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The Gold Market and the Value of the U.S. Dollar

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Abstract

The aim of this research is to determine to what extent the price of gold is suppressed, thereby revealing an internal structural problem within the global monetary system. Historical manipulation could only have been done by controlling the value of money under a fractional reserve gold standard through the physical demand for, and supply of gold, in relation to official reserves held at a central bank. More recently, the price of gold is largely influenced through paper trades, as a function of the operation of the gold market involving gold derivatives, in conjunction with physical trades and changes in official reserves. This research adopts a qualitative interpretation and numerical analysis to analyze the extent of market concentration and price manipulation. Our findings reveal that the gold market is largely deterministic rather than stochastic in nature. It also reveals that markets are not only subject to a fractional reserve banking system, but also a fractional reserve gold market, highlighting systemic instability inherent within the modern monetary system, and especially the value of the U.S. dollar and related dollar denominated assets.

Keywords: gold market, gold derivatives, monetary policy

1. Introduction

This research (Note 1), is within the field of monetary and financial economics, and seeks to demonstrate the extent of gold price suppression as a function of central bank monetary policy, as identified by Abdullah (2013, 2014, 2015). The gold price is a measure of value and its manipulation is an extension of modern monetary policy, as admitted by Governor Angell whom disclosed that, "the price of gold is pretty well determined by us…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" (FOMC, 1993, pp. 40-41). Ultimately, the opportunity cost of holding, selling, lending or trading in gold is a function of real rates of interest generated on other financial assets. However, in what manner do economic agents conduct themselves within the framework of the gold market, and in particular from 2000-2010, which witnessed not only a financial crisis, but also a significant increase in the price of gold. What started as a sub prime crisis in 2007, quickly developed into a global banking, then a sovereign debt crisis, with countries such as Greece confronting a debt to GDP ratio of 175%. The problem is that settlement cannot be achieved through remittances involving a monetary system backed by debt. A debt cannot settle a debt, and yet that is the nature of the fiat monetary standard. Rather than backed by the promise of the United States, the monetary balance sheet of the dollar is backed by debt. The U.S. has a gold stock worth USD11,048 million valued at an historical cost of USD 42.2222/oz, or 261,663,296 ozs. By end June 2003, and re-valuing U.S. gold reserves at the prevailing London PM fix of USD347.70/oz, the U.S. gold was worth USD 90.5 billion. Equally, from the Federal Reserve 's balance sheet, M3 was USD 8,971.6 billion (Table 1). Thus, each dollar is backed by 1% of gold and 99% by debt.

Table 1. Monetary balance sheet of the U.S. dollar (Bns) at June 2003

Assets	Value	Liabilities	Value
Gold @ $347.70/oz	90.5	Federal Reserve Notes	658.9
IOUs Owed to Banks	8,881.1	Bank Deposits	8,312.7
	8,971.6	**M3**	8,971.6

Sources: Federal Reserve Statistical Releases H.4.1 & H6; U.S. Reserve Assets 3.12.

The Federal Reserve System's 50th Anniversary Edition annual report of 1963 stated that, "the function of the Federal Reserve System is to foster a flow of credit and money that will facilitate orderly economic growth, a stable dollar, and long-run balance in our international payments" (Duncan, 2003, p. 90). Clearly, the Federal Reserve has failed in its strong dollar policy, except for the period at the end of the 20th century – why did the dollar pause before continuing its trend of exponential decay? The answer requires an analysis of the gold and silver markets. "Despite the importance of gold in central bank reserves and its value to investors as a store of wealth and potential risk diversifier, there is relatively little academic literature that attempts to estimate the price determinants [of gold]" (Oxford Economics, 2012). Accordingly, this paper attempts address the mechanics of the gold market, with also a reference to silver. This research consists of six sections of which the first section provides an introduction and research background; section two analyzes the gold markets and derivatives; section three provides an analysis of the nominal and real price of gold, supply and demand; section four presents important analysis on the Bank of International Settlement (BIS) data; section five analyzes LBMA data to assess the extent of unallocated gold within the gold market; and section six provides some concluding remarks.

2. The Gold Market and Derivatives

The world is still submerged in a global financial crisis, and the dollar is the international reserve currency, but given that the U.S. faces insurmountable fiscal obligations, run-away budget and trade deficits, an un-repayable national debt and an unsustainable credit market, why has the dollar not already collapsed? The answer to this is that the strong-dollar policy, so often advocated by the U.S. government, involves gold price suppression. Two mechanisms are used to suppress the gold price: (1) the sale of gold by central banks and also the sale of gold by private commercial bullion banks of leased gold from central banks, and (2) the sale of futures contracts on exchanges such as the Commodity Exchange (COMEX) in New York.

In terms of the commercial bullion banks, their self-interest is that the gold price should decrease in order to repay leased gold at a future lower price. This coincides with the political interest that several central banks have in maintaining the value of the dollar by ensuring that the price of gold does not increase in an unmanageable way. In reality central banks allow bullion banks to conduct their work for them, but have the ability to intervene and sell official gold reserves into the market if needed. If there is a 5% increase in the retail demand for gold, rather than wait for an expensive increase in mine production to increase supply and thus reduce the price, this can be met by only a 0.4% sale of office gold reserves (Note 2). This inevitably leads to coordination between central banks and commercial (bullion) banks. Commercial banks in the U.S. are regulated by the Office of the Comptroller of the Currency and National Administrator of Banks (OCC), with the demise of the largely unregulated U.S. investment banks in 2008, all activities of U.S. commercial banks have now become more transparent, including bank participation in regulated exchange-traded derivatives markets, such as on COMEX.

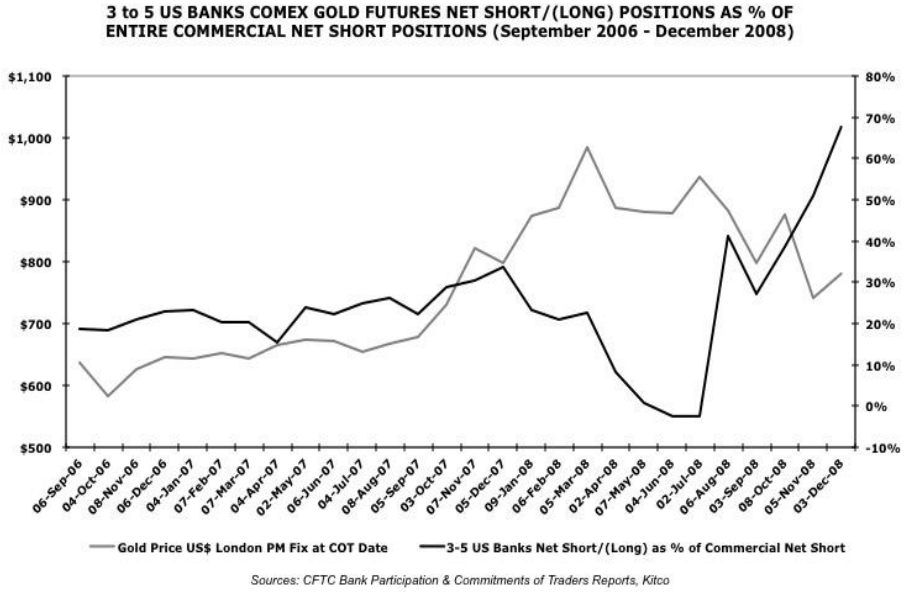

Figure 1. COMEX gold short positions

Over 2006 and 2007, typically 4-5 U.S. banks traded in gold derivatives on COMEX (Figure 1), however by December 2008, only 3 U.S. banks (primarily J. P. Morgan and HSBC USA) accounted for 68% of all net short positions and were net short 218% of deliverable gold on stock at COMEX warehouses. At that stage, gold went into 'backwardation' where the futures price was selling lower than the spot price. Most commodity traders would be happy to sell their physical gold now, and buy it back in the futures market at a discount for delivery in 30 days. However, investors increasingly did not believe COMEX physical gold was available for delivery in 30 days time. The amount of short positioning being concentrated and far higher than COMEX stocks, resulted in an increase in delivery notices, causing the futures price to trade lower than the spot price, as investors were not lured into giving up their physical gold for paper gold, which they saw was simply not available. The situation is even more exacerbated with silver short positions (Figure 2).

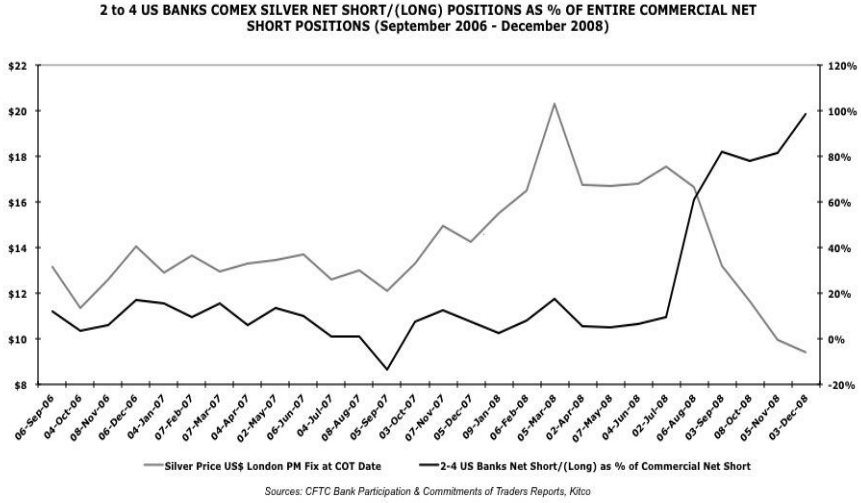

Figure 2. COMEX silver short positions

From 2006-2007, 3-4 U.S. banks were trading silver derivatives, by 2008 just 2 US banks accounted for 98.6% of all net shorts for COMEX silver futures, and were net short 153% of deliverable silver stock at COMEX warehouses, and for the same reasons as gold, the silver price also went into backwardation. However, perhaps

to ensure that silver did not re-emerge as a monetary asset, the silver price collapsed just as J. P. Morgan acquired Bear Sterns (in March 2008). Allegedly, Bear Sterns' considerable silver short position was transferred and added to J.P. Morgan's silver short position: if Bear Sterns has been allowed to go bankrupt, the silver price would have escalated exponentially to around USD100/oz from USD20/oz, thus bringing down other bullion banks including J. P. Morgan. Instead, the price subsequently decreased to USD10 and in so doing, ultimately J. P. Morgan itself survived and profited in the process by buying Bear Sterns for a nominal sum and absorbing Bear Stern's silver derivatives. J. P. Morgan and HSBC USA also dominate U.S. bank activity in gold derivatives with 99% market share, worth a combined USD112.8 billion by 2007 (Figure 3). However, by 2010, J. P. Morgan has single-handedly secured an 85.3% market share worth USD163.8 billion.

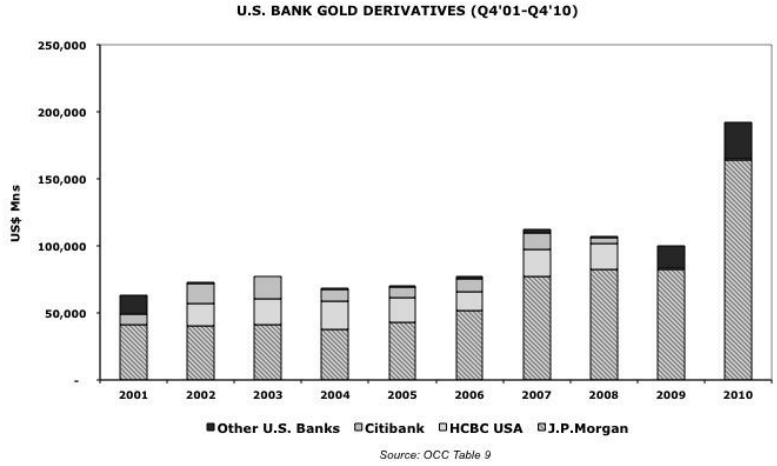

Figure 3. U.S. commercial banks' gold derivatives

Pre-financial crisis in 2007, J. P. Morgan 's exposure was actually worse. By 2010, and post-recapitalization, the exposure is less, but still profound (Table 2).

Table 2. J. P. Morgan's derivatives exposure

	2007	**2010**
Total Derivatives (Tn)	84.87	78.66
Gold Derivatives (Bn)	77.01	163.83
Total credit exposure (netted current & future exposure) (Bn)	469.98	345.43
Assets (Tn)	1.56	2.12
Equity (Bn)	123.22	176.11
Risk-Based (tier 1 & tier 2) Capital (Bn)	112.25	130.44
Nominal U.S. GDP (Tn)	13.81	14.76
Annual Gold Mine Production (MTs)	2,476	2,689
Ratio of gold derivatives : total derivatives	0.09%	0.21%
Total credit exposure (netted current & future exposure) to risk-based capital (tier 1 & tier 2 capital)	418.7%	264.8%
Ratio of total derivatives : assets	64	48
Ratio of total derivatives : equity (implied leverage)	689	447
Total derivatives : U.S. GDP	6.15	5.33
Gold derivatives MT equivalent (Note 3)	2,873	3,628

The share of gold derivatives has increased, but is still relatively low by comparison to its entire derivatives exposure (0.21%). From the perspective of credit-worthiness, total credit exposure (netted current and future exposure) of its derivatives, versus tier 1 capital and tier 2 capital, has improved, but still at 265% (419% in 2007); meanwhile every dollar of assets supports 48 dollars of derivatives (64 dollars in 2007). However, the implied leverage is that every dollar of equity is supporting 447 dollars in derivatives (689:1 in 2007) - in fact, an implied leverage of 10:1 would be regarded as brazen, 100:1 might be in the realms of an extremely aggressive hedge fund, but 447:1 is still beyond Long Term Capital Management's status of 417:1 (Note 4) before its demise in 1998. The notional value of J.P. Morgan's 2010 derivatives is 5.33 times the entire output of the United States (6 times in 2007) - and all this from a prime Wall Street bank and Dow Jones blue-chip stock.

Other than at an institutional level, wider evidence of price irregularities can also be found in the trading patterns within the gold market. One cannot detect these irregularities by merely observing the daily AM and PM fixes (Figure 4).

Figure 4. Gold price, daily London AM and PM fixes, 1970-2010

However, we have updated and expanded upon the methodology of Douglas (GATA, Aug. 2010), by analyzing gold price data over 11 years from 2000 to 2010. Figures 5 and 6, demonstrate that the price of gold has consistently been bought upon the PM fix and being sold proportionally upon the following AM fix: this being the same *modus operandi* of the London Gold Pool, which the Gold Fixing Ltd historical timeline describes as historical fact, that by 1961 the "Gold Pool of US and main European central banks set up to defend $35 price, by selling at fixing to contain it" (Gold Fixing) - thus, they sold in to the fix to suppress the price with the obvious co-operation of the commercial bullion bankers. Whilst, the Gold Pool disbanded in 1968 upon suffering large outflows of bullion due to the demand for metal when the price of gold was floated, however, the practice remains *in situ* even if not formally recognized - it is covert rather than overt price suppression.

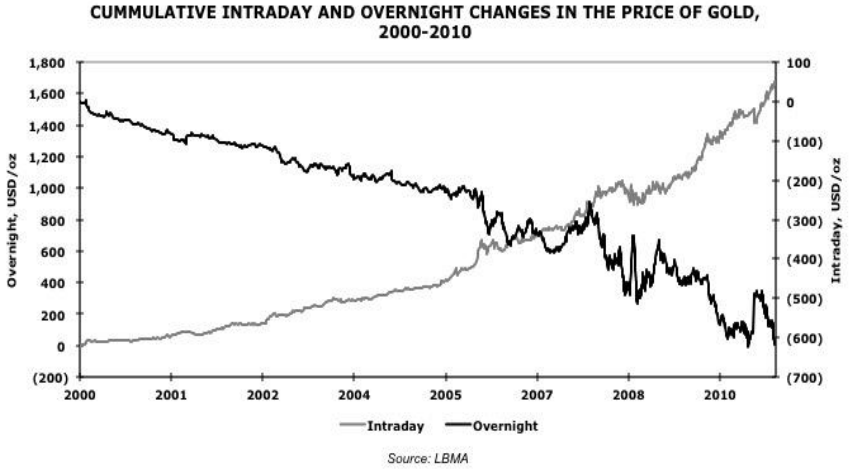

Figure 5. Cumulative intraday and overnight changes in the price of gold, 2000-2010

The more the price of gold is rises in the Asian markets, the more it is sold down into the PM fix during trading in London and New York. For the large bullion banks which are now dominating the market such as J. P. Morgan Chase and HSBC, the profits are obvious by being long overnight (during the New York/Asian trade) and short intraday (during London/New York trade) - between 2000 and 2010, the cumulative overnight trade was a positive USD1,680/oz and the cumulative intraday trade a negative USD 615/oz.: a combined trading profit of USD 2,295/oz.

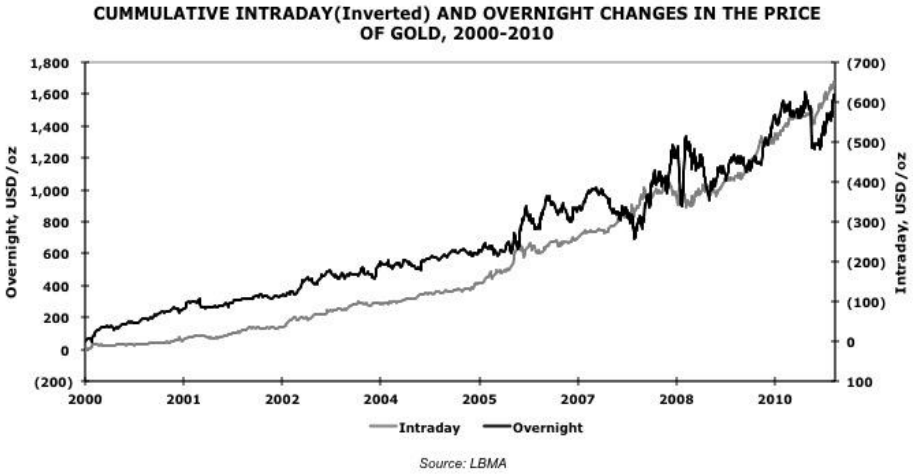

Figure 6. Cumulative intraday (inverted) and overnight changes in the price of gold, 2000-2010

Figure 7 reveals that the cumulative amount of gold is consistently being sold down at the AM fix, in an almost perfectly linear proportion to the cumulative amount bought up from the PM fix in the overnight Asian trade.

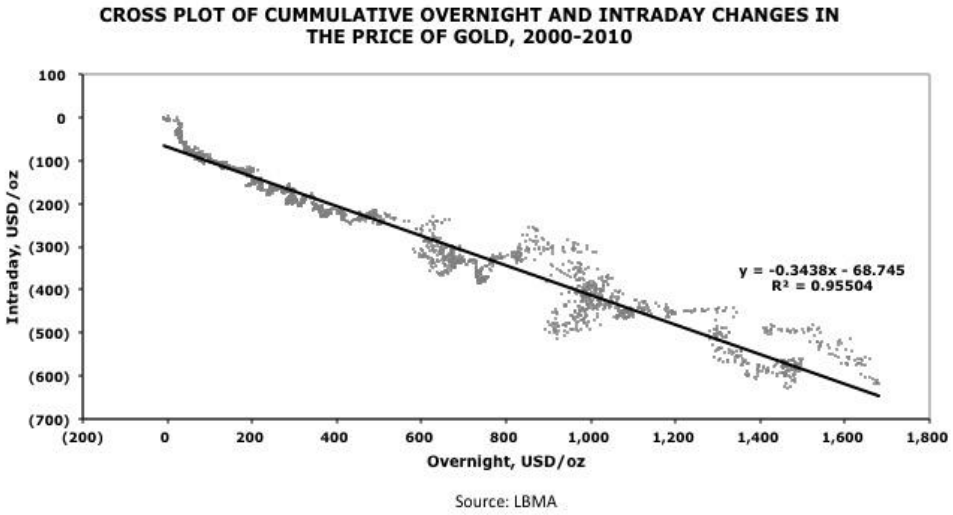

Figure 7. Cross plot of the cumulative overnight and intraday changes in the price of gold, 2000-2010

Moreover, whilst the gold price has increased by 400% during the same period, 89% of those changes remained within a very narrow trading band of +/- 1%, which also implies a tight control of the market (Figure 8).

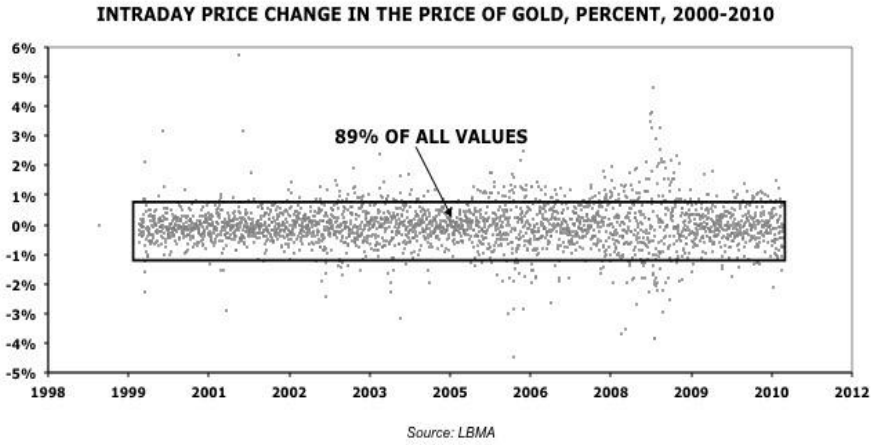

Figure 8. Intraday price change in the price of gold, 2000-2010

The above price irregularities show how the dollar value of gold is being rigged to give a false impression of the real value of the dollar, which would otherwise have continued its exponential rate of decay in terms of value and thus purchasing power.

3. Gold Price, Supply and Demand

From about 1995 onwards, an explosion of gold derivatives has suppressed the gold price, and continues to exert enormous downwards pressure, but the tsunami of debt and *fiat* money entering the financial system, when combined with decreased central bank gold lending activity, has created a pressure-cooker scenario with the gold price (Figure 9). The gold price has not kept pace with inflation. Current prices have now run up in excess of USD1,200/oz, whilst nominally more than the last high achieved during the Iran-Iraq War of USD850/oz on 21st January 1980, the price of gold is, in fact, relatively low in real terms: adjusted for inflation (Figure 10), the real price of gold should be USD2,546/oz in constant 2013 dollars (Note 5), and as we know from COMEX data, shorting the gold market continues at the hands of a dwindling number of U.S. banks, but to less effect given the dwindling supply of official gold.

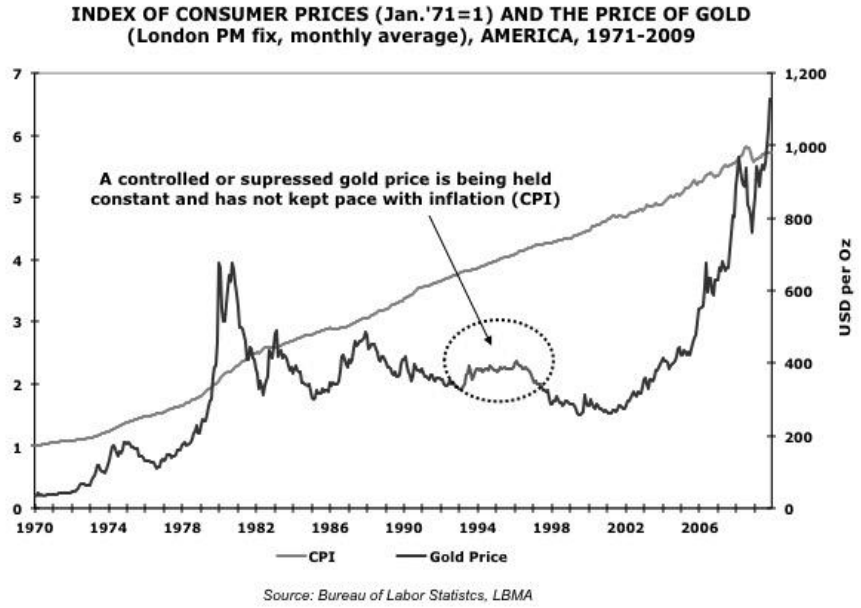

Figure 9. CPI and the price of gold, America, 1971-2009

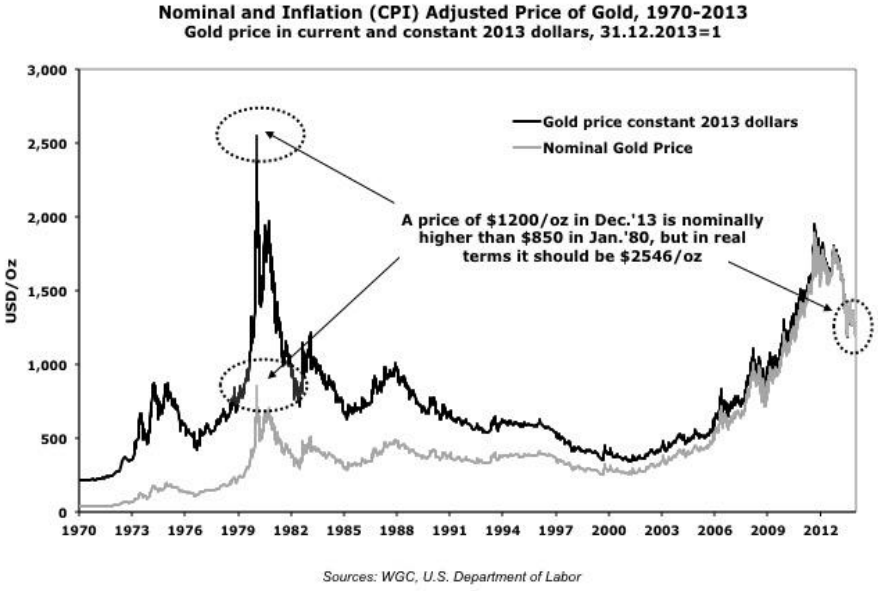

Figure 10. Nominal and inflation adjusted price of gold, America, 1970-2009

Indeed, a Citigroup analyst report of 21st September 2007 states, "our sense is that central banks have been forced to choose between global recession or sacrificing control of gold, and have chosen the perceived lesser of two evils" (Citigroup-b, 2007, p. 7), and again in a commodity report dated 17th September 2008, "it is notable that the hard-core gold-bugs have been proven correct in the decade-long contention that an overwhelmingly vast and complex pool of nested financial derivatives would ultimately result in cascading defaults and ruin for major portions of the banking industry. Frankly, we're surprised that gold is not already at USD2,000 per ounce" (Citigroup-a, 2008, p. 2). And a higher price has occurred despite the fact that total mine supply (Table 3) has actually increased in recent years.

Table 3. Gold supply and demand (MTs), 2003-2010

	2003	2004	2005	2006	2007	2008	2009	2010
GOLD SUPPLY								
Mine Production	2,593	2,463	2,549	2,484	2,473	2,410	2,589	2,689
Net Hedging	(270)	(427)	(92)	(410)	(447)	(352)	(236)	(103)
Total Mine Supply	2,323	2,036	2,457	2,074	2,026	2,058	2,353	2,586
Official sector sales	617	471	663	370	485	232	34	(76)
Old gold scrap	939	834	898	1,129	977	1,316	1,695	1,645
Total Gold Supply	3,879	3,341	4,018	3,573	3,488	3,606	4,082	4,155
GOLD DEMAND								
Fabrication								
Jewelry	2,478	2,618	2,709	2,285	2,401	2,304	1,814	2,017
Industrial	380	410	432	459	461	461	410	466
Sub-Total	2,858	3,028	3,141	2,744	2,862	2,765	2,224	2,483
Investment Demand								
Bar & Coin	310	391	411	424	446	879	778	1,149
ETFs	39	133	208	260	253	321	617	338
Sub-Total	349	524	619	684	699	1,200	1,395	1,487
Inferred Investment	672	(211)	258	145	(73)	(359)	463	185
Total Demand	3,879	3,341	4,018	3,573	3,488	3,606	4,082	4,155
London PM fix ($/Oz)	**363**	**409**	**444**	**604**	**695**	**872**	**972**	**1,225**

Sources: World Gold Council, Gold Fields Minerals Services (GFMS).

The unwinding of the mining company hedge book has helped, indeed, the closing out/delivery into hedge programmes has been one of the supporting factors in driving the gold bull market, since the gold producer's hedge book (Figure 11) has declined from 2,924 tonnes in 2001, to as little as 146 tonnes by 2010. However, as we shall see from BIS data below, these levels do not justify the amount of gold lent or swapped out of bank vaults to provide liquidity for the gold derivatives market, which although down from 2007 is still enormous.

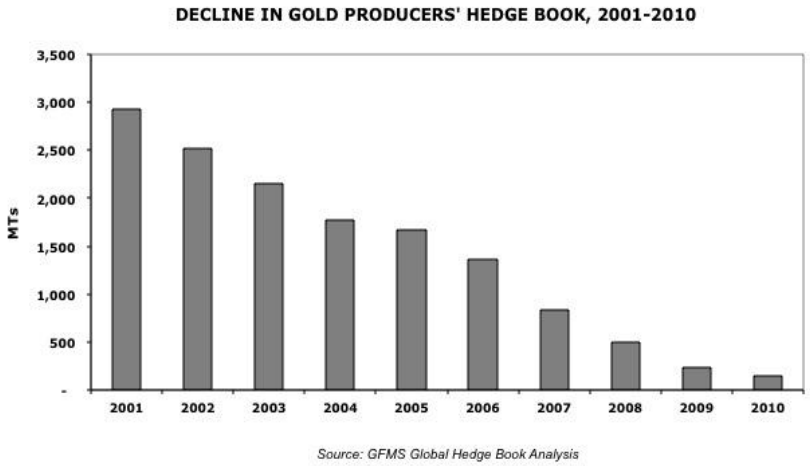

Figure 11. The declining gold producer's hedge book, 2001-2010

In order to provide sufficient short selling cover, central banks must continue to supply official reserves; once the source of the gold carry trade dries up, the ability to continue to suppress the gold price is also affected. Official central bank gold reserves in 2010 were 27,220 tonnes, and including 2,814 tonnes of gold held at the IMF and 501 tonnes of gold by the BIS, total global gold reserves are 30,535 tonnes. With reduced lending by central banks and short positioning on futures markets by bullion banks, central banks have been increasingly unable to hold down gold prices (Figure 12), hence the run up from about USD300/oz in 2001, to around USD1,400/oz by the end of 2010. At the same time, official central bank reserves (excluding IMF and BIS stocks) have dropped from 29,643 tonnes in 2000, bottoming out to about 26,500 tonnes in 2008 due to official gold sales, but the trend has reversed in recent years, alongside a higher gold price.

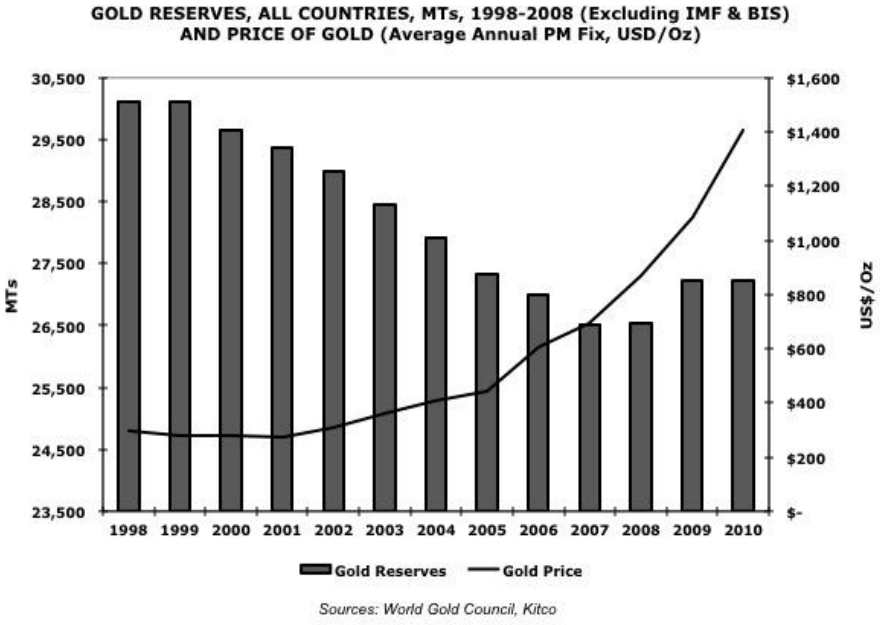

Figure 12. Official central bank gold reserves and the price of gold, 2000-2010

To maintain control over the price of gold requires international co-operation, which was substantively echoed by Mr. W.R. White, Economic Advisor, Head of the Monetary and Economic Planning Department at the BIS, whom stated in the opening remarks of the June 2005 BIS annual conference, that central bank co-operation extended to influencing the gold price: "And the [fifth objective], the provision of international credits and joint efforts to influence asset prices (especially gold and foreign exchange) in circumstances where this might be thought useful" (BIS, 2006, p. 2). Tacit admission of central bank involvement and collusion in gold price manipulation, was exposed in a legal complaint filed on 7th December 2000, against the BIS that quoted Edward George the former Governor of the Bank of England (BoE) and a Director of BIS, describing to Nicholas Morrell (Chief Executive of Lonmin PLC) in relation to the activity of certain central banks attempting to quell the sharp rise in the gold price, following the Washington Agreement (WAG) on 26th September 1999 (Note 6): "We looked into the abyss if the gold price rose further. A further rise would have taken down one or several trading houses, which might have taken down all the rest in their wake. Therefore, at any price, at any cost, the central banks had to quell the gold price, manage it. It was very difficult to get the gold price under control but we have now succeeded. The U.S. Fed was active in getting the gold price down. So was the U.K." (GATA, Dec. 2000, p. 55).

Officially quoted reserves (as required by the IMF) treats gold-in-vault as well as gold receivables from gold lending activity as a same-line-item, which therefore serves to disguise the true amount of gold left physically owned and controlled by central banks. The GFMS Gold Survey of 1998 stipulated that "…the lending of gold to the market, in most cases, by a central bank in order to generate a return on its gold holdings results in a physical sale, either directly by the borrower, of after a series of interconnected transactions" (Mylchreest, 2007, p. 83). Therefore, "there is a net short position in the gold market that is equivalent to the outstanding stock of borrowed gold. This net short position is unique since it corresponds to a 'physical' short position" (GATA, 2000, p. 25).

Indeed, "the best approximation of the total net short physical position in gold arising largely as the result of gold lending in one form or another by central banks is the total notional value of gold forwards and swaps as reported by the Bank for International Settlements and converted into tonnes" (GATA, 2007, p. 6), conducted in the OTC market captured in BIS data, which also eliminate double counting that would otherwise occur with reporting entities on both sides of the same contract. On the basis of the BIS June 2001 data, GATA had already estimated in 2002 that gold lending "by the central banks themselves would imply a short physical position in excess of 15,000 tonnes" (GATA, 2002, p. 8), which represents 46.3% of official gold stocks at 32,413 tonnes according to 2002 World Gold Council (WGC) data.

4. BIS Analysis

The BIS in fact publishes three OTC derivatives reports, (1) semi-annual Regular OTC Market Statistics covers the notional amounts and gross market values outstanding of the worldwide consolidated OTC derivatives exposure of major banks and dealers in the G10 countries plus Switzerland (BIS, 2011); (2) the Quarterly Review covers a survey of derivatives on the books of banks and dealers in 30 countries, including the G-10 and Switzerland (BIS, Dec. 2010); and (3) the Triennial Central Bank Survey of derivatives on the books of banks and dealers in 54 countries, released every 3 years (BIS, Nov. 2010). In the BIS Quarterly review, we learn that total notional value of OTC derivatives in 2007 was USD595,341 billion, and exchange traded futures and options was USD79,099.1 billion, which combine for a total of USD674,440.1 billion: given that, according to World Bank data, global GDP in 2007 was USD54,347 billion, then the global trade in derivatives has ballooned to 12.41 times the value of the entire output of mankind (Figure 13).

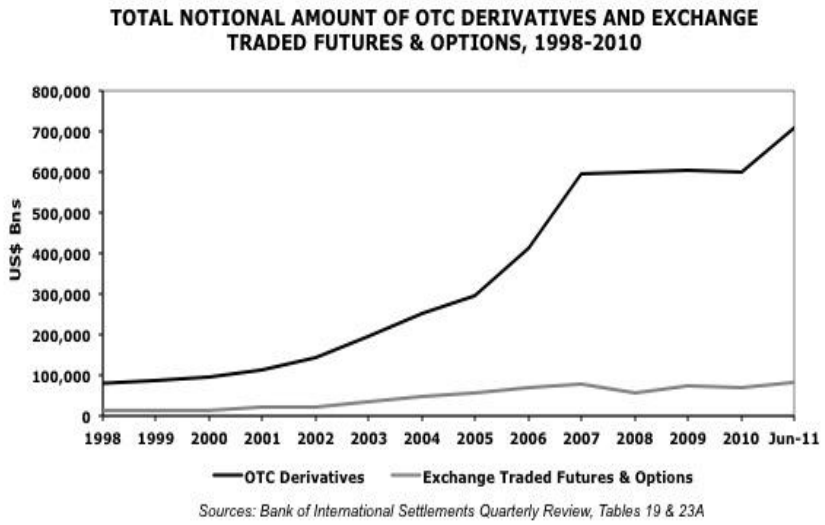

Figure 13. Total notional amount of OTC and exchange traded derivatives

Far from being a tool for risk management, no argument can justify this as a necessary form of hedging, whereby derived paper trades ultimately dominate and distort the pricing of the underlying physical trade in goods and services. Warren Buffet stated in the Berkshire Hathaway annual report of 2002 "derivatives are financial weapons of mass destruction" (Berkshire, 2002, p. 15). Indeed, in a narration from Hakim ibn Hizam: "Hakim asked (the Prophet): 'Apostle of *Allah*, a man comes to me and wants me to sell him something which is not in my possession. Should I buy it for him from the market?' He replied: 'Do not sell what you do not possess'" (Abu Dawud 23: 3496) - direct possession and ownership (*milkiyyah*) of commodities is quite different from trading in the transfer of risk, and as we may observe from the Islamic legal maxim "reward begets risk" (*Majalah*, Art. 87), risk is a prerequisite for lawful income in Islam.

With respect to gold derivatives, the BIS publishes two surveys: (1) the semi-annual OTC Regular Updates from G10 plus Switzerland, and (2) the Triennial Survey from 54 reporting countries. The gold derivatives data included in the Quarterly Review is also derived from the semi-annual G10 plus Switzerland survey. Hence, the twice a year G10 plus Switzerland survey is more regular, but not as comprehensive as the, albeit less regular, Triennial Survey. The notional value of derivatives can be converted into ounces by dividing the notional figures

by the London PM fix USD gold price/oz at the (month-end) reporting date, and then converting ounces into tonnes at 32,151 (Table 4, and Figures 14 and 15). The G10 data showed for forwards and swaps that gold lending has reduced since 2007, and by June 2010, the same reporting date as the Triennial Survey, G10 gold lending represents 20% of official reserves excluding the IMF (= 5,601/27,614 MTs).

Table 4. BIS semi-annual survey of OTC gold derivatives on the books of banks and dealers in the G10 plus Switzerland

	Gold Price $/Oz Ldn PM fix	Forwards & Swaps US$ Bns	MTs equiv.	Options US$ Bns	MTs equiv.	Total Forwards Swaps & Options US$ Mns	MTs equiv.
Jun-98	296.30	103	10,812	82	8,608	185	19,420
Dec-98	287.80	76	8,214	99	10,699	175	18,913
Jun-99	262.60	87	10,305	102	12,081	189	22,386
Dec-99	290.25	119	12,752	124	13,288	243	26,040
Jun-00	288.15	120	12,953	141	15,220	261	28,173
Dec-00	274.45	101	11,446	116	13,146	217	24,592
Jun-01	270.60	88	10,115	116	13,333	204	23,448
Dec-01	276.50	101	11,361	130	14,624	231	25,985
Jun-02	318.50	118	11,523	161	15,723	279	27,246
Dec-02	347.20	136	12,183	180	16,125	316	28,308
Jun-03	346.00	134	12,046	169	15,192	303	27,238
Dec-03	416.25	154	11,507	190	14,197	344	25,705
Jun-04	395.80	129	10,137	189	14,852	318	24,989
Dec-04	435.60	132	9,425	237	16,923	369	26,348
Jun-05	437.10	109	7,756	178	12,666	287	20,422
Dec-05	513.00	128	7,761	206	12,490	334	20,250
Jun-06	613.50	148	7,503	301	15,260	449	22,763
Dec-06	632.00	139	6,841	501	24,656	640	31,497
Jun-07	650.50	141	6,742	285	13,627	426	20,369
Dec-07	833.75	200	7,461	395	14,736	595	22,197
Jun-08	930.25	222	7,423	428	14,310	650	21,733
Dec-08	869.75	152	5,436	243	8,690	395	14,126
Jun-09	934.50	179	5,958	246	8,188	425	14,145
Dec-09	1,087.50	201	5,749	222	6,349	423	12,098
Jun-10	1,244.00	224	5,601	193	4,826	417	10,426
Dec-10	1,404.50	230	5,093	166	3,676	396	8,770

Source: BIS semi-annual Regular OTC Derivatives Updates, Table 19 or D-4.

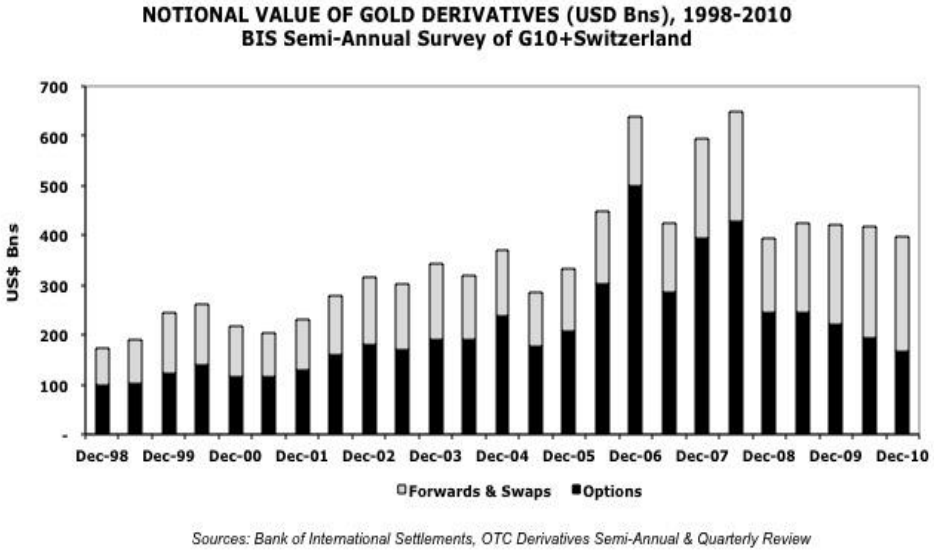

Figure 14. Notional value of OTC gold derivatives, G10+Switzerland

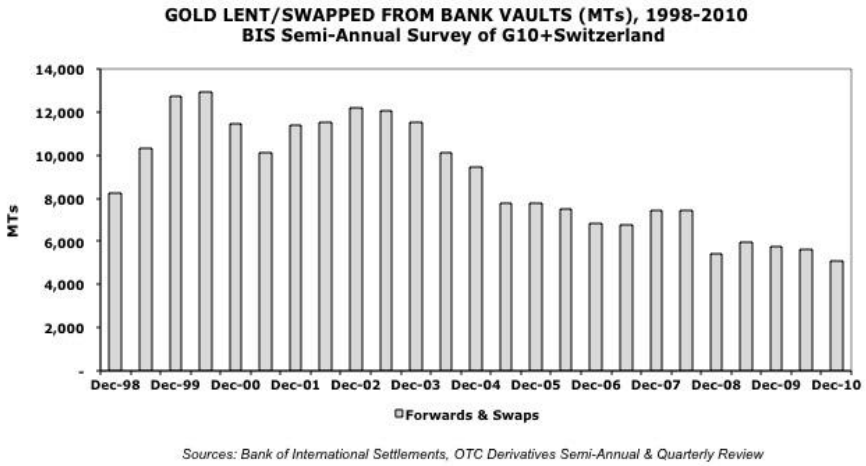

Figure 15. MTs equivalent of forwards & swaps/gold lent by G10+Switzerland

However, the more comprehensive Triennial Survey from 54 reporting central banks (Table 5, Figures 16 and 17), showed a significant increase in forward and swaps since the last Triennial Survey in 2004, resulting in an extraordinary increase to 34,008 equivalent metric tonnes. Total official reserves including IMF 'owned' gold was 30,142 tonnes at June 2007 according to the WGC , and excluding IMF gold of 3,217 tonnes, was 26,925 tonnes. BIS gold of 148 tonnes is still included, since the BIS gold may readily be lent to bullion banks and sold into the spot market. Hence, gold swaps equivalent to 34,008 tonnes against national and BIS reserves of 26,925 tonnes. In reality, according to Redburn Research only about 80% of gold lending and swaps transactions results in a spot sale (Mylchreest, 2007, p. 89), an assessment that implies a figure of approximately 27,000 MTs. Either all the official stocks have been lent and sold into the market, or there are simply many more claims against physical gold.

Table 5. BIS triennial central bank survey of OTC gold derivatives on the books of banks and dealers in 54 countries

	Gold Price $/Oz Ldn pm fix	Forwards & swaps US$ Mns	MTs equiv.	Diff. 3-yr & semi-ann.	Options US$ Mns	MTs equiv.	Diff. 3-yr & semi-ann.	Total forwards swaps & options US$ Mns	MTs equiv.	Diff. 3-yr & semi-ann.
Mar-95	392.0	88,318	7,008		58,938	4,676		147,256	11,684	
Jun-98	296.3	149,705	15,715	45%	78,016	8,190	-5%	227,721	23,904	23%
Jun-01	270.6	141,178	16,227	60%	136,178	15,653	17%	277,356	31,880	36%
Jun-04	395.8	156,415	12,292	21%	202,503	15,913	7%	358,918	28,205	13%
Jun-07	650.5	711,241	34,008	404%	339,685	16,242	19%	1,050,926	50,249	147%
Jun-10	1,244	384,810	9,621	72%	284,308	7,108	-52%	669,118	16,730	60%

Source: BIS Triennial Survey, Tables E.41 and E.49.

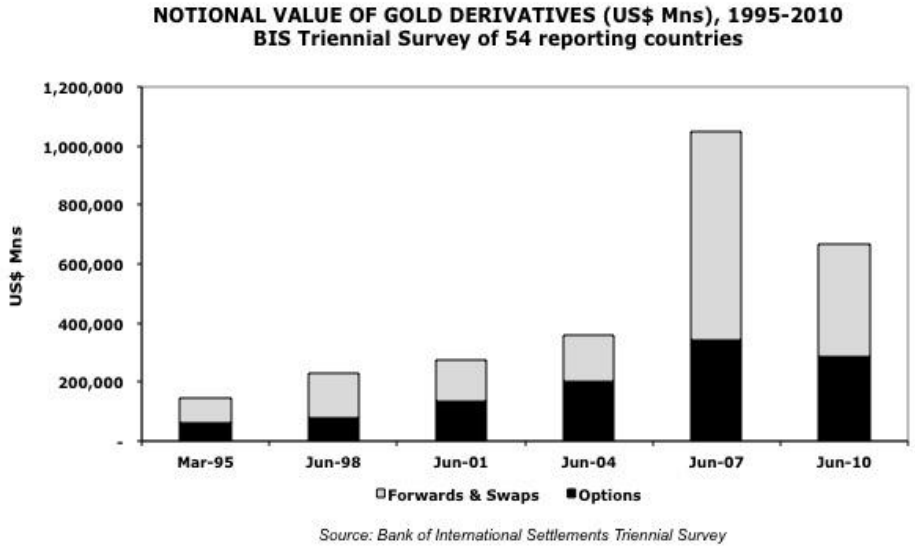

Figure 16. Notional value of gold OTC derivatives, 54 countries

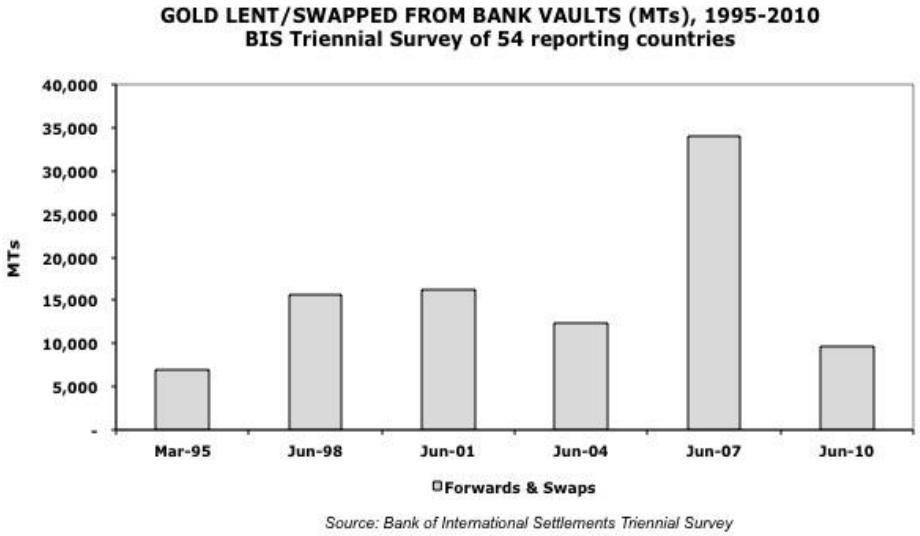

Figure 17. MTs equivalent of forwards & swaps/gold lent by 54 central banks

In fact, with a decline in the June 2010 Triennial data for 54 countries to 9,621 MTs equivalent (72% higher than the G10 figure of 5,601 MTs equivalent), implied official gold lending still nominally represents 35% of official reserves of 27,614 MTs, which includes BIS stocks of 449 MTs, but excludes the IMF stocks of 2,934 MTs (= 9,621 / 27,614 MTs). Assuming only 80% of gold lending and swaps transactions results in a spot sale, then in reality 80% of 9,621 MTs would have been sold into the market, or 7,697 MTs equivalent, which equates to 29% (= 7,697 / 27,614 MTs). This is an improvement on 100% from 3 years earlier, but as central banks are either unable (with stocks already lent) or are unwilling to deplete stocks any further, official gold lending has reduced and in fact there was a modest gain in official sector purchases in 2010 (of 76MTs as per Table 3), contributing to a higher price, and yet still requires a significant volume of trade in derivatives to maintain control of the value of the dollar, in the face of an exponential increase in the supply of money and debt.

5. Fractional Reserve Gold

Interestingly, "gold trading is often conducted 'loco London' in unallocated gold, with the implication that the gold market operates on a fractional reserve basis. Furthermore, many clients have been encouraged to hold gold in unallocated form also, which is nothing more than an unsecured claim on a general pool of gold in a bullion bank. Therefore, if every central bank, bank, gold trader and private individual demanded physical delivery of the gold bullion they have a claim to, the shortfall of gold…is not just gold from central bank vaults, but also relates to unallocated gold accounts at bullion banks." (Mylchreest, 2007, p. 89). Accordingly, as the 34,008 equivalent tonnes suggest, there maybe many more claims outstanding against physical gold due.

Indeed, by updating the analysis of Douglas (GATA, Jul. 2010) and Mylchreest (2009), in evaluating the fractional reserve gold market, the average daily volume of gold traded through the LBMA, for example, in mid 2010 (May-June) was 22.7 Mn ozs or 706.05 MTs (= 22,700,000 ozs/32,150.7 troy ozs per MT). According to remarks before the LBMA conference in Kyoto in 2008, made by Gerhard Schubert, a Director of Fotis Bank in London, "One of the most important objectives of the LBMA was to strengthen the loco London contract so that more OTC business could be settled and delivered through London. This objective has clearly been reached with at least 90% of the daily OTC turnover being settled and cleared…through London" (Schubert, 2008, p. 2). By interpreting "at least 90%", we may assume 91%, as per Mylchreest (2009, p. 7), thus we obtain 24.945 Mn ozs, or 775.88 MTs per day, which over 253 trading days (less weekends and holidays), we arrive at 196,297 MTs. According to the WGC, annual mine production was 2,689 MTs in 2010, which the LBMA is managing to clear every 3.81 days (or 2,689/706.05). Total mine production and scrap for 2010 was 4,334 MTs, and so the ratio of total gold traded to physical gold traded = 45 (or 196,297/4,334): this means that for every 45 ozs of gold being sold by the gold market via unallocated gold, only 1 oz is real, and 44 are paper ozs, which implies a fractional reserve ratio for the gold market (FRRG) of 2.27% (or 1/44 x 100). Assuming an average nominal price of gold of USD 1,244.53/oz for 2010, the real price, absent of any paper ozs, should be about USD 54,000 (or 1,244.54/0.0227).

We may obtain a similar FRRG in terms of the USD. According to the U.S. Treasury the gold stock of the United States is 261.5 Mn ozs (UST), which at the average nominal price of gold for 2010 at USD 1,244.53/oz, valued the gold stock at USD 320,215 Mn. The estimated average M3 money stock for 2010 was USD 14.01 Tn (SGS), hence the USD has an FRRG of 2.29% (or USD 320,215 Mn/USD 14.01 Tn x 100), and the real price of gold should be USD 53,600 (261.5 Mn ozs/USD 14.01 Tn). Although the USD FRRG in 2013 was a similar 2.38%, it has not been static, and depends on the amount of M3 being created by the Federal Reserve each year divided by the value of the gold stock, with the value of the gold stock being a function of the physical stock of U.S. owned-gold and the prevailing price of gold. In fact, figure 18 presents the FRRG for the U.S. from the collapse of the London Gold Pool in 1968 until 2013. Since 1968 the FRRG has been anything but constant - in fact, it has varied by a factor of 9.13 times, with a minimum of 0.88% and a maximum of 8.05%. When a monetary system unravels, the trend towards real gold away from paper gold increases. The price of nominal gold will increase until its effective limit will be the price related to physical gold, so that all paper substitutes are rejected and discounted towards zero.

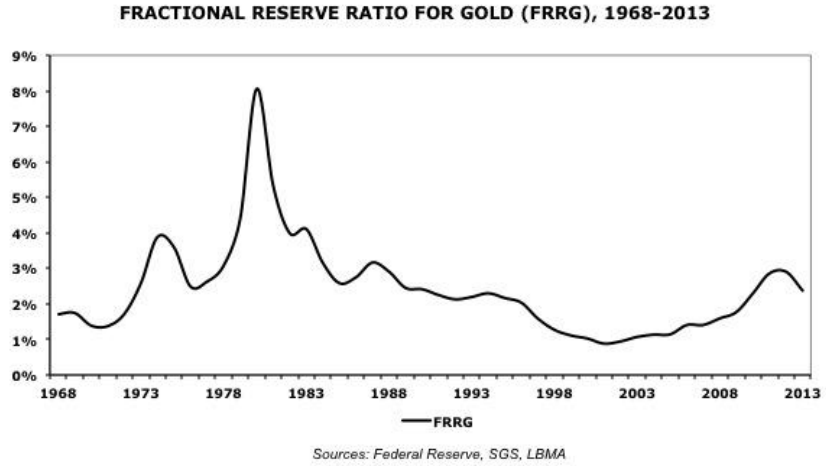

Figure 18. Fractional reserve ratio for gold, 1968-2013

6. Conclusion

In essence, we can conclude from our analysis that the gold price is subject to active manipulation by the BIS, the BOE and the Federal Reserve in terms of gold sales and lending. There is coordinated self-interest between the central banks and commercial banks, primarily J. P. Morgan and others in selling short the price of gold on COMEX. The gold market is selling on average 45 ozs of gold for 1 oz of physical gold, and is backed by 2.3% of gold. The real price of gold is about USD 54,000/oz absent of the unallocated gold, in the presence of which, the market price of gold has been reduced to about USD 1,200/oz. The value of the USD is therefore 45 times over-valued (= 54,000/1,200). A 'strong dollar policy' requires a money illusion involving unallocated gold to hide the true value of the dollar. The value of one 'gold' dollar was defined under the Coinage Act of 1792 as being 24.75 grains of pure gold, so that the official price of gold was USD 19.3939/FTO (= 480/24.74), hence the 'paper' dollar is now worth today only 1.6 cents (= 19.3939/1,200), but absent of the 'paper gold', it is worth only 0.0004 (1.6 cents/45). Any prudent wealth manager would no doubt accordingly advise their clients to own allocated physical bullion, preferably outside of the fractional reserve bullion banking system, to protect intrinsic wealth against not only the erosion in the store of value function of fiat money, which in real terms in terms of gold affects the returns of fixed and financial assets, but also the counterpart risk of the financial intermediaries that are selling them financial assets.

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Notes

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Note 2. In 2010, the retail demand for jewelry was 2,017 MTs, which at 5%= 101 MTs, being 0.4% of the total official gold reserves of all countries excluding gold held at the BIS and IMF at 27,220 MTs.

Note 3. 2010 = 163,831,000,000/$1,404.50 per oz/32,151 oz per MT = 3,628 MT; 2007 = 77,010,000,000/$833.75/32,151 = 2,873.

Note 4. USD1.25 trillion of notional derivatives to USD3 billion of equity.

Note 5. Nominal PG 21 Jan. '80 x (CPI Dec.' 13 / CPI Jan.'80) = Real PG adjusted by inflation at Dec. '13.' 850 x (233.049/77.8) = 2,546.

Note 6. The Washington Agreement (WAG) was signed by 11 European central banks to limit official gold sales to 400 tonnes p.a. in order to stabilized the gold market following the U.K. announcement in May 1999 to sell 58% of its gold reserves (415 tonnes) through Bank of England auctions, as a result of the failure by the U.K. supported campaign of Robert Rubin, the U.S. Treasury Secretary, to persuade member nations to sell IMF gold.

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