non-official gold) from January 2013-December 2015. Indeed, during this 36-month period, net UK gold exports amounted to 2,415 tonnes.

Cumulative net gold exports from UK, October 2012 to December 2015 (tonnes)



Source: Hardman & Co Research, LBMA

Secondly, by using the average ratio of gold stored at the BoE vs. total gold in London vaults to estimate the latter in December 2015

In the **second way**, we divided the 4,779.5 tonnes of gold reported by the BoE to be in its vaults on 31 December 2015 by 0.678, which gives 7,049.4 tonnes, i.e. a fairly modest 6.9% above the 6,594.2 tonne first estimate.

Averaging the two gives (6,637.0 + 7,049.4)/2 = 6,821.8 tonnes.

Almost all of the gold in the BoE's vaults is official, i.e. national/central bank gold – we estimate 95% of the 4,779.5 tonnes remaining in the BoE's vaults at the time. This left 6,821.8-4,540.5 = 2,281.3 tonnes. From this figure, we need to subtract ETF gold in London and institutional/HNW.

Gold float estimated at 968 tonnes on 31 December 2015

The WGC estimates that, at 31 December 2015, gold held in ETFs worldwide amounted to 1,590.1 tonnes. Our calculation is that gold currently held by ETFs that is stored in London is 71.0% of the total, and has been relatively stable at ca.70.0% in recent years. Applying 70.0% to ETF gold holdings of 1,590.1 tonnes on 31 December 2015 implies 1,113.1 tonnes of ETF in London at that time. We estimate that gold held in London by institutions, including SWFs and HNW investors, amounted to about 250 tonnes on 31 December 2015. Now we can estimate the gold float as follows:

Estimating for gold "float" in London on 31 December 2015 (tonnes)

Total gold in London vaults	**6,843.2**
Less:	
Official gold	*-4,.540.5*
Less:	
ETF gold held in London	*-1,113.0*
Less:	
Held by institutions (incl. SWFs) and HNW investors	*-250.0*
Equals	
Gold float supporting London OTC trading	*939.7*

Source: Hardman & Co Research

So, we estimate that, after a run on London's vaults of more than 2,000 tonnes, the float supporting London's gold market trading had dwindled to below 1,000 tonnes.

We need to put this in context.

The float declined to dangerously low levels vs. the volume of OTC trading

A float of 939.7 tonnes is less than 18% of the daily average turnover of 5,403 tonnes of "loco London" gold trading, based on the 2011 LBMA survey. It is also comparable with the 939 tonnes of daily average turnover using what we believe is the very understated figure from the LBMA trade report from November 2018.

The conclusion from these calculations is profound**.**

Absent the convention of unallocated gold, London could have run out of gold in less than a day

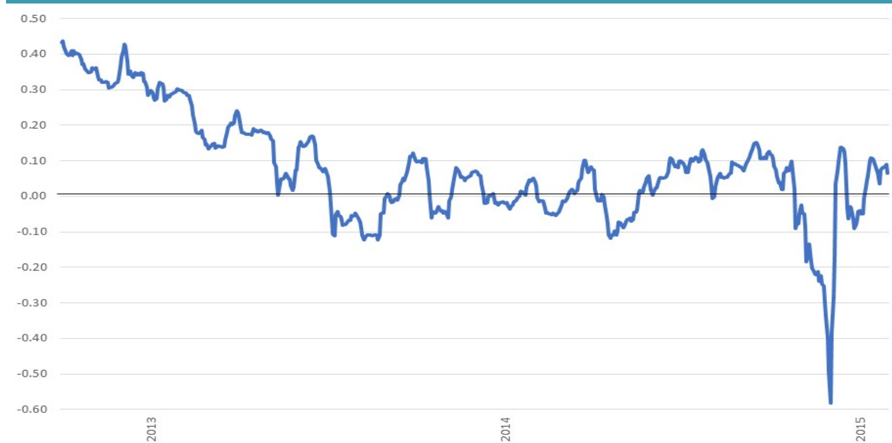
Without the convention of trading gold credit notes, i.e. unallocated gold, London's gold market could have run out of available inventory of gold bullion in about 24 hours in December 2015.

As the gold float dwindled during 2013-15, it was no wonder that the GOFO rate was negative and signalling severe tightness in physical gold supply – in contrast to gold's collapsing price. Recapping briefly, GOFO stands for the "Gold Offered Forward Rate", and is the interest rate for swapping gold into US dollars for a fixed time. Putting it another way, it is the interest rate for borrowing dollars using gold as collateral.

GOFO traded repeatedly in negative territory

The GOFO rate should not trade below zero. If it trades negatively, it means that the market will pay holders of gold bullion to borrow dollars in exchange for lending their gold bullion to the market. Consequently, negative GOFO means that the OTC gold market in London needs to borrow gold to ease the supply shortage. GOFO repeatedly traded in negative territory in 2013-14, before publication was terminated in January 2015, after pressure from LBMA members.

GOFO (Gold Forward Offered Rate), October 2012 to January 2015 (%)



Source: Bloomberg

Discontinued after huge spike down

This helped to disguise the severity of stress on London vaults, which became even more intense by the end of 2015.

The collapse in the gold price was also at odds with other evidence of strong bullion demand

During 2013-15, as the gold price plummeted, there were contradictory stories about the strength of Chinese gold demand and how gold refiners were struggling to meet customer orders. Reading the following anecdote clarifies the disconnection between the gold price, and the fundamentals and intrinsic value of gold bullion.

A discussion with the MD of a major gold refinery

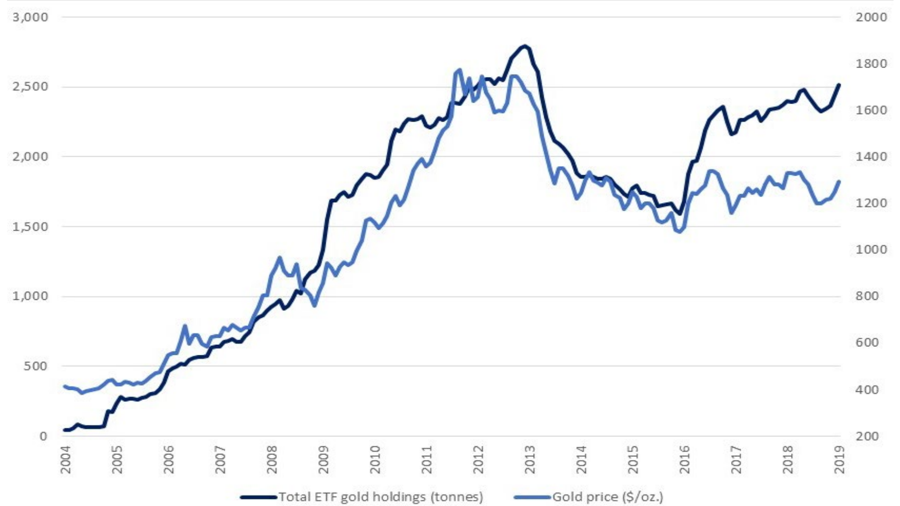
The following comments were published on the BullionStar website in December 2013. BullionStar's former writer, Koos Jansen, interviewed Alan Stanczyk, the Chief Market Strategist of the Anglo-Far East investment group, after Stanczyk visited one of the biggest Swiss gold refineries. In the report, Stanczyk recounted his conversation with the refinery's managing director.

> *"We (spent) about two hours talking to him, we learned some very interesting things. What's going on in the gold market as far as the price, is I think very counter intuitive. Everybody understands, knows and believes the price should be higher than it is, but it isn't. There's confusion in the marketplace, and there are two reactions; the reaction in the west is fear, confusion and uncertainty; the reaction in the east is buying.*
>
> *Now, this gentleman we were talking to probably has a better idea of physical gold flow than anybody else globally. He sees what is coming from the mines, he sees what is coming from the UK, and all over the world, as well as where it's going. He indicated the price didn't make sense because he has got so much fabrication demand. They put on three shifts, they're working 24 hours a day, and originally he thought that would wind down at some point. Well, they've been doing it all year. Every time he thinks it's going to slow down, he gets more orders, more orders, more orders. They have expanded the plant to where it almost doubles their capacity. 70 % of their kilobar fabrication is going to China, at apace of 10 tons a week. That's from one refinery, now remember there are 4 of these big ones (refineries) in Switzerland.*
>
> *At this Swiss refinery there have been several times this year on which they were unable to source gold. This shocked me. They're bringing in good delivery bars, scrap and dore from the mines, basically all they can get their hands on. This gentleman has been in the business for 37 years, he was there during the last bull market in the late seventies. I asked him when was the last time this happened, that he was unable to source gold. He said never. And I clarified it, I asked: let me make sure if I understand what you're saying to me, in the last 37 years you've worked in the gold industry this has never happened? He said: this has never happened."*

ETF holdings track the direction of the gold price

When we looked into the data more deeply, we realised that the main reason that the London gold market did not collapse into delivery failure was the dishoarding of gold held in ETFs by western investors. Gold ETF holdings tend to track the gold price, and western investors buy gold as the price rises and sell when it falls.

Total ETF gold holdings vs. gold price (tonnes, since 2004)

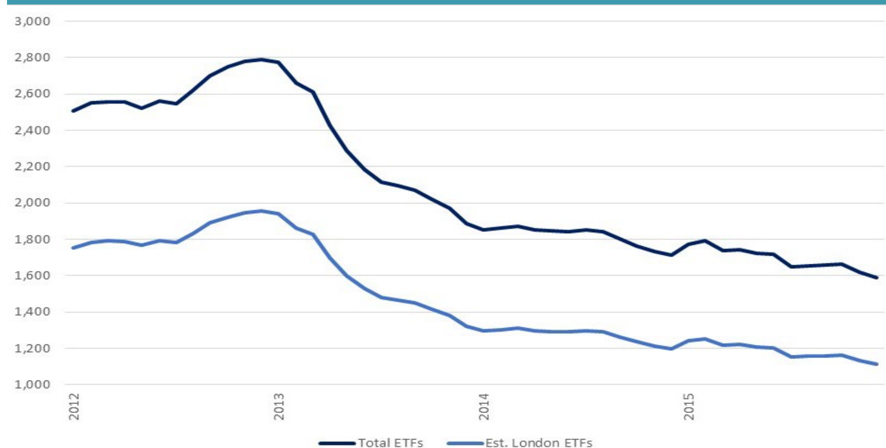


Source: Bloomberg, LBMA

We estimate that ETF gold held in London fell by nearly 800 tonnes between October 2012 and December 2015

The next chart shows the WGC data for the tonnes of gold held by all known gold ETFs, of which, as explained above, the proportion held in London is relatively stable, at about 70%. Total gold held in ETFs declined from 2,701 tonnes on 1 October 2012 to 1,590 tonnes by 31 December 2015. Applying a consistent 70% ratio, we estimate that gold in London ETFs fell from 1,890 tonnes to 1,113 tonnes during the same period, **a decline of 777 tonnes**.

Total ETF holdings and London estimate (tonnes, 2012-15)



Source: Bloomberg, LBMA

Let's put this in the context of the "run" on London's gold vaults during 2013-15.

Dishoarding saved the London gold market in 2015

We estimated above that the float of gold in London vaults on 31 December 2015 was 968.2 tonnes. Consequently, without this dishoarding by western ETF investors of nearly 800 tonnes in the two years prior to this date, the London gold market would have been at risk of an approaching delivery failure.

Putting it another way, it took a "False gold bear market" – in direct opposition to strong Asian and central bank gold demand – to scare enough western investors out of gold in order to save the gold market during 2013-15.

The market was misled

How would western gold investors have responded in late 2015 if they had been aware that the gold float in London was nearly exhausted? In our view: they would have bought aggressively, pushing the market towards delivery failure and causing a dramatic reversal and bull market in gold.

What was the cost of the "False gold bear market" to gold mining companies?

Methodology for estimating the cost on the gold mining industry

Below we have estimated the lost value – in the form of cashflow – suffered by the gold mining industry, which resulted from the False gold bear market. The calculation is based on WGC statistics of mine production, multiplied by the difference between the $1,791.80/oz gold price on 4 October 2012, when the bear market began, and the average prices in each year (October-December in the case of 2012).

Difference in daily average trading volume, 2011 vs. 2018

Year	Mine prod'n. (m oz)	Avg. gold price ($)	Cashflow ($ bn)
Oct-Dec 2012	*24.4*	*1,718.90*	*1.8*
2013	*98.8*	*1,411.23*	*37.6*
2014	*100.9*	*1,266.40*	*53.0*
2015	*103.1*	*1,160.06*	*65.1*
Total			***157.5***

Source: Hardman & Co

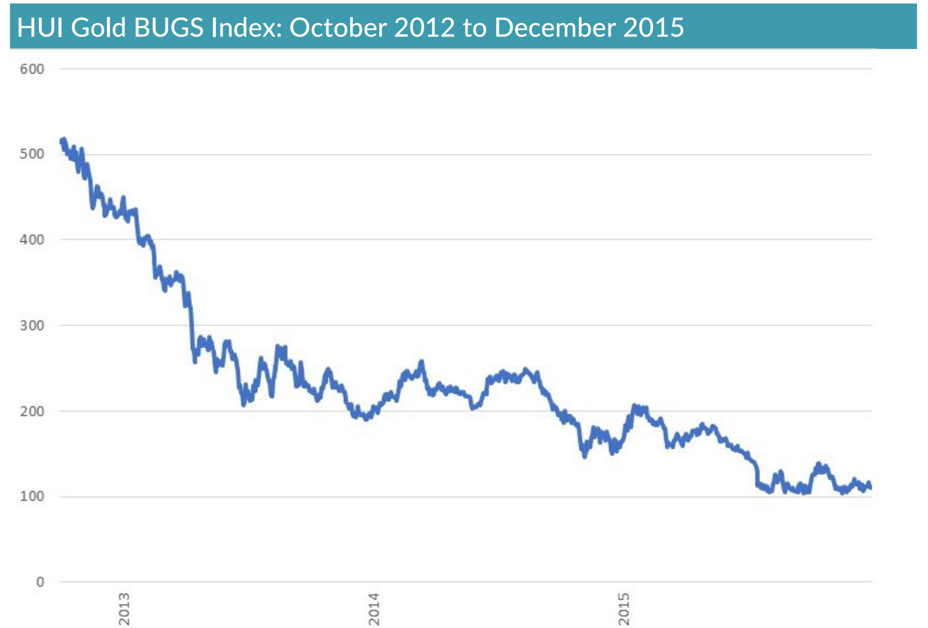
We estimate that the bear market cost over $150bn in cashflow

As the table shows, we estimate that the gold mining sector suffered a loss in cashflows of $157.5bn as a result of the fake gold bear market during the three and a quarter-year period between October 2012 and December 2015.

Gold mining stocks crashed

Besides lost cashflow, the bear market had other negative effects, such as diverting capital away from projects and putting weaker companies out of business. During the same period, the HUI Gold BUGS Index of unhedged gold stocks declined by 78% (see chart below) and the GDXJ ETF, an index of junior gold miners, fell 81%.

HUI Gold BUGS Index: October 2012 to December 2015



Source: Hardman & Co Research

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Paul Mylchreest is an equity analyst covering the Mining sector at Hardman & Co.

Paul has 30 years' analytical experience, having started his career in the Chemicals sector. He was an Extel-rated analyst at S.G. Warburg, Schroders and Citibank. As well as a brief foray into Oil & Gas, he worked for several years as a Global Macro & Cross Asset strategist, firstly setting up on his own, and later working at US commodity trader, Archer Daniels Midland (ADM Inc.). He began his mining coverage at Crédit Agricole Chevreux in 2005.

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In particular, Article 12(3) of the Directive states: 'The following benefits shall qualify as acceptable minor non-monetary benefits only if they are: (b) 'written material from a third party that is commissioned and paid for by a corporate issuer or potential issuer to promote a new issuance by the company, or where the third party firm is contractually engaged and paid by the issuer to produce such material on an ongoing basis, provided that the relationship is clearly disclosed in the material and that the material is made available at the same time to any investment firms wishing to receive it or to the general public…'

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The full detail is on page 26 of the full directive, which can be accessed here: http://ec.europa.eu/finance/docs/level-2-measures/mifid-delegated-regulation-2016-2031.pdf

In addition, it should be noted that MiFID II's main aim is to ensure transparency in the relationship between fund managers and brokers/suppliers, and eliminate what is termed 'inducement', whereby free research is provided to fund managers to encourage them to deal with the broker. Hardman & Co is not inducing the reader of our research to trade through us, since we do not deal in any security or legal entity.

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