

May 31, 2013

## Why the Bull Market in Precious Metals and Commodities is Not Over

- Gold's price has corrected during the last 20 months by a percentage amount similar to its 2008 correction. Nonetheless, it remains in a long-term bull market. **It is our conclusion that the rise in gold prices during the past 12 years has primarily been, and will continue to be, a direct consequence of the later stages of the dollar reserve system that has financed global growth for decades but may be in its sunset decade.** The "Triffin Dilemma" named after economist Robert Triffin states that a single country reserve currency sows the seeds of its own eventual destruction as the global demand for the currency (a liability of the issuing country) eventually causes a loss of its risk free status. While the price of gold may also be impacted by inflation rates, it is the increase in paper currency reserves and U.S. debt held by foreigners that will continue to be the driving forces behind higher gold prices. Until there is a fundamental change in the world's currency reserve system, gold can be expected to reach significant new highs in the years ahead.
- Commodities began an extended intermediate correction in May 2011. Although they reached their price low a year ago in June 2012 and rallied into mid-September 2012, commodities have been drifting sideways to slightly lower for the past eight months. **We believe that this two year sideways move is a pause in a bull market that is far from complete. The engine of global economic growth will continue to be the emerging economies and the historically unprecedented explosion of the middle class in these economies. Emerging economies, at the margin, are basic resource (i.e. commodity) intensive.** Nobel Laureate Simon Kuznets in his 1966 book, Modern Economic Growth, defined the multi-decade phenomenon of emerging country modernization, rural to urban population shifts, and the accompanying productivity growth that is dominating growth in the emerging economies. This growth may be influenced by events in the developed world, but will continue at this point, independent of growth rates of developed economies.
- While the world has encountered modern economic development in the past, it has never encountered the massive size of population participation that is occurring now.
- Supplies of basic resources will be strained by rising demand. Historic resource development typically discovers the largest, richest, and most easily developed deposits of energy or minerals first. As time evolves, discovery is centered on the remaining smaller, lower grade, and less hospitable deposits. Price increases and technological advances will be necessary to ration tight supplies.
- The U.S. stock market likely remains in a secular trading range with several more years of sideways performance at best.

## The Gold Bull Market

In April 2001, we published a paper, **The Coming Commodity Inflation Tsunami** ([http://www.aisgroup.com/The\\_Coming\\_Commodity\\_Infla\\_Tsunami-040301.pdf](http://www.aisgroup.com/The_Coming_Commodity_Infla_Tsunami-040301.pdf)), in which we put forth the foundation for recommending that investors include both gold and commodities in their portfolios. In addition to numerous updates from that point forward, we also published a paper in January 2010, **How Should Gold Be Valued?** (<http://www.aisgroup.com/HowShouldGoldBeValuedJan2010.pdf>), that suggested looking at worldwide currency reserves and U.S. Federal debt held by foreigners as a logical means of valuing gold.

As the January 2010 piece stated, we are not in the perma gold bug camp. Rather we view gold as a legitimate asset class that is negatively correlated with equities and bonds. Our current analysis concludes that it is undervalued relative to other asset classes. Therefore, it should have a prominent place in client portfolios. The challenge with gold is determining the appropriate way in which to determine its value. Gold was for centuries considered money. Money has two primary functions, a medium of exchange, and a store of value. Since 1971 when the U.S. severed the dollar's tie to a specific gold redemption value, gold lost its remaining limited transaction role. The dollar and all other countries' currencies were then purely fiat currencies (e.g. paper liabilities backed only by their respective government's general promise to support them). Gold has still retained a store of value function with central banks around the world. However for several decades central banks were net sellers of what they considered excess holdings of gold. Proceeds from the sales were reinvested in government bonds, primarily U.S. Treasury securities in order to earn interest. The peak of this selling occurred between 1999 and 2001 when the U.K. sold half of its gold holdings at what turned out to be the bottom in gold prices, just above \$250 oz.

After decades of selling gold, beginning in 2008 (Chart I), central banks have once again become consistent net buyers of gold, increasing its legitimacy as a store of value. Why after selling gold for several decades at much lower prices have they become net buyers of gold at much higher prices? The financial turmoil of 2008, the extremely low interest rate now paid on U.S. Treasury debt, and the increasing concern about the soundness of paper currencies probably have all played a role in increasing demand for gold. For a more fundamental explanation we can turn to Robert Triffin and what has become known as Triffin's Dilemma. From 1944 through mid-1971 the world operated under the Bretton Woods U.S. dollar reserve system in which all other countries could exchange their dollar holdings for gold. As early as 1947 through the early 1960s Triffin predicted that any system built on a single country's currency had a built in self destruction mechanism. His prediction proved accurate with regard to the original Bretton Woods agreement, as the U.S. stopped convertibility of the U.S. dollar into gold in August 1971, or it would have lost all of its gold. From that point the dollar remained the world's reserve currency but was merely backed by the full faith and credit

of the U.S. The world's use of the dollar as a reserve currency requires the U.S. to run a consistent current account deficit, in turn eventually creating an unsupportable level of U.S. debt, which in turn eventually destroys the risk free nature of U.S. debt. While the dollar remains the world's reserve currency, cracks have begun to appear that suggest changes must occur. One piece of evidence that it is occurring is the rising price of gold over the last decade. Global currency reserves are now approximately \$11 trillion and have been increasing at over 15 percent a year since 2000. About 60 percent of those reserves are held in dollars, primarily U.S. government debt. If global currency reserves continue on their present growth path and dollar holdings remain at current percentages, U.S. debt will reach levels that only a fool would consider sustainable. As the economist, Herb Stein, was famous for saying, "If something can't continue, it won't continue." Evidence is mounting that the world is seeking alternatives. U.S. debt was recently downgraded. China is actively promoting bilateral trade deals with other countries that eliminate use of the dollar as a settlement factor. Other countries such as Iran and Russia are favoring payment in Euros for their exports. In addition many countries have begun to accumulate gold as a way to diversify their reserves. Unlike all paper currencies, which are a debt of the issuing country, gold is an asset which cannot be issued at will by any government.

At year end 2012 gold holdings by all governments represented 15.4 percent of total currency reserves. Interestingly at the middle of the three year low of gold prices in 2000, gold holdings of all governments were 15.2 percent. From 2000 through 2008 governments continued to gradually sell gold. Essentially over this time period the price of gold climbed at an annual rate of 16.2 percent, which allowed the remaining value of government gold holdings to increase proportionately to their increasing total currency reserves. In the 1970s gold holdings by all governments were equal to somewhere between 60 and 120 percent of currency reserves. As the world searches for a solution to the increasingly risky dollar reserve system, it is entirely possible that government gold accumulation may push the price to levels that would equate to much higher percentages of their total currency reserves, as in the 1970s. (See Chart II)

Gold holdings vary dramatically across countries. The U.S. has 75 percent of its limited reserves in gold. However current U.S. Treasury debt held by foreigners is close to 20 times its current gold holdings. As long as the dollar remains the world's reserve currency, the U.S. needs to maintain only limited total reserves since it makes all payments in dollars. Should the dollar lose that status, it would be a serious problem for the U.S. The Euro zone has 67 percent of its reserves in gold. However, the next 14 countries on average, including China and Japan, have only 3 percent of their reserves in gold. Interestingly, China, India, Russia, Saudi Arabia, Korea, and Mexico, among others have all announced increases in their gold holdings over the last several years.

Global reserves need to increase in order to facilitate economic growth. For the U.S. to continue to facilitate this increase through increasing government debt, and a continuing balance of payments deficit, it will lead to a destruction of the dollar's value and its

credibility. Therefore we are probably rapidly approaching the Triffin Dilemma. It is therefore highly likely that gold will become increasingly important as an alternative store of value. Should central bank buying accelerate, gold could rise to a significantly higher price (e.g. \$6,000 to \$10,000 oz.). This would allow highly indebted countries such as the U.S. and Italy, which own significant amounts of gold, to exchange a portion of their gold holdings for outstanding debt. In turn it would allow the global financial system to expand its reserves and continue to function.

The reader is no doubt asking the question, if the case for gold is so bullish why was there such a price crash in mid-April. We have always been reluctant to espouse theories we cannot substantiate, but we remain disturbed by the events of Friday, April 12<sup>th</sup> and Monday, April 15<sup>th</sup>. On April 12<sup>th</sup> selling did break key support at 1550 which no doubt triggered stop loss selling. During those two sessions the price of gold declined over \$200 or approximately 14.6 percent. The question is, was there aggressive selling with the intent to trigger more selling? As Barron's has described the selling: "...a seller who wanted to unload a large position at the optimal price would have done precisely the opposite—liquidate as discreetly as possible. Instead, sellers dumped the equivalent of more than 300 tons of the metal in staccato-like blasts during the sessions." That amount of selling on the Comex futures exchange was worth approximately \$16 billion, which at a minimum, would have required at least \$1 billion in margin money. Given the way in which it was sold makes it unlikely that it was a long, unloading a position. It is more likely that it was someone or some group establishing a short sale with the intent of creating as much downside as possible. Could it have been one large fund, or several funds in concert, possibly? Could it have been a central bank or government seeking to create an environment in which to purchase large quantities, possibly? In the 1960s the U.S. and several other countries operated the London gold pool which deliberately sold gold in order to keep its price at \$35 oz. The Chinese government has been known to manipulate commodity prices to serve their purposes. Given that they own very little gold, and have been rumored to be a buyer of gold, could they have influenced prices? We are unlikely to ever know. Howard Simons of Bianco Research, a respected research firm, wrote at the time that the odds against such a move were 20 trillion to one—"a lower probability than randomly selecting a particular \$1 bill out of a pile of singles representing the U.S. national debt."

Regardless of how the mid-April price decline came about, we believe that the basic fundamentals support the view that the gold bull market is still in place. The price should move significantly higher in the next few years as the world seeks a replacement for the aging U.S. dollar reserve system. We believe that financial events could very well move the price of gold at least into the lower price targets of Charts II and III which currently would suggest a price target over \$6,000. Another value comparison is in Chart IV which shows the value of gold relative to all financial assets. This chart would also suggest that the gold price is well below previous relative levels. In summary we believe that substantial upside remains for the price of gold. Therefore it should remain a foundation investment in portfolios.

## The Commodity Bull Market

In our April 2001 paper cited earlier, we also made a strong case for investing in commodities. Commodity prices began to advance in early 2002 and for the next six and a half years, until the financial crisis in the second half of 2008 (The inset in Chart VI shows the commodity index by itself. The larger chart compares the unfolding current commodity bull market with another two decade bull market advance, the Nasdaq market in the 1980s-1990s). After the 2008 selloff, commodity prices then advanced from early 2009 through April 2011. At that peak they were still below the 2008 high. Since then commodity prices have been in a two year consolidation. The price consolidation has corresponded to a moderate slowing of economic growth in the emerging economies such as China, as well as the economic crisis in Europe. The length of this correction has had a severe negative impact on the psychology of investors as well as managements of many of the commodity producing companies. Many are now questioning whether the bull market in commodities ended in mid-2008. We believe that the facts support the view that we remain in the middle of a major bull market in commodity prices. Similar to other major multi-decade bull markets, which have experienced pauses in their uptrends, commodity prices will resume their price advance and rise to levels well above the 2008 peak. We believe something similar to the late 1990s in the stock market is still ahead for the commodity bull market.

Our conclusion supporting a continuation of the commodity bull market is based on several factors. First, on a long-term inflation adjusted basis (Chart VII), commodity prices in 2000 were at an extreme low, comparable to the extreme low in the 1930s depression. At the 2008 peak, prices were still only slightly more than half way back to the previous peaks reached in the last century. Today, with the correction of the last two years, they are closer to the extreme lows of the last century than to the peaks. Second, the world is experiencing the greatest economic expansion of emerging economies in its history. This is bringing the largest expansion of individuals into the middle class that the world has ever experienced. These developments are extremely commodity intensive. Finally, there is strong evidence that many of the key commodities will be in short supply as expansion of demand continues.

The world has experienced several examples of rapid multi-decade expansions since World War II. Notable examples would include Japan, S. Korea, Taiwan, and Singapore. However, the populations of these countries are miniscule compared to the size of China, India, the Middle East, Latin America, and others. Combined, this group of countries represents the greatest economic expansion in history. The strain it has and will place on the world's resources is unprecedented. The defining work on the subject of economic modernization was done by Nobel Laureate Simon Kuznets in his 1966 book, Modern Economic Growth. It defines the process of modernization that all developed industrial economies have experienced. It typically evolves over five to eight decades of very rapid economic growth. It involves the migration of rural labor to more productive work in urban areas, generating higher per capita incomes and placing major demands on infrastructure development.

China, the leading but by no means the only example, has been in the midst of this transformation for the past three decades and will likely remain on this path for at least another three decades. Clearly as China is currently demonstrating, there are growing pains that accompany this modernization but it has a self driving momentum. While a great deal of publicity is given to Chinese exports, suggesting that they might be the primary reason for growth, in fact, net exports have only contributed about five percent of their total growth (e.g. 0.5% of 10% annual GDP growth). The primary source of growth is migration of rural to urban labor that may contribute six percentage points to GDP growth, due to much higher productivity (e.g. 6.0% of 10% annual GDP growth).

Rural migration each year, combined with rising infrastructure development and rising consumer spending, provide the primary sources of growth. China's middle class is expected to expand from 14 percent of its population to 43 percent (Chart VIII) by the end of this decade. Given that China's consumer spending represents only 34 percent of GDP compared the 70 percent in the U.S., China's consumer spending should continue to be a major growth factor in the years ahead. Although China's growth rate has slowed to a range of 7 to 8 percent from 10 percent, their economy is over 30 percent larger now than in 2008. Today, even at a slower rate of growth and a smaller GDP than the U.S., China contributes more to global growth than the U.S.

While China leads the pack of these emerging economies in terms of total population and GDP, there are collectively many other participant countries, from India on down, which are also moving up these growth curves. At this stage of their economic growth they are all commodity intensive. Regardless of their cultural or religious backgrounds the new middle class of these emerging countries want to experience the same consumption experiences prevalent in the middle class of the developed world. That means growing demand for housing, appliances, electronics, clothing, meat proteins, motor bikes, cars, energy, and the infrastructure to support a growing urban population.

The urbanization trends of these emerging economies are creating unprecedented demands on infrastructure as countries modernize and expand facilities. Rapid expansion can lead to speculation, environmental problems, and malinvestment at times. However with the continuing flow of people to the urban areas, investment mistakes can be absorbed more quickly than in more advanced slower growing economies.

Many of these countries are chronically water short which will also cause shifts in agricultural patterns. Since agriculture consumes 70 percent of fresh water supplies, many of these countries will replace agricultural production with greater dependence on food imports. In effect food imports become an indirect way to import water. This, along with greater meat consumption in these emerging economies, will place greater demands on those few countries with strong agricultural production and plentiful water.

Meat proteins require from two to seven times as much grain as protein from direct grain consumption.

One of the most critical issues facing global economic growth will be the availability of oil. Oil supplies approximately 70 percent of transportation needs. Global oil production has effectively plateaued since 2005 with only minimal production growth since then (Chart IX). From 2005 through 2011 total global oil exports have actually declined as domestic consumption in the exporting countries has grown faster than total production. This is a serious development. Only the near recession conditions in the developed world have restrained global demand. However, consumption growth continues in the emerging economies and crude production supplies will be strained going forward. In the last couple of years there has been a great deal of misinformation about the potential for oil production growth from tight oil formations (sometimes incorrectly called shale oil). Some news articles have suggested that the U.S. could become self sufficient in oil and out produce Saudi Arabia. This is a sad fallacy. Tight oil formation wells only produce an average of 400 to 500 bbls. per day at completion. Then the resulting loss of pressure leads to an average production decline of 69 percent after 12 months and 80 to 95 production loss after two to four years. As a result the U.S. may experience moderate production increases in the next few years, similar to the production increases that occurred for several years after the development of Prudhoe Bay in Alaska. However, the U.S. is then likely to return to a gradual state of production decline that has been the U.S. experience since 1970.

Globally, oil discoveries peaked in the 1960s and the new discoveries have failed to keep up with annual consumption since the late 1980s (Chart X). Massive amounts of money and technology are being employed to improve discovery and recovery techniques. While technology is aiding in new production, the average price required for new oil is now estimated to be \$80 to \$105 per bbl. The reality is that the large easily developed oil fields have already been discovered and their production is aging. With the aging comes a gradual decline in production rates. Globally the existing fields are losing approximately 4.5 percent of daily production each year. Therefore over 3 million bbls of new daily production must be brought on line each year just to maintain flat production. That requires the equivalent of a new Saudi Arabia every three years, which will probably not happen. Therefore prices are likely to rise significantly in future years. Price increases will encourage conservation and substitution. However, technological breakthroughs are unlikely to occur quickly enough.

What is likely to happen with oil is also likely to develop with other basic minerals, water and agricultural production. Energy is essential to all basic commodity production. The last doubling of global agricultural production in the world was accomplished with a tripling of water and fertilizer consumption. Both irrigation and fertilizer production are heavily dependent on energy. Irrigation in many instances is dependent on deep underground water reservoirs that are being drained faster than water is refilling them.

The combination of unprecedented demand growth from the emerging country economies, and the reality of lower grade and more difficult deposits of oil, minerals, and water, along with shrinking agricultural land in emerging economies, will likely place us in a decade of rapidly rising real prices for basic necessities. This will be a very different environment than the world experienced for several decades before 2000. The rapid price increases of commodities in the 2002-2008 period may only be a prelude to what might be ahead.

The moderate slowing of economic growth in the past two years, in the emerging economies and in Europe, combined with banking problems, have had an exaggerated negative effect on commodity prices as inventory pipelines have been emptied either voluntarily, or due to inability, in some instances, to get bank financing. Therefore only a moderate increase in growth rates should also have an exaggerated impact on rising prices as inventories will need to be rebuilt. The financial turmoil of the past several years and slower growth of the past two years have also had a major impact on mothballing of possible expansion projects. Companies have become extremely defensive and cost conscious, with little interest in increasing production. If we are correct that demand continues to grow, it will quickly hit full production limits in many items leading to exaggerated price increases. Given the long lead time usually required to expand production, where it is possible, prices will reach significantly higher levels. This has been the past history of commodity price cycles. However, it will be exaggerated by both the considerable growth in the demand pool, and both the natural supply constraints, as well as the financially constrained supply environment. We believe these are all the elements necessary for a very powerful bull market (Chart VI).

If we are correct that commodity prices are headed significantly higher, this will feed back to the developed economies, even if they remain mired in slow growth. In turn this will either squeeze profit margins for companies unable to pass on price increases, or it will lead to a more generalized inflation. Inflation was very low in the 1960s as it is currently, but then exploded to over 14 percent by the end of the 1970s (Chart XI). The developed world economies remain very fragile and financially over leveraged. Therefore if inflation develops we believe that central banks will be reluctant to introduce monetary restraint which could once again sink these economies.

Developed country stock markets, especially the U.S. and Japan, have been primed by quantitative easing. Sales growth of many companies has been minimal, and profit margins are well above historical norms. Interest rates are artificially low due to central bank policy. Finally, inflation has been historically low. The stock market has been in a secular trading range bear market for 13 years (Chart XII). Past history of the U.S. stock market has three prior examples where these secular sideways movements lasted for 17 to 20 years. Given the currently full, if not high valuations, the possibility of commodity inflation developing, and the past tendency of secular corrections to last for another four to seven years, we believe that the general stock market is vulnerable. Therefore equity investments should focus only on companies that can benefit from the expected commodity price advance.



## Summary

Investors have two significant opportunities at the present time. The confluence of attractive long-term fundamentals and intermediate corrections in both gold and commodities has created a unique opportunity potentially as attractive as the 2001 period. While absolute valuations may not be at the extreme under valuations that existed at that time, the potential upside may be as great or greater than that which developed in the 2002 to 2008 period. If we are correct that gold and commodities are in the middle stage of a two decade bull market, history suggests that the later stages of a major advance experiences the most accelerated portion of the total advance.

There are strong fundamentals supporting both long-term demand for both gold and commodities. At the same time Federal Reserve and other developed world central banks' policies have created conditions of overvaluation in both bonds and equities. This in our view is the ideal prescription to support the next stage of the advance in both gold and commodities.

**Past Performance is not necessarily indicative of future results.** This information does not constitute an offer to sell any securities or the solicitation of an offer to purchase any securities. For further information on the AIS TAAP Program, contact John R. Hummel at 187 Danbury Road, Wilton, CT 06897 - Telephone: (203) 563-1180 - Facsimile: (203) 563-1186 - E-Mail: [info@aisgroup.com](mailto:info@aisgroup.com)

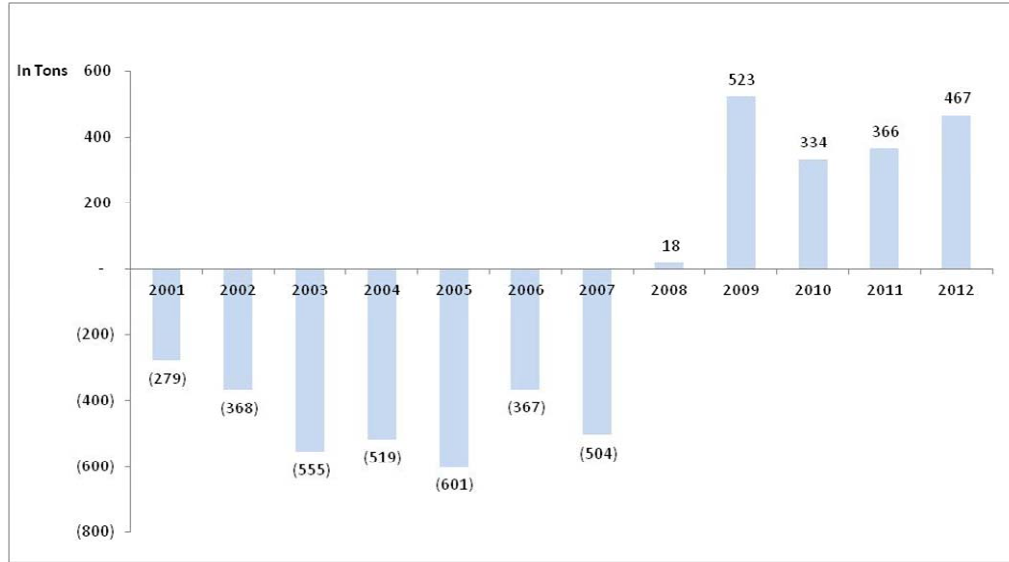
Past results are not necessarily indicative of future performance. Actual trading for the MAAP 3X-6X commenced on 7/8/92 and 2X-4X commenced on 10/15/92. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. For a complete disclosure document of AIS Futures Management LLC's MAAP Program, contact AIS Futures Management LLC, 187 Danbury Rd. Wilton, CT 06897 (203) 563-1180.



I.

## Central Banks Holding More Gold Reserves

Net Buying by Central Banks Through December 31, 2012

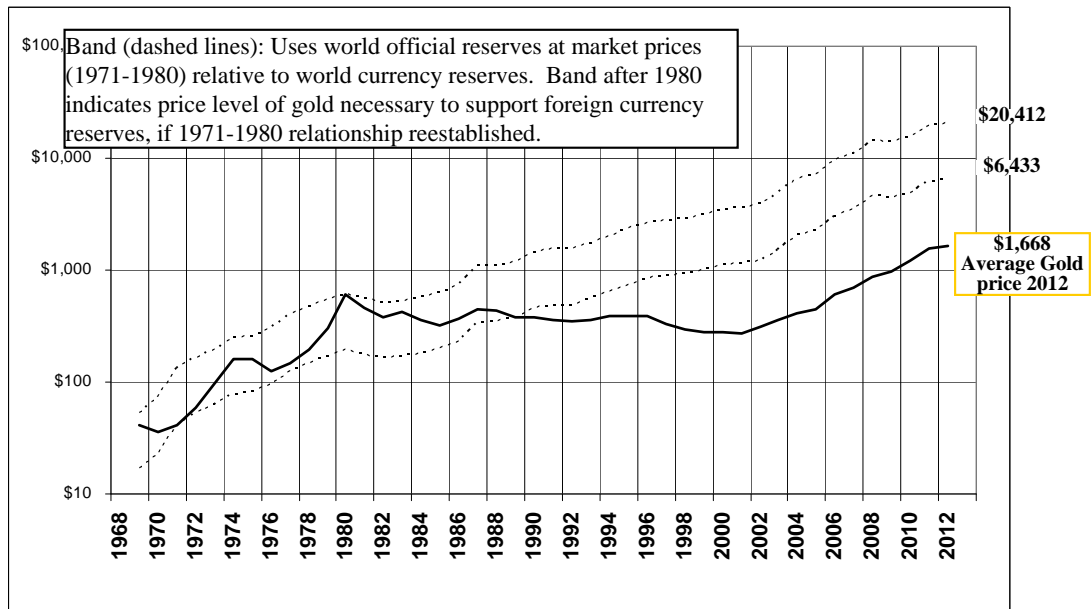


• China, India, Russia, Saudi Arabia, Korea, among others, have all announced reserve increases

Source: World Gold Council, GFMS

II.

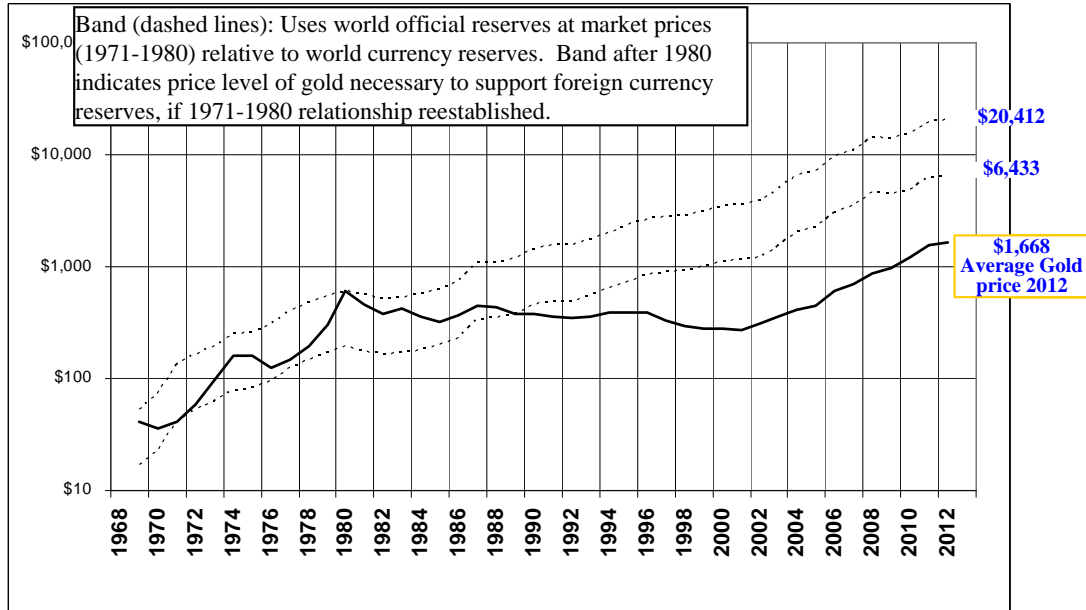
## World Official Gold Reserves Relative to World Currency Reserves (12/31/2012)





III.

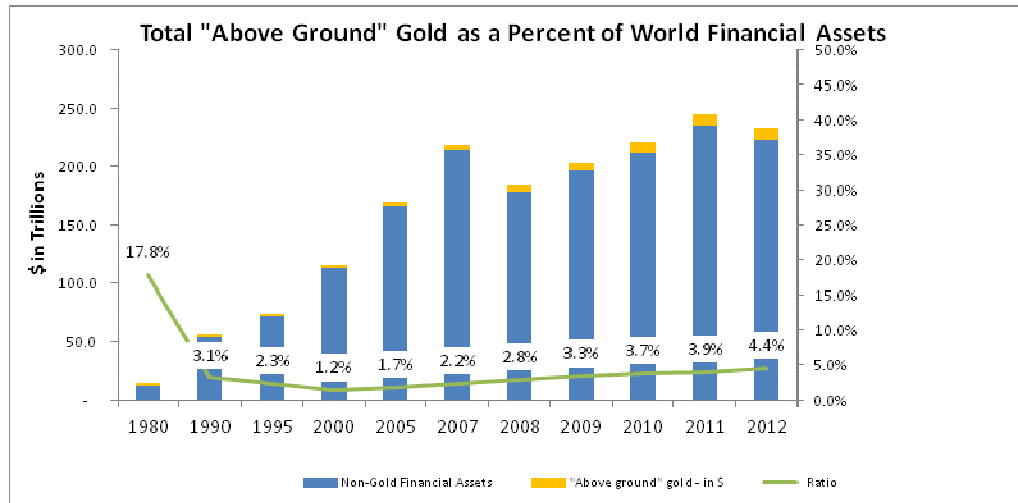
## U.S. Treasury Gold Value Relative to Foreign Held U.S. Government Debt (12/31/2012)



IV.

## TOTAL WORLD FINANCIAL ASSETS VERSUS TOTAL "ABOVE GROUND" GOLD

- o World financial assets (stocks, bonds, gold and deposits) total \$233 trillion. The total value of all gold ever mined to date (175,600 metric tons, or 6.2 billion ounces) is \$10 trillion.

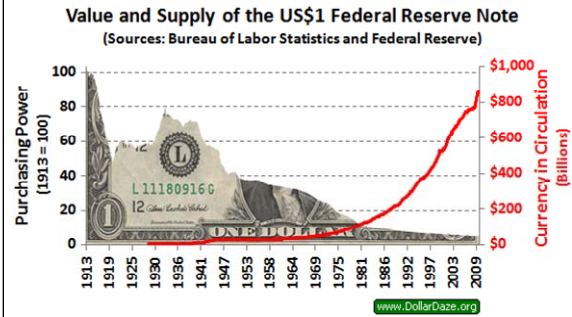
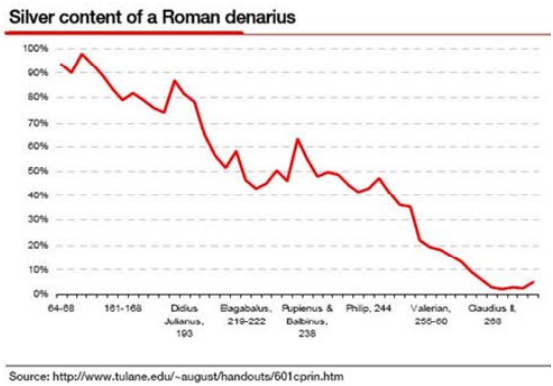


Source: GFMS for gold; McKinsey Global Institute pre-2000; Credit Suisse data thereafter



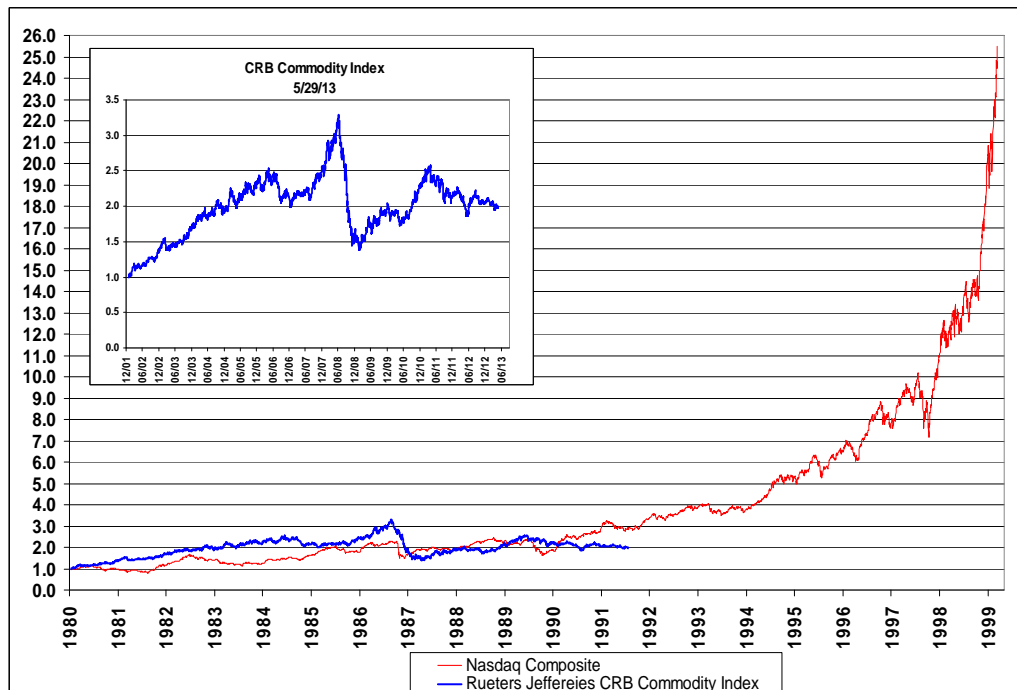
**V.**

**Throughout History, Governments' Debasement of Currency Undermines its Purchasing Power and Reserve Status**



**VI.**

**Comparison of Bull Markets**



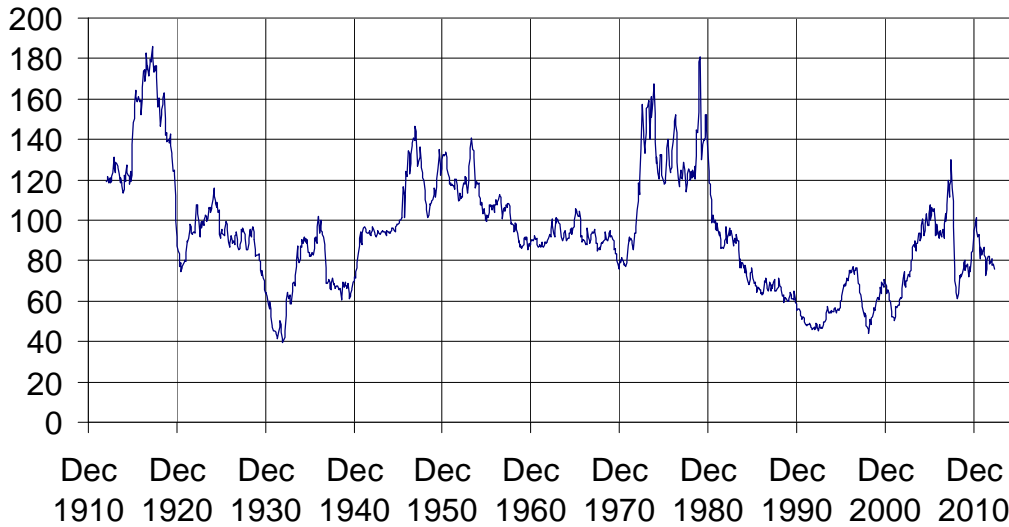


VII.

## Appreciation Opportunities

Real (Inflation-Adjusted) Commodity Prices Dec 1910 – Apr 2013

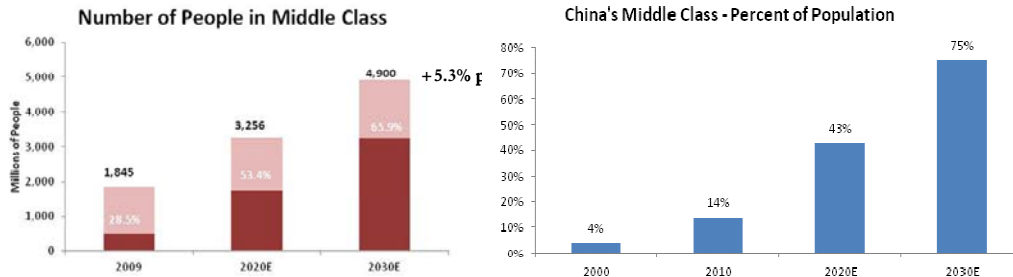
### Real (Inflation-Adjusted) Commodity Prices Dec 1910 - Apr 2013



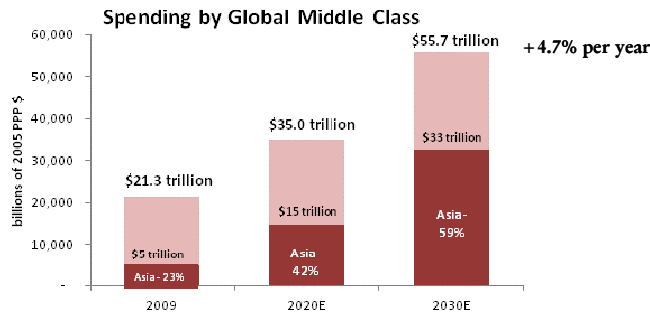
VIII.

## Growth in the Middle Class

- Approaching the Tipping Point: Developing countries are reaching the Tipping Point where large numbers of people enter the middle class, defined as \$10 to \$100 per day per



- Real spending power is also increasing

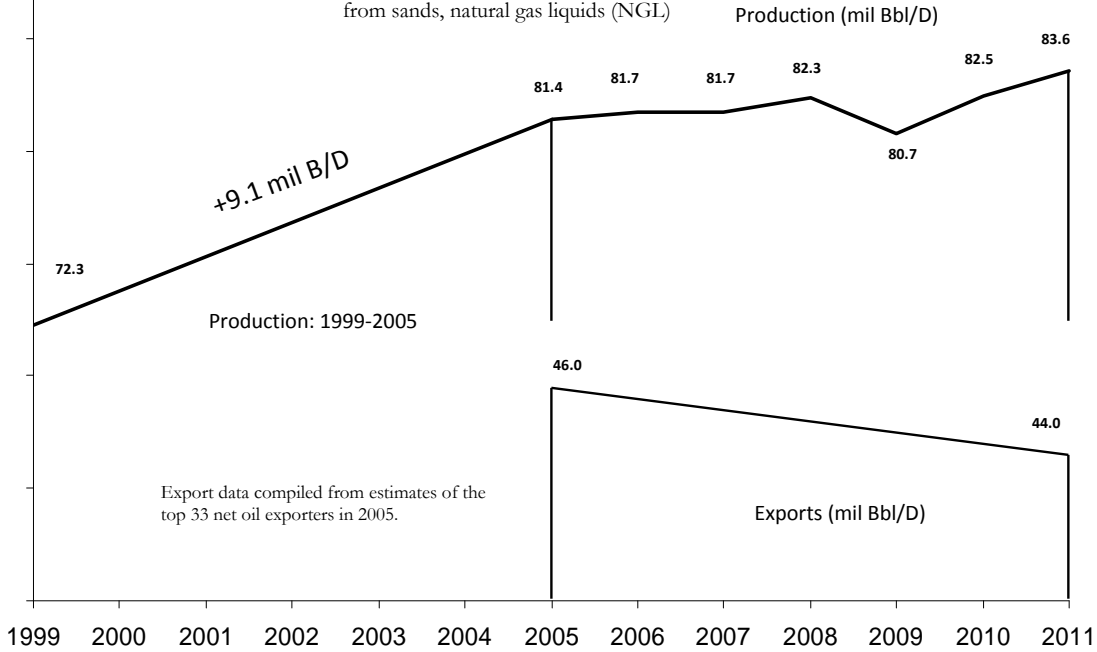


Source: OECD, *Global Development Outlook*



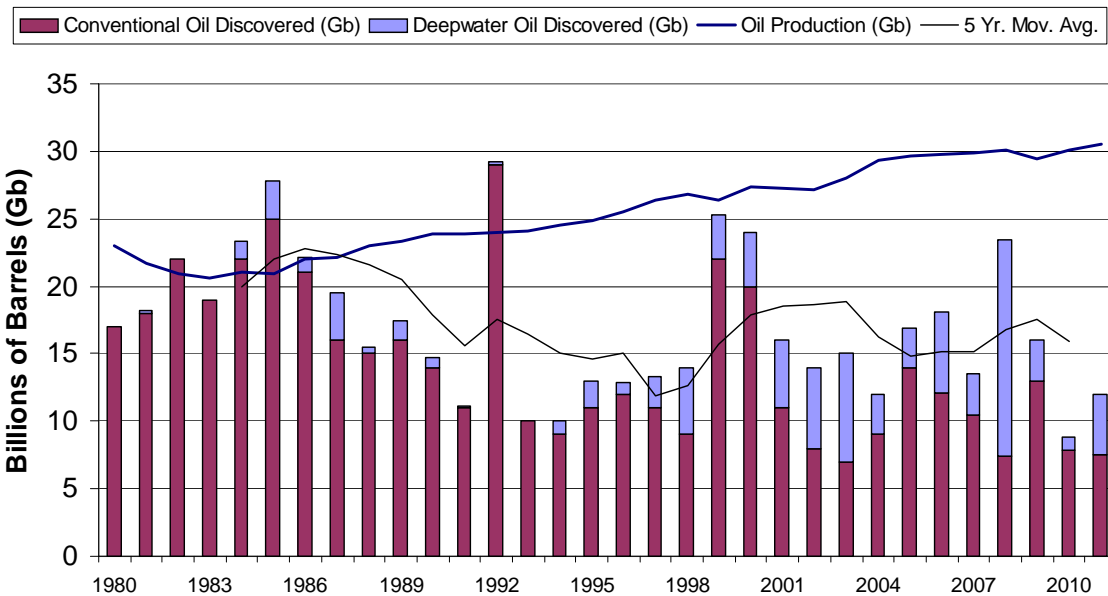
### IX. Global Production and Export of Oil

Global Production is Stagnating – Exports are Declining  
BP Statistical Review 2010 Production.  
Includes conventional crude oil, oil from shale, oil  
from sands, natural gas liquids (NGL)



### X. Global Oil Discovery (1980 – 2011)

5-year Moving Average for Oil Discovery

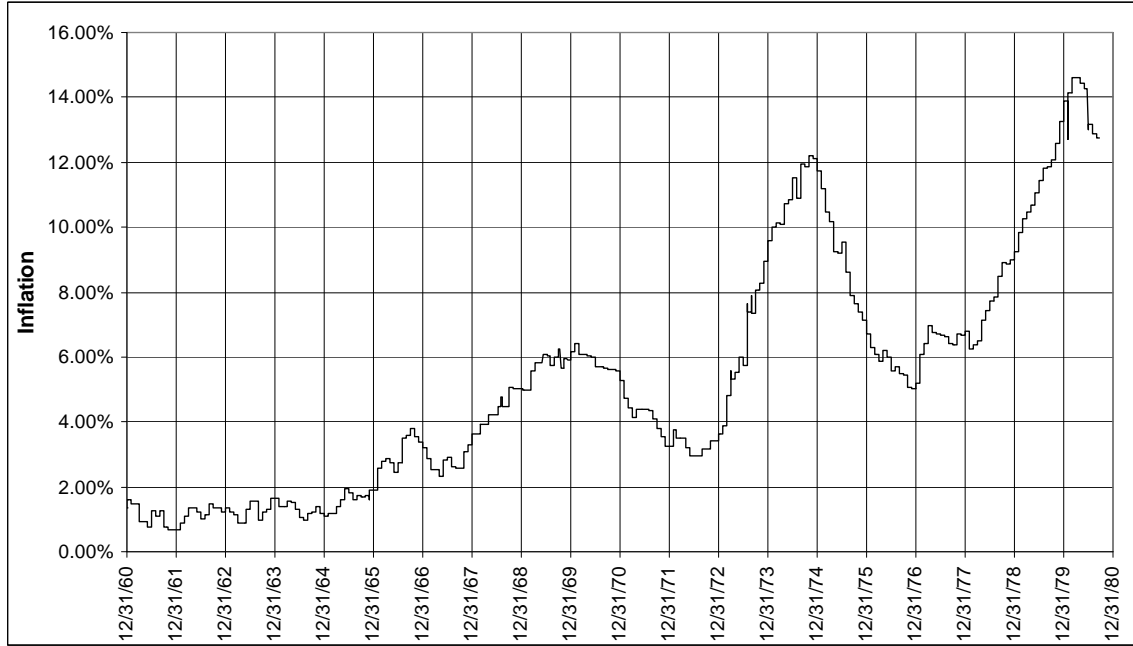


Source (Oil Discovery): Dr. Colin J. Campbell, ASPO  
Source (Oil Production): BP Statistical Review of World Energy 2009



**XI.**

**C.P.I. Rolling 12-Month Inflation Rates  
1960 - 1981**



**XII.**

**Dow Jones Industrial Average  
(1897 – May 29, 2013)**

