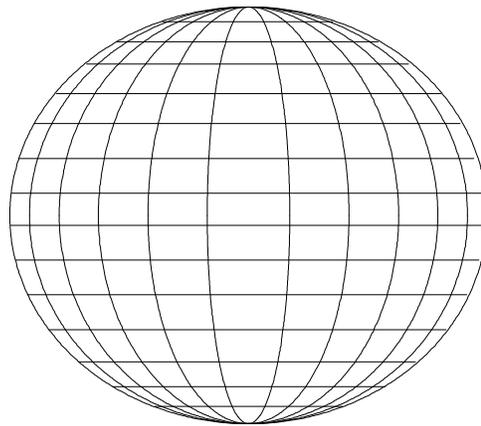


# Gold Market

## Seasonal Outlook

March 5, 2008

**MF GLOBAL  
RESEARCH**



By Tom Pawlicki

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## **Gold Executive Summary**

MFGR believes that price direction in gold over the next 6-12 months will be more the result of a favorable environment than supply/demand fundamentals. That environment will be dominated by safe haven from weakness in stocks and the dollar, as well as by the growing popularity of commodities. Prices should easily move above \$1,000/oz by the end of Q1 and could potentially spike up toward \$1,200/oz sometime during the remainder of the year. The positive environment should remain in place until late-2008, when bullish factors are forecast to diminish. Gold prices could then form a peak and begin a longer-term trend lower, which would eventually take the market down toward \$700/oz in 2009/2010. MFGR is in favor of buying dips in the near-term and targeting \$1,100-\$1,200.

## Gold Outlook

by Tom Pawlicki 3/4/08

Gold is expected to advance over the next 6-12 months, but the pace of gain should slow from that seen in early-2008. MFGR anticipates prices possibly peaking between \$1,100-\$1,200 before declining toward \$700 sometime in 2009/2010. Support will come from constrained mine output and investment in commodities as an alternative asset class. Bearish risks include the lack of any gold shortage, low lease rates, weak physical demand, and reduced producer de-hedging. Best trade is to buy on dips and target a move into the \$1,100-\$1,200 price range.

### Supply/Demand Scenario

In the latest quarterly data from the World Gold Council, it wouldn't be obvious that gold prices rallied 58% in the last year. Only a portion of the strength can be explained by the supply/demand data, especially given that Q4 prices advanced \$88/oz amid a 175 tonne surplus. The rally hasn't been driven by supply constraints or fabrication demand, but instead has been more of an investment story. Quarterly supply/demand data for 2007 shows that the late-year rally was initially the result of producer de-hedging in Q1 & Q2 and strong jewelry demand in Q2. Those events created significant deficits early in the year which put the late-year rally on a strong footing when investment demand returned in Q3 & Q4. During those latter two quarters, there was also a reduction in central bank sales and strong non-commercial buying of futures.

Gold Supply & Demand (Tonnes)	2005	2006	2007	Q4 '06	Q1 '07	Q2 '07	Q3 '07	Q4 '07
<b>Supply</b>								
Mine Production	2,550	2,481	2,447	663	587	611	631	618
Official Sector Sales	662	367	485	59	73	145	169	98
Gold Scrap	886	1,107	937	242	237	219	204	277
Net Producer Hedging	-86	-373	-400	-32	-137	-182	-31	-50
<b>Total Supply</b>	<b>4,012</b>	<b>3,582</b>	<b>3,469</b>	<b>933</b>	<b>760</b>	<b>792</b>	<b>973</b>	<b>943</b>
<b>Demand</b>								
<b>Jewelry Fabrication</b>	<b>2,707</b>	<b>2,283</b>	<b>2,426</b>	<b>624</b>	<b>584</b>	<b>701</b>	<b>630</b>	<b>511</b>
<b>Industrial &amp; Dental Fabrication</b>	<b>430.6</b>	<b>458</b>	<b>465.5</b>	<b>115.7</b>	<b>115.9</b>	<b>119.0</b>	<b>117.7</b>	<b>112.9</b>
Electronics	280.4	306.1	314.6	76.2	77.2	80.2	79.8	77.4
Other Industrial	87.8	91.2	93.2	24.3	23.9	24.3	23.7	21.2
Dentistry	62.4	60.7	57.7	15.2	14.7	14.5	14.2	14.2
<b>Identifiable Investment</b>	<b>593.6</b>	<b>659.0</b>	<b>656.1</b>	<b>189.2</b>	<b>144.6</b>	<b>124.9</b>	<b>242.2</b>	<b>144.5</b>
Bar Hoarding	263.7	232.3	243.3	74.9	65.3	79.5	59.4	39.1
Official & Non-official Coin	147.9	188.5	197.7	43.8	54.4	59.9	52.0	31.5
Other Retail Investment	-26.1	-21.9	-35.8	-8.7	-11.5	-11.9	-8.7	-3.7
ETFs & Similar	208.1	260.2	250.8	79.1	36.4	-2.6	139.5	77.5
<b>Total Demand</b>	<b>3,731</b>	<b>3,400</b>	<b>3,547</b>	<b>929</b>	<b>844</b>	<b>945</b>	<b>989</b>	<b>769</b>
London PM fix (US\$/oz)	\$445	\$604	\$695	\$613	\$650	\$667	\$680	\$786
<b>Balance</b>	<b>+280</b>	<b>+182</b>	<b>-79</b>	<b>+4</b>	<b>-84</b>	<b>-153</b>	<b>-16</b>	<b>+175</b>

Source: WGC, GFMS \*Totals may not add due to rounding

### 2008 Supply/Demand Outlook

Prospects for a surplus in 2008 look similar to that of Q4 '07. Supplies may fall again on weak official sector sales and constrained mine production. Mine supply will decline amid power shortages and safety strikes in South Africa. Reductions in producer de-hedging should add to supplies, as should scrap sales, as anecdotal evidence

from India has already shown. On the demand side, jewelry fabrication should remain lackluster amid seasonal weakness and high prices. Lease rates are relatively low and suggest that no shortage of physical gold exists.

### Mine Production

Global mine output should fall slightly in 2008 after falling 34 tonnes, or 1.3% in 2007. The decline was mostly due to safety-related strikes and slowdowns in South Africa following a string of worker-related accidents and fatalities. The breaking point for mine workers came on October 3rd when 3,200 miners were trapped at Harmony Gold's Elandsrand mine. A one-day strike involving 240,000 miners across South Africa took place on Dec 4th as a protest. 2007 also witnessed China surpass South Africa as the largest gold mining country, producing 276 tonnes vs. South Africa's 272 tonnes. South African production fell 8% y/y while Chinese production grew 12%.

Prospects for output growth in 2008 appear grim at this point. Guidance from the four largest miners are tallied in the table on the right and show that production guidance from those that have provided it is fairly disappointing.

Gold Producer	2006	2007	2008e
Barrick Gold	8.647 Moz	8.056 Moz	7.6-8.1 Moz
AngloGold	5.634 Moz	5.473 Moz	4.8-5.0 Moz
Newmont	5.871 Moz	5.285 Moz	No guidance
Gold Fields	4.183 Moz	3.965 Moz	Q1 falls 20%-25%

Along with poor production guidance, miners are having difficulty controlling costs, thus limiting profitability and failing to increase exploration incentives. In 2007, world cash costs increased by 24% to \$387/oz and even surpassed \$400/oz in the third quarter. Barrick Gold, for example, saw an \$89/oz increase in cash costs, while its realized gold price rose only \$76/oz. Similar numbers were reported by other miners as well. In Newmont's latest earnings report, marginal costs at its Phoenix operation were around \$700/oz, representing a potential price floor for gold. Despite elevated gold prices, accelerating costs and narrow margins will keep mine output from growing.

### Official Sector Sales

Official sector sales should fall in 2008 after totaling 485 tonnes in 2007 and 367 tonnes in 2006. Sales were elevated in 2007 after Germany negotiated away its 120 tonne sales slot, which wasn't done the previous year. Both Switzerland and Spain increased the pace of their sales last year, with Switzerland selling 115 tonnes of a 250 tonne intention. Spain aggressively sold 150 tonnes, amid growing worries over reserve issues as Spain's own real estate problems surface. Russia has been one of the strongest (and one of the few) buyers, purchasing around 10 tonnes per month from Jun-Oct (Oct is the latest data). There's growing potential of Russian domination of commodity market supplies, as ex-President Putin maintains significant power from his new Prime Minister position.

Speculation grew in Feb that the IMF would begin selling gold. G7 members gave verbal approval of such sales at their Feb 9th meeting, and an official from the U.S. Treasury said on Feb 25th that he expected Congress to approve. The U.S. has veto power over IMF sales, so an act of Congress is needed. The IMF is likely to sell 403 tonnes, but it is not known whether it will be to the open market or to another official entity. MFGR has posed the question to GFMS, who expected that sales would be rolled into part of a third CBGA agreement. The current agreement expires in Sep '09. Future central bank sales are likely to decline from current levels, even with the IMF in the market. Additionally, the CBGA makes sales quantities known and prevents excess pressure on gold prices.

### Producer Hedging

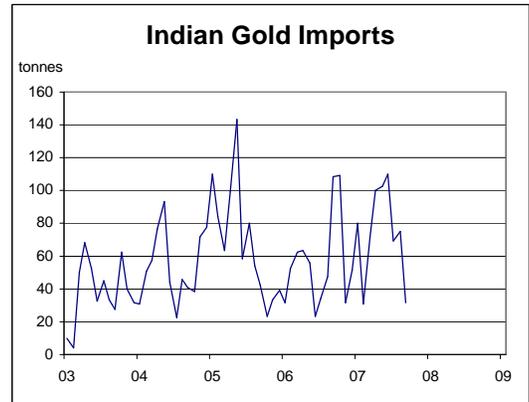
Reductions in producer de-hedging should have an additive effect on gold supplies. The global hedge book ended 2007 with approximately 27 Moz, or 840 tonnes still hedged. In 2006, de-hedging subtracted 373 tonnes from the supply side of the supply/demand balance, and in 2007, 400 tonnes were subtracted. While higher prices in the last seven years have increased the incentive to unwind hedges, the rate of unwinds should begin slowing in the next year or two as the total hedge book approaches minimum desirable levels.

In the latest Fortis Bank/GFMS Q4 hedge report, de-hedging in 2008 was forecast at 6-8 Moz, or 187-249 tonnes. Of that amount, 4.4 Moz will come from gold that's already on the delivery schedule. The remainder will come

from pro-active de-hedging such as Buenaventura's closure of its entire 782,000 oz (24.3 tonne) hedge book in Feb '08, and from Newcrest's closure of its 19.3 tonne hedge book by Sep '08. 2008 is expected to end with around 20 Moz (622 tonnes) remaining, with the vast majority held by AngloGold Ashanti and Barrick. Incidentally, Q4 '07 saw the lowest level of new hedging ever recorded by Fortis at only 15,090 ounces. As the pace of hedge unwind slows, it could eventually swing the market toward supply surpluses and pressure prices.

### Jewelry Demand

Jewelry demand should weaken in 2008. Sales in the fourth quarter fell 19% globally due to the sharp advance in prices and ongoing economic weakness in the U.S. Sales in #1 consumer India typically rise strongly in Q3 & Q4 due to the holiday & festival seasons as well as the marriage season. Prior to the sharp rally that began in Sep '07, many consumers in that country took advantage of the perceived low and stable price environment that existed. For that reason, jewelry fabrication was very strong in the first eight months of the year but diminished sharply thereafter. Q4 year over year demand fell 67%, but full-year 2007 demand rose 6%. Indian imports were strongest in May & Jun with numbers slightly over 100 tonnes per month (chart on right). The latest data on hand shows Sep imports close to 30 tonnes which is 71% below Sep '06 levels.

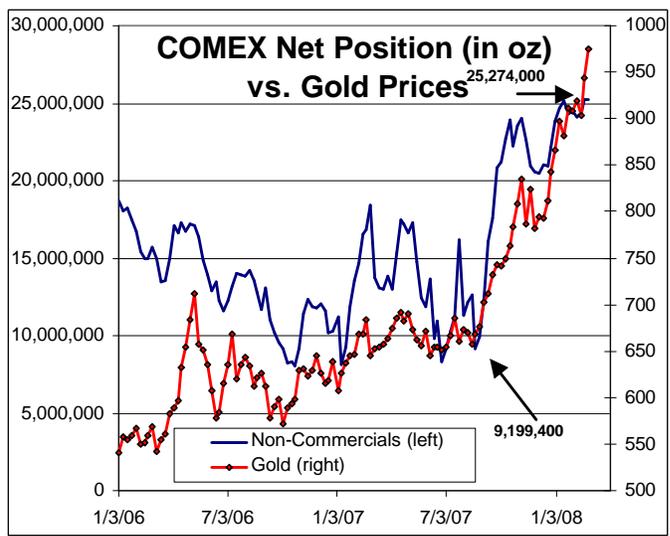
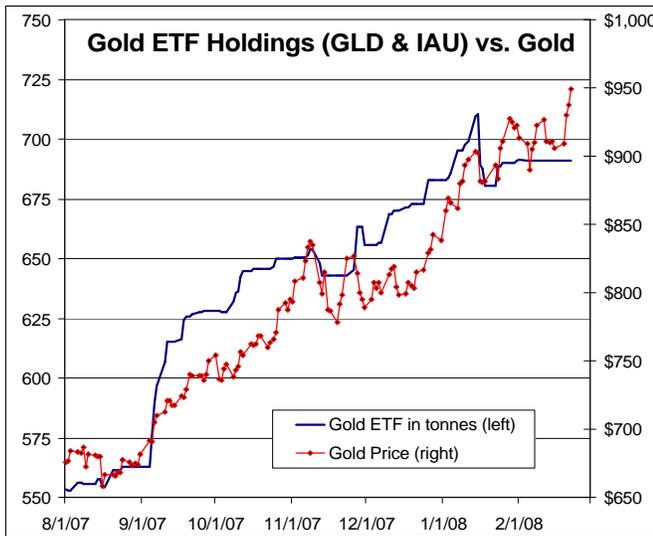


Reports from the Bombay Bullion Association show that imports in Dec, Jan, & Feb have fallen to 13, 5, & 11 tonnes respectively. The latest WGC data from #2 consumer United States shows that Q4 demand fell 17% while full-year '07 demand fell 14% due to weak economic conditions.

The outlook on jewelry sales is mixed. In India, the Apr-Jun wedding season will surely prompt new buying, but buying can also rely on recycling as a source for new gold rather than fresh imports. The willingness to recycle implies that Indian sales will be only average compared to previous years. Additionally, there has been a social change in recent years, that has made it more acceptable to give gifts other than gold at weddings, such as necessities for the home or even consumer electronics. Even investment jewelry buying has lost out to a degree to investments in India's booming stock market. Of course, the outlook for Indian sales will also depend on price volatility. If volatility were to unexpectedly fall soon, jewelry demand may recover in a big way. Indian economic growth is still 8.9% after all. Demand from Turkey and UAE are expected to remain firm due to the strong Turkish lira and the growing acceptance of Dubai as a global jewelry center. U.S. demand should remain sub-par.

### Identifiable Investment Demand

Identifiable investment surprisingly fell in Q4, but held steady in full-year 2007. The Q4 dip was mainly the result of a decline in ETF demand following the strong builds that took place during the Sep rally in Q3. ETF demand in Q3 was 139 tonnes and 78 tonnes in Q4, but through late-Feb '08, has only totaled around 20 tonnes (chart 1). Surprisingly, the investment-led rally in Q4 took prices \$88/oz higher despite the slowdown in ETF demand. A big portion of the rally took place off the supply/demand table, including through futures demand. The \$325 rally from late-Aug to late-Feb saw the non-commercial and small speculator net long position grow by 16,074,600 ounces, or around 500 tonnes equivalent (chart 2). Part of that gain was fueled by growing interest in long-only commodity index funds. In Dec '07, AIG estimated between \$30B-\$40B growth in money tracking long-only funds in 2008. At the Q4 average price of \$786/oz, it would take only \$4.4B to purchase the entire Q4 surplus of 175 tonnes. Large amounts of money entering a relatively small gold market has made investment demand one of the most important determinants of prices.



## Macro Factors

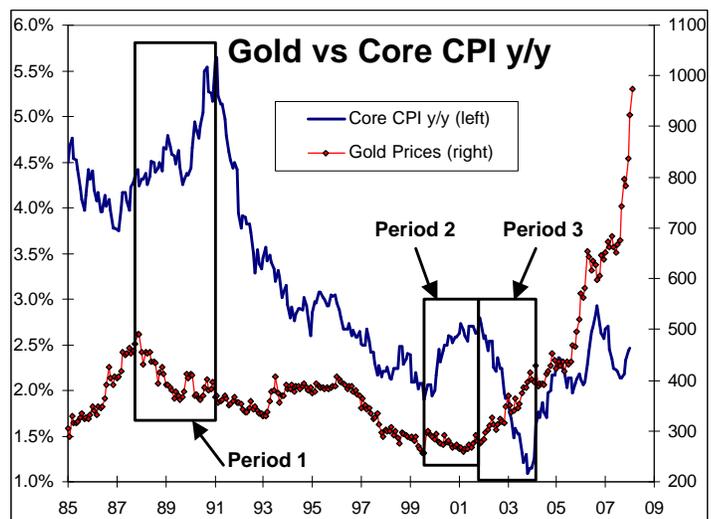
While supply & demand certainly explain part of the bullish influence on gold prices, they don't explain it all. External factors such as dollar weakness or safe haven are cited daily as being key drivers of price. What's made it difficult to analyze, however, is that some of the factors work well in theory but don't always present a concrete relationship in practice. The dollar, for instance, traded sideways from Nov '07-Feb '08 while gold rallied \$136 to new record highs. Additionally, periods of safe-haven have seen money flow both into and out of gold.

MFGR tends to think that no one argument offers a perfect fit in explaining every move in gold prices. It may better be described as an issue of environment and whether it is friendly or hostile to investments not only in gold but also in commodities. MFGR has the opinion that the seven-year rally will continue as the environment remains friendly and significant returns cannot be found elsewhere. Below, we examine some key issues and find their place in the current environment.

### Gold as an Inflation Hedge

The fear of inflation makes this a minor positive. There's no doubt that gold represents an inflation hedge due to its small size, portability, store of value, and its long universal history as a currency. At the same time, it has failed to keep pace with inflation. Gold's 1980 nominal high of \$850 equates to \$2,300 in inflation adjusted terms. Its use as a hedge against inflation has also been mixed at times, as was the case in the late-1980's and early-2000's.

As the chart on the right shows, there were three periods of significant divergence between gold prices and core consumer prices in the last 25 years. The first was the 39 month period between Nov '87 and Feb '91. Core CPI rose from +4.4% to +5.6% in that period, while gold fell from \$491 to \$369. The second period was the 23 months from Dec '99 to Nov '01. Core CPI rose from +1.9% to +2.8% while gold fell from \$289 to \$274. Finally, period 3 occurred in the 24 months between Nov '01 and Nov '03. Core CPI fell from +2.8% to +1.1% while gold rose from \$274 to \$397.

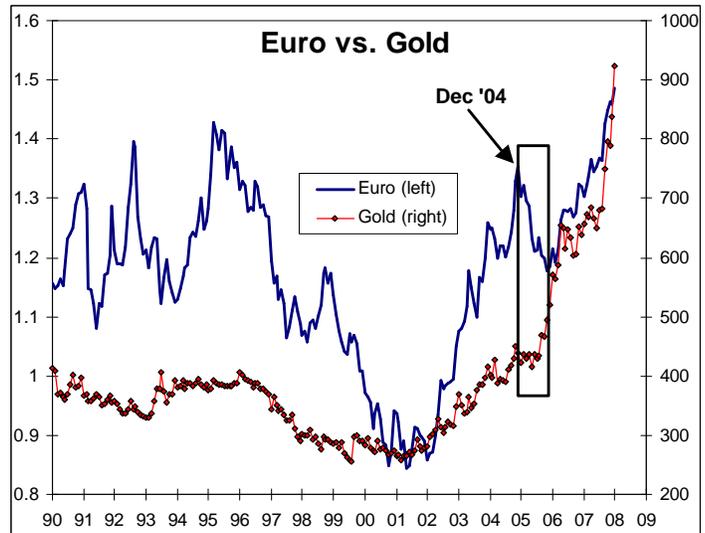


Gold bugs may argue that gold leads inflation, but we believe activity in this decade counters that. If the bottom in gold in Feb '01 predicted that inflation would start rising in Nov '03, it didn't predict the decline in inflation starting in Sep '06. The chart above is currently turning higher due to the rate cuts made since Sep '07 prompted by the weak housing market and sub-prime crisis. We find it hard to believe that gold could have predicted those events. It seems difficult to justify daily rallies in gold on inflation numbers that are updated only 2-3 times each month. Additionally, the fact that gold is double its price of 1988 and core CPI is not suggests either that CPI will be at least twice its 5.6% peak of 1988 or that gold is a poor inflation hedge.

### Gold as a Dollar Hedge

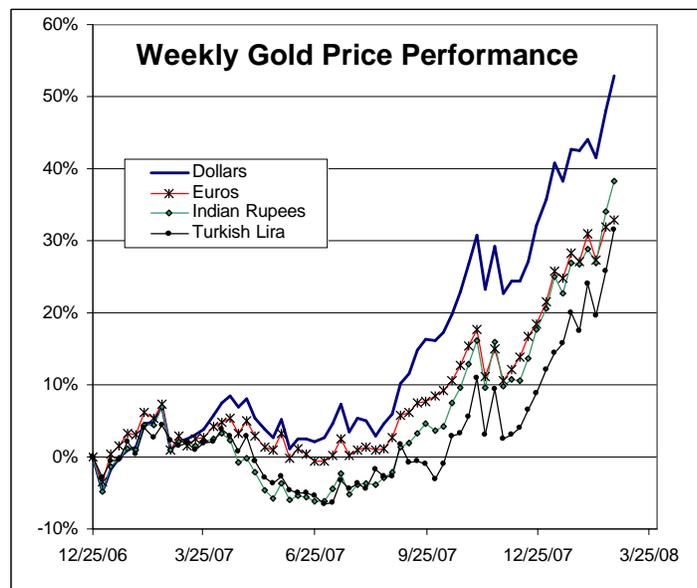
Further dollar weakness will make this a moderate positive. Nearly every day, newswires will summarize gold activity by starting out with action in the dollar. It can become tiresome, as fundamentals seem to take a backseat. However, the relationship persists, as memories of the gold standard still linger and because it's viewed as an alternative currency due to its rarity and inability to create new "currency." There have also been divergences in the past where gold either didn't follow the dollar's direction or its correlations were either muted or exacerbated.

The dollar index is mainly a euro-based index, so rather than inverting it, the chart on the right looks at the euro vs. gold prices. Prior to 2001, there was much more volatility in the euro than in gold, and since then, it's changed back towards gold. The chart also shows a divergence starting with the Dec '04 peak in the euro. From that peak to the next low in Nov '05, gold rallied from \$438 to \$495. Similarly, from Nov '07 to Feb '08, the euro failed to make a new high, while gold during that time went from \$825 to \$961.



The other flaw with over-reliance on the dollar, is the belief that dollar weakness prevents gold price gains in other currencies. As the second chart shows, gold prices in dollar terms have risen 52% since the end of 2006, while they're up 38% in rupees, 33% in euros, and 31% in lira. Over the past year, weakness in the dollar has not kept up with strength in gold. Therefore, weakness in the dollar hasn't made gold cheaper outside the U.S., but just less expensive.

Since the dollar does decide gold prices to some degree, the biggest concern going forward is when dollar weakness will end. Given the U.S. government's \$150B stimulus package, the 2 1/4% cut to Fed Funds since Sep, the Fed's TAF auctions, and foreign purchases of distressed U.S. companies, MFGR believes that a turnaround will be made later this year.

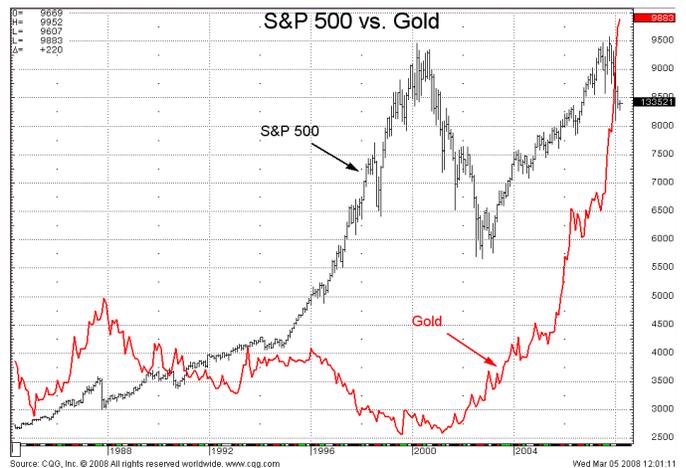


### Safe Haven From Equity Weakness

The likelihood of further stock market weakness makes this a moderately positive factor. The concept of safe haven has been widely cited in the past year as a reason to remain bullish on the gold market. The reasoning makes sense, as gold is a store of value, but it's performance during times of short-term financial market stress has mostly ran opposite of theory. For instance, when the sub-prime issue began unraveling in late-Feb '07, S&Ps sold off 4.0% while gold fell 4.3%. Gold bottomed a week later 7.2% below levels existing before the event while S&Ps bottomed 5.8% lower. During that period, treasuries benefited most, with the 10-year gaining 1.6%. Similar reactions have been seen in other episodes of stress including the Aug '98 & Apr '00 stock market drops. Safe haven worked in Oct '87 and Sep '01, however. More recently, problems created by sub-prime have translated into economic weakness in the U.S. On Jan 22nd '08, the FOMC cut rates by 75 bps. The cut caused S&Ps to move -3.8% at their intraday low while gold fell -3.6% at its low. The following day saw a recovery in both markets, with an indistinguishable five-minute comparison chart shown above (gold is in red).



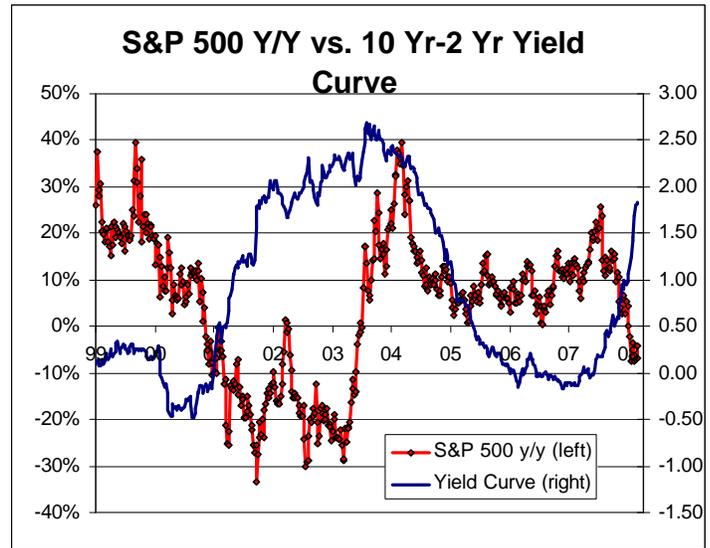
A longer-term view presents similar discrepancies. The chart on the right shows that the inverse relationship worked from 1995-2000, as gold traded lower when U.S. equities rallied sharply amid the "internet bubble." As equities peaked in 2000, gold began a potential safe haven advance that continued through 2002. S&Ps fell 50% below their Mar '00 peak while gold rallied 16%. The relationship broke down, however, in late-2002 as stocks reversed higher. Stocks rallied 105% from late-2002 to late-2007 while gold rallied 206%.



Regardless of the performance, the safe-haven concept would not stick around as long as it has if it didn't work some time. That is perhaps where diversification and volatility enter. Investment has flowed to the gold market in an effort to achieve better returns than stocks with less volatility and could be considered safe haven. That may explain the lack of inverse correlation between Oct '02-Oct '07. Because investment seeks performance and avoids volatility, gold has outperformed. The small size of the gold market has created a circular logic where higher returns draw more investment and more investment create higher returns. As the chart on the right shows, the year over year change in gold prices has benefited from elevated levels of volatility in the CBOE's VIX index. Since Jul '07, the index has ranged between 17-30. That's about the time that rating agencies began downgrading sub-prime issues, and quick bouts of liquidation in stocks (such as what occurred in Feb '07) turned into longer-term episodes.



Perceptions that equities will continue moving lower will increase the need for safe haven, but gold prices will be keenly focused on the point in time when safe haven is no longer needed. Along with the Fed and government stimulus measures, signs of future stock market strength may come from the yield curve. As in past years, steepening in the yield curve has been associated with economic stimulus and later, bottoms in the stock market. The chart on the right shows the loose correlation between year over year changes in S&Ps and the yield curve. The steeper yield curve encourages lending and therefore economic activity and could eventually create an environment where safe haven is no longer needed.



Another factor to watch for is activity in emerging market equities and strength in the yen. Recent yen strength has made carry trades a bit less profitable and may also create an incentive to repatriate funds to the U.S. dollar, stocks, or assets. Finally, sub-prime mortgage resets are forecast to peak sometime in mid-2008. A recovery in the credit situation at that time may signal less need for safe haven.

### Gold as a Portfolio Diversifier

Investment in gold through funds will continue to support a positive environment. Tying into the usefulness of gold as a safe haven is the issue of gold as a portfolio diversifier, and in some regards they're even the same issue. Over the last several years, there has been tremendous growth in commodity markets. Investors, hedge funds, and pension funds have all migrated toward commodities either through futures, ETFs, or long-only commodity index funds. Originally, it was favorable as a diversifier due to a lack of correlation with equities, but it's also become a way to speculate on economic growth in China and India. ETF holdings in gold are currently around 800 tonnes, or about four months worth of mine supply. Long-only commodity funds currently hold around \$110B in investments and are expected to grow \$30B-\$40B this year after growing \$40B in 2007. Pension funds have been buyers of ETFs in the past and will likely continue to add to holdings. In late-Jan '08, Calpers said that its \$500M investment in commodities would grow to \$5B within three years.

### Geopolitical Risk

Geopolitical risk always exists, but at this juncture, it's likely to contribute to the positive environment. Confrontation between the U.S. and Iran is inevitable, militant issues in Nigeria have cut oil production, and recent tensions between Colombia and Venezuela/Ecuador could create a military showdown between Venezuela and the U.S. It's difficult to quantify the amount of geopolitical risk premium that exists in the gold market, but it certainly doesn't appear at this point to be going away anytime soon. Our analysis of the overall geopolitical risks are below.

**Iran:** The UN Security Council passed a third round of sanctions on Iran on Mar 3rd '08 for its resistance to halting uranium enrichment. Prior sanctions packages were passed on Dec 24th '06 & Mar 24th '07. Movement on the Iranian nuclear issue has certainly occurred at a glacial pace, and no solution appears to be on the horizon. Russia and China have stood in the way of tighter sanctions demanded by the U.S., UK, France, and Germany due to their trade relationships with Iran. Some analysts expect Pres Bush to attack the nuclear facilities before the end of his term, but that appears unlikely. The issue will continue to smolder and risk premium will be moderate.

**Iraq:** While the troop surge announced in Jan '07 has certainly been controversial in American politics, its favorable results have failed to pressure the gold market. Iraq's recent shipments of oil from its northern pipeline are potentially an example of success of the surge. Other numbers have also improved including the decline in

suicide attacks and the number of U.S. soldiers killed in combat. That number averaged 32 per month in the last three months of 2007 and compared with 79 per month in the first three months.

The key issue for risk premiums in 2008 & 2009 will be the presidential election in the U.S. With American frustration with Iraq high, both democratic candidates have promised that withdrawal from Iraq would be a top priority. In our opinion, such a withdrawal could re-ignite the civil war, increase Iranian influence, and re-open sanctuary for al-Qaeda in Iraq. As a result, gold may focus on presidential opinion polls this year. If a democratic candidate pulls into the lead, it should be bullish for gold, while if Sen. McCain pulls ahead, it could be bearish.

**Turkey/Kurds:** The threat of a PKK attack on the Baku-Tbilisi-Ceyhan and Kirkuk-Ceyhan oil pipelines running through Turkey have added to risk premium. On Oct 17th, the Turkish parliament gave the prime minister approval to attack Kurdish rebels in northern Iraq. There have been several military campaigns carried out by the Turks including an instance where several thousand troops entered Iraq for two weeks in late-Feb. None of the actions, however, have resulted in a retaliatory attack on oil facilities or pipelines. The attacks that have occurred since 2003, have been carried out by militants inside of Iraq attempting to destabilize U.S.-backed Prime Minister Maliki.

**Nigeria:** Shell lifted the force majeure on its Forcados and Bonny Light crude oil exports on Mar 3rd '08 and has said repeatedly since Apr '07 that it would work to restore the full capacity of the Forcados oil field. The company is counting on increased peace and security in the country following the election of President Umaru Yar 'Adua in Apr '07. However, the election was contested and MEND militants have expressed displeasure at the slow pace of promised reforms. MEND attacks picked up in late '07 and early '08 as a result. On Mar 5th, the Nigerian government charged one of MEND's leaders, Henry Okah, with terrorism and treason. His release was one of MEND's conditions for peace. Prosecution and/or sentencing of Okah will likely disrupt chances for peace and cause an increase in kidnappings and attacks on oil infrastructure, thus boosting the geopolitical risk premium.

## Technicals

Technical factors indicate that a peak may be near, but don't suggest that one is right around the corner. Technicals have had mixed results in the past year and have given several false negative signals. The chart on the right shows that the rate of incline during the seven-year rally increased in 2005 and again in 2007. Such action is typical of a market that will soon run out of steam and reverse lower. However, the same signal was given in early-2006 when the market broke out above the rising channel pattern. History suggested that the May '06 peak at \$732 should have remained a long term peak and that prices should have fallen back below the rising channel. The failure of that signal, however, indicates that technical factors are exerting reduced influence over gold prices. Momentum indicators imply that \$1,000/oz will easily be tested soon. Technicals would then remain positive until the market breaks below the last rising trendline near \$940/oz.



## Summary

MFGR expects gold prices to react more to a positive environment than any one bullish or bearish factor. Until the dollar and U.S. stock market rebound, that environment is likely to remain friendly and gold prices are expected to continue to advance.