

The Financial Market Implications of Global Raw Material Shortages

Presentation

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John R. Hummel

President

AIS Futures Management LLC



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The Financial Market Implications of Global Raw Material Shortages

Thank you and Good Afternoon. My task today is to summarize key trends of the last decade and look at important issues going forward. Given unlimited time this would be a challenge. Given 20 minutes, it is close to impossible. My apologies therefore, if I leave issues out or fail to fully support any controversial statements.

My focus will be on one issue in particular:

The Financial Market Implications of Global Raw Material Shortages

I believe that the world is entering a period of increasingly tight raw material supplies.

This development is going to play havoc with the present dollar reserve system on which the world's trade and financial system is built.

Trends of the Last Decade

- Surplus of Labor and Capital/Emerging Scarcity of Raw Materials
- The Rise of the BRICs
 - Resource Poor: High Population China/India
 - Resource Rich: Russia/Brazil
- Emergence of the Euro Zone as the Largest Market
- The Securitization of Anything and Everything
- The Transfer of Risk to a Non-Permanent Capital Base

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With that in mind, let's review some of the important trends of the past decade:

Surplus Labor and Capital but Tightening Raw Material Supplies

The 1990s witnessed the unleashing of unprecedented entrepreneurialism, privatization of enterprise, and globalization. Labor, Capital and Raw Materials were all in excess supply. However by late 2001 raw material markets began to tighten. As stated earlier, I will try to provide evidence to show why this may play a key role in destabilizing the current dollar reserve system and trigger significant financial market changes.

The rise of the BRICs.

Most important are the huge populations of China and India super imposed on the world economy. Rather than just the historic 12 or 15 percent of the world's population consuming most of the raw materials, we now have over 50 percent of the world's population as potential consumers. This is unprecedented.

The emergence of the Euro Zone as a potential to challenge the U.S. as the world's largest market.

Typically the largest market in terms of GDP is in a position to set terms of trade for the world and throw its weight around on international negotiations.

Securitization and the Transfer of Risk to a Non-Permanent Capital Base

With securitization and the sale of loans and the explosive growth of over the counter derivatives, risk has been transferred to hedge funds which do not have the same permanence of capital that banks and insurance companies have. This may become problematic if financial storms develop and investors redeem their capital from hedge funds.

Trends of the Last Decade

- A Continuing Financial Bubble Environment
- More Information/Less Wisdom
- Growth of Contingent Liabilities
 - Federal Social Security and Medicare
 - Unfunded State & Municipal Pensions
- Current Account Deficit
- Peaking of U.S. Global Financial/Economic/Military Dominance

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Financial Bubble Environment

I believe that the U.S. and world entered a financial bubble environment in late 1996, when then Fed Chairman, Greenspan, identified “Irrational Exuberance” and then did nothing about it. Subsequently The Federal Reserve has moved to a position in which they deny their ability to recognize a speculative bubble as it occurs. They do not believe it is their responsibility to stop a bubble if they did recognize it. However, they believe they have a responsibility to bail the system out after a bubble breaks. We could be here all day discussing this controversial point. Unfortunately we don’t have the time but it is extremely significant in this observer’s view.

Information Overload and Wisdom Shortage

We are in an environment of massive information availability and a decline in our ability to decipher its significance. Once again this could be a topic for a speech as there are many examples. One recent example was HSBC’s Household Finance subsidiary with 150 PhDs handing out sub prime loans on the basis of computer program credit scores. There is an unjustified confidence in risk models.

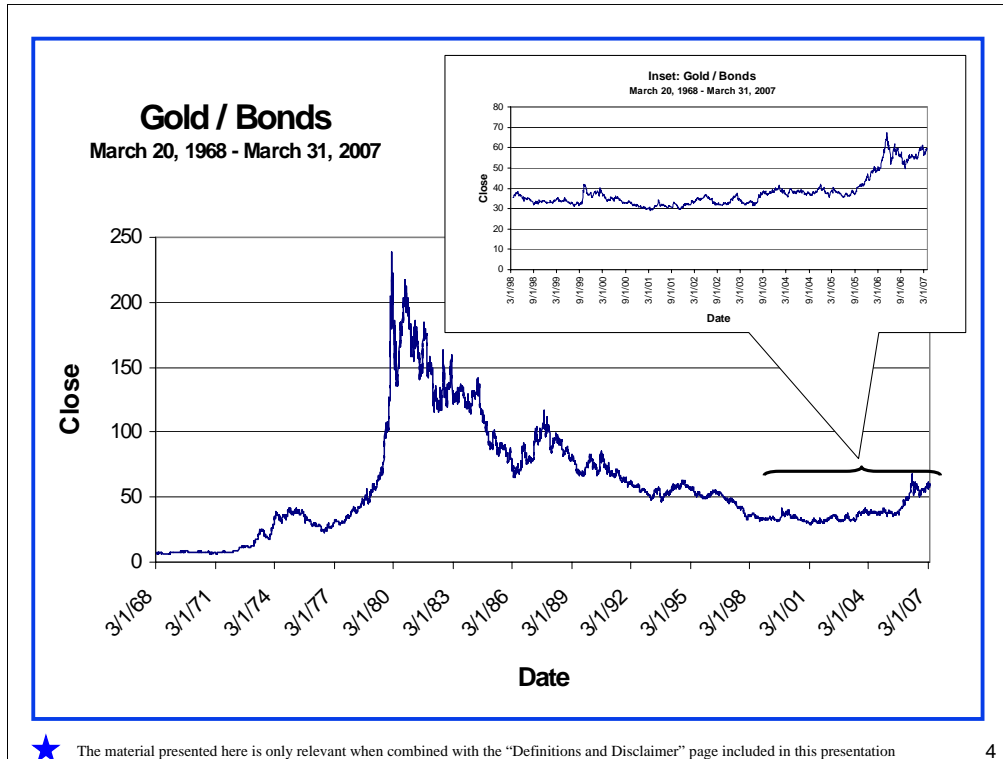
Contingent liabilities at the national, state, and local levels for social welfare programs.

These have reached levels that cannot be supported by aging developed country economies. This issue will be making headlines in the future.

The rising current account deficit about which more will be said shortly.

The peaking of the U.S. relative global role similar to Great Britain a century ago.

Each of you no doubt could add many other ideas to this list but let me move on to the primary point.



Part II

What is the Price of Gold Telling US?

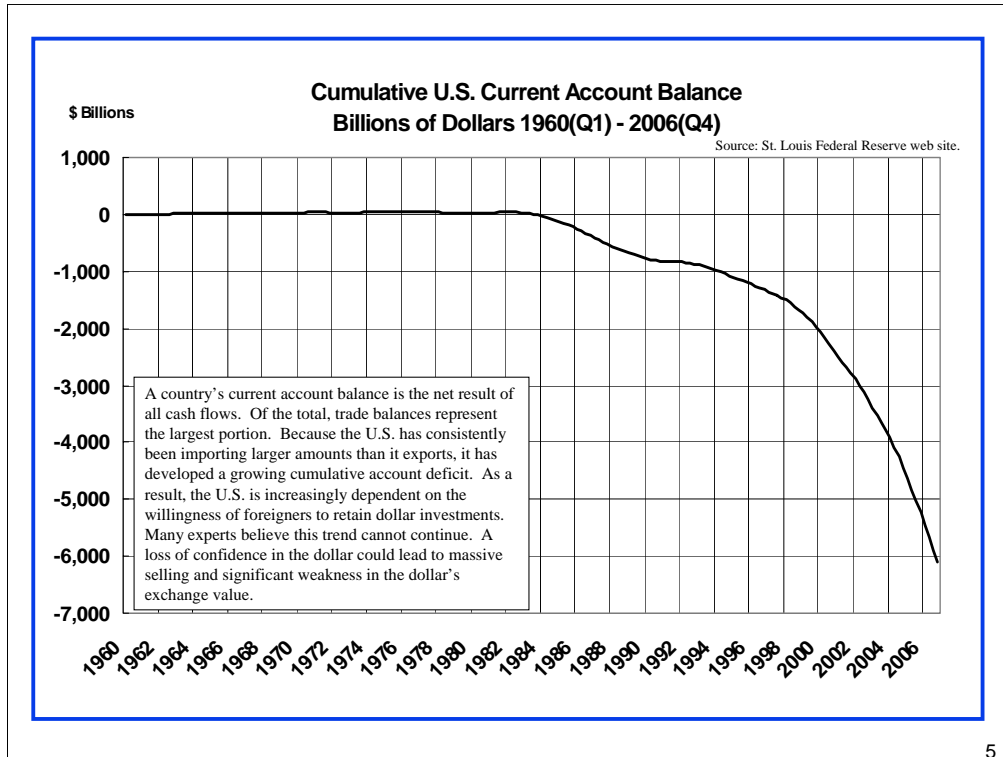
This chart is a ratio of the price of gold divided by the price of the long Treasury bond. The price of gold relative to U.S. Treasury bonds is a useful barometer of the financial market's health. Both gold and Treasury bonds are large internationally traded markets. Gold pays no interest or dividends and incurs storage expenses. Treasury bonds provide an income stream and a promise of principal repayment. The two instruments are in stark contrast to each other.

A declining gold price relative to bonds is indicative of an environment that is calm. Confidence in financial markets and government institutions is high. It is typically one in which there is low or declining inflation. Historically it has been conducive for bull markets in stocks and bonds.

A rising price of gold relative to U.S. Treasury bonds, tells the opposite story. Rising inflation expectations and declining confidence in financial markets and government institutions.

After declining from 1980 through 1997 this ratio went sideways for seven years until mid-2005. Since that time it has moved to the upside and is suggesting a very different financial/economic environment than we have grown used to.

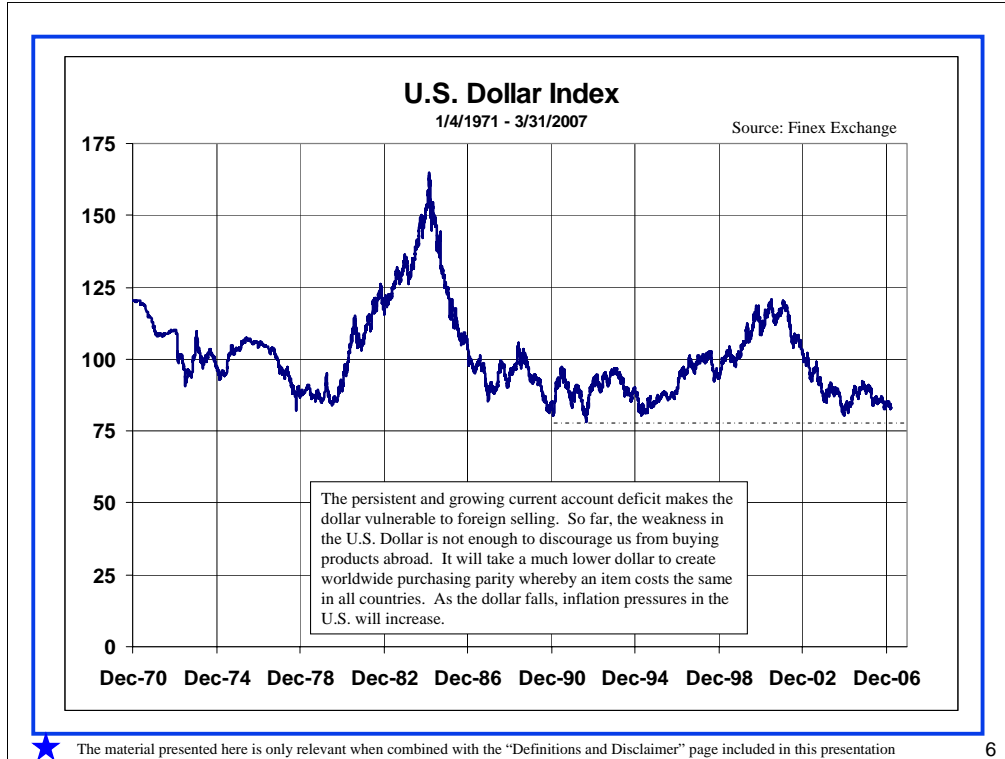
None of us can be certain as to its future course but the significance of this move should not be ignored.



The Cumulative U.S. Current Account Balance Chart

I refer to this chart as the financial waterfall. This is a controversial topic. The optimists argue that the other side of the ledger is the capital account which indicates that foreigners are anxious to invest capital in the U.S. If it was foreign individuals and corporations who were recycling the funds, that argument might hold water. However it is increasingly foreign governments, largely Asian governments, trying to maintain undervalued currencies to increase their exports to the U.S.

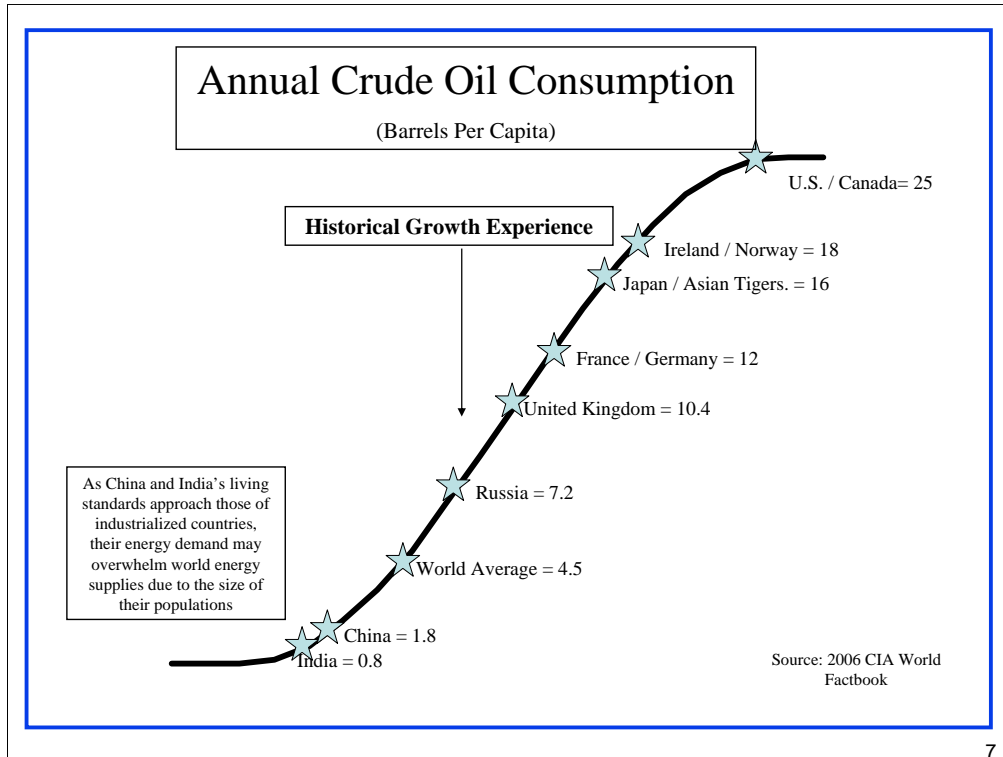
I believe that we are rapidly approaching the practical limit of this trend and believe the competition for raw materials will be the straw that breaks the camel's back.



U.S. Dollar Index

The trade weighted dollar is hovering close to its all time lows. I expect that with the next round of Federal Reserve easing we will witness a significant breaking of the lows.

I would now like to look at the potential for raw material shortages.



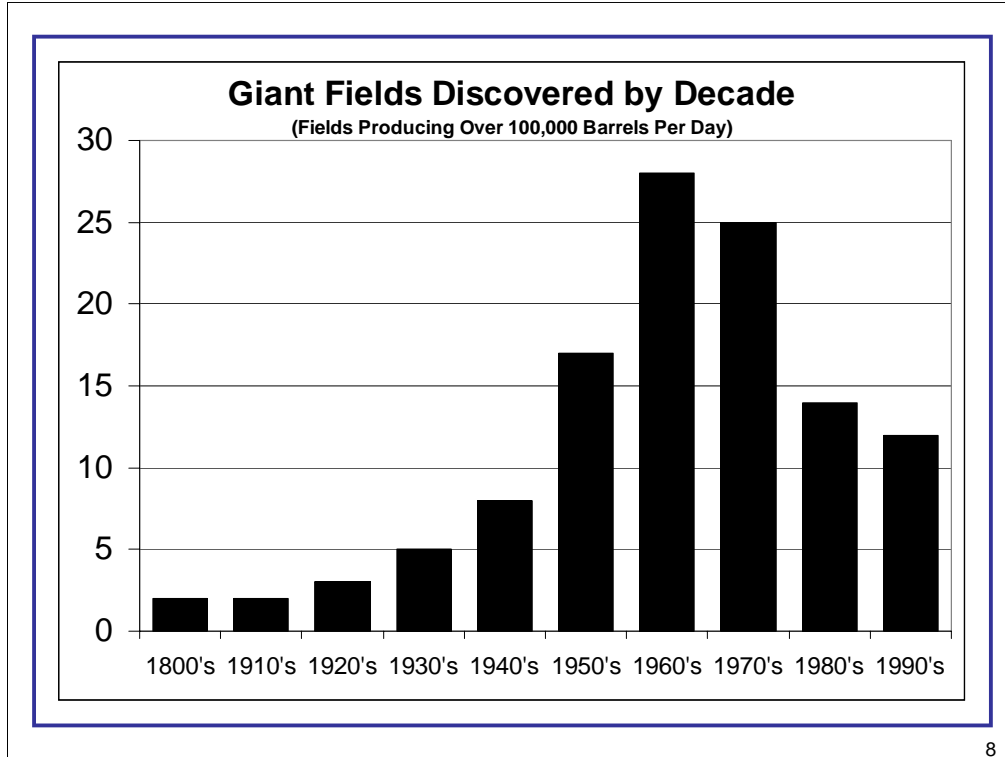
Crude Oil Consumption

This chart indicates the approximate annual per capita oil consumption in various countries in barrels per capita. The U.S. is at the top of this chart in per capita consumption at 25 barrels annually.

Japan and the Asian Tigers are interesting because they both went through three decades of significant industrialization and growth in energy consumption. Japan at the end of WW II consumed one bbl per capita and by the early 1970s reached its current level of approximately 16 barrels. The Asian Tigers beginning at a later date went through a similar three decade increase in consumption from one bbl to 16 barrels.

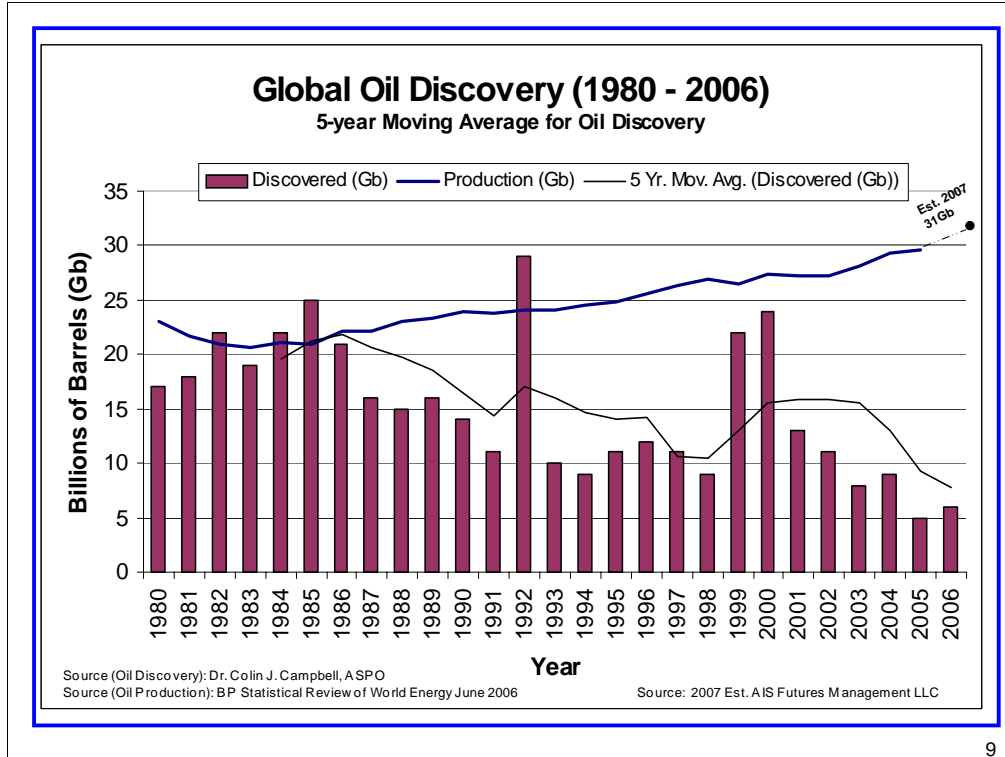
China a few years ago was at one bbl and is following a similar growth pattern as the other industrialized Asian countries. The one key difference is the size of the population of China. India is now awakening to a similar growth path.

The key question is whether the world can supply enough for all participants or is the world on a collision course?



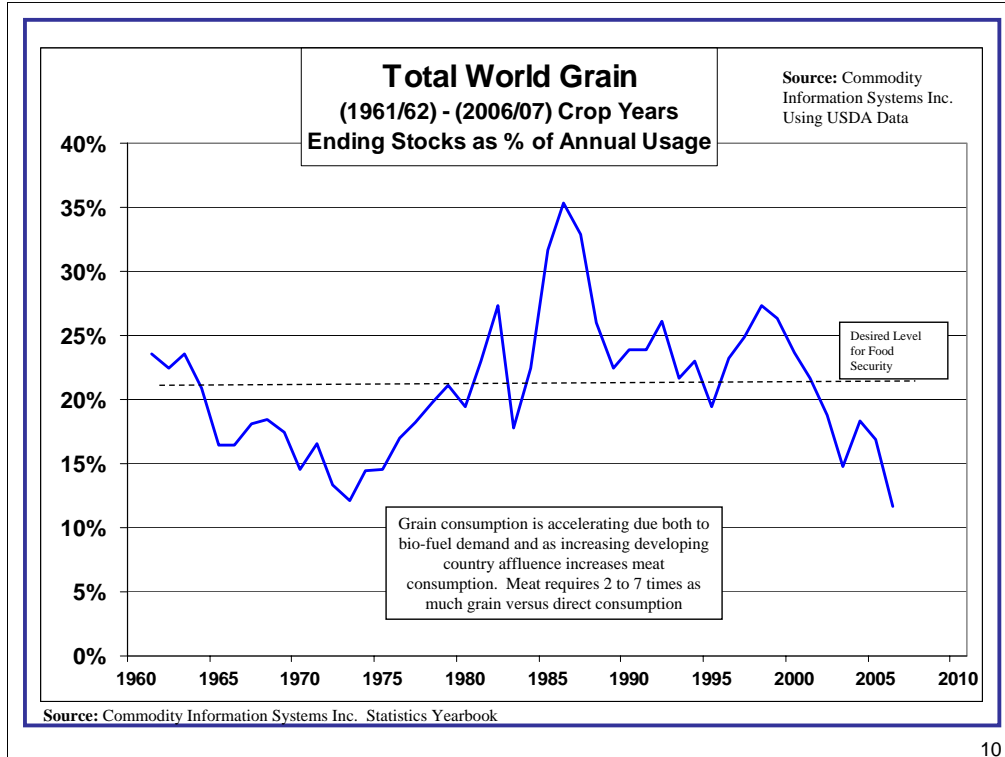
Giant Fields

Less than one percent of the world's oil fields have historically provided over half of annual production. The peak of discoveries of large fields occurred in the 1960s. Many of the large fields are reaching or are past their peak production rates. It is a mathematical challenge to replace this aging production. The world is running on a treadmill whose speed is being continually increased.



Global Discovery and Production

The world is now only replacing approximately one quarter of its current production. If economic supply/demand curves were all that mattered, the pace of new discoveries should be responding to dramatically higher prices since 1998. The sun appears is setting on the era of liquid hydrocarbons.



Total World Grain

Something similar is now occurring in world grain markets. The world's demand for grains, due to expanding affluence, leading to higher meat consumption, and the new demand for biofuels, is outpacing the world's ability to increase production. The result will be much higher food prices in the years ahead.

Grains – Water – Energy Closely Linked

Energy Prices Impacting Grain Prices

Conversion of Grain to Energy Most Profitable Use

1950-1973 Price of Oil and Wheat 1 to 1 Ratio

2005 Price of Oil and Wheat 13 to 1 Ratio

Grains are an Investment in Scarce Water Supplies

1000 Tons of Water Needed for 1 Ton of Grain

70% of Water Used in Agriculture

Fastest Growing Economies (China and India) Water Short

Will Give Up Grain Production for Higher Value Lower Water Use

Intensifies Demand for Remaining Producers

Growing Affluence Increasing Meat Consumption

2 to 7 lbs. of Grain Needed to Produce 1 lb. of Meat



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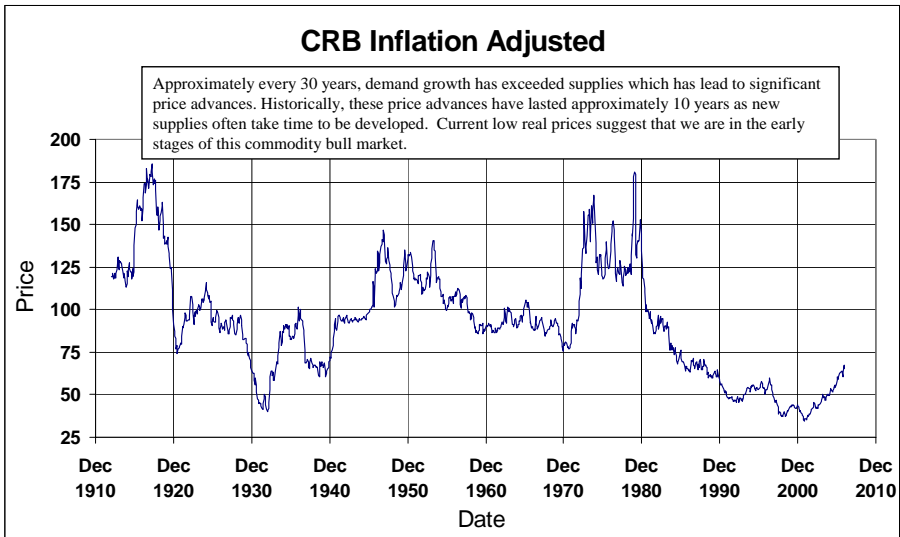
Grains Water and Energy are Tightly Linked

40 percent of modern agricultural costs are energy related. Currently, the most profitable use of grains is to convert them to biofuels. Grain prices are out of whack with energy prices. The last doubling of world grain production required a tripling of both energy and water use.

Agriculture is water intensive. It takes 1,000 tons of water to produce one ton of grain. 70 percent of water consumption is used in agriculture, 20 percent in industry and 10 percent in residential. Both China and India suffer from water shortages. As they industrialize, they will likely give up agricultural production which will further exasperate world grain shortages and drive prices higher.

Real (Inflation-Adjusted) Commodity Prices

Dec. 1910 – Dec. 2006



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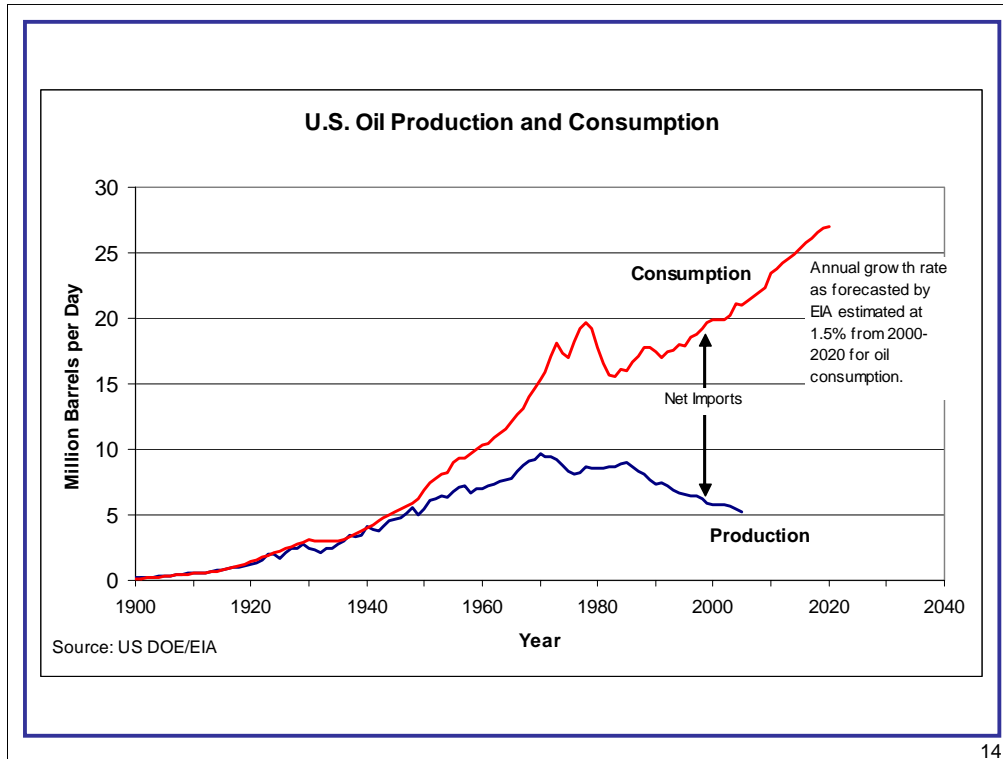
Real (Inflation-Adjusted) Commodity Prices

Raw Material/Commodity prices in real terms were at record lows at the beginning of the decade. Even with the rising prices since then, they are still extremely low in real terms.



China Daily

The Chinese Government understands the importance of gaining access to scarce raw materials. The world is on a collision course as it fights for available supplies. I came across this cartoon in the official Communist Daily newspaper one day in May 2005 during a visit to China. China has been busily signing government to government supply contracts. Their emphasis is on assurance of supply rather than competitive prices. This puts private western companies at a severe disadvantage. If peak oil is occurring, supply availability may be more important and the U.S. may find itself out in the cold.

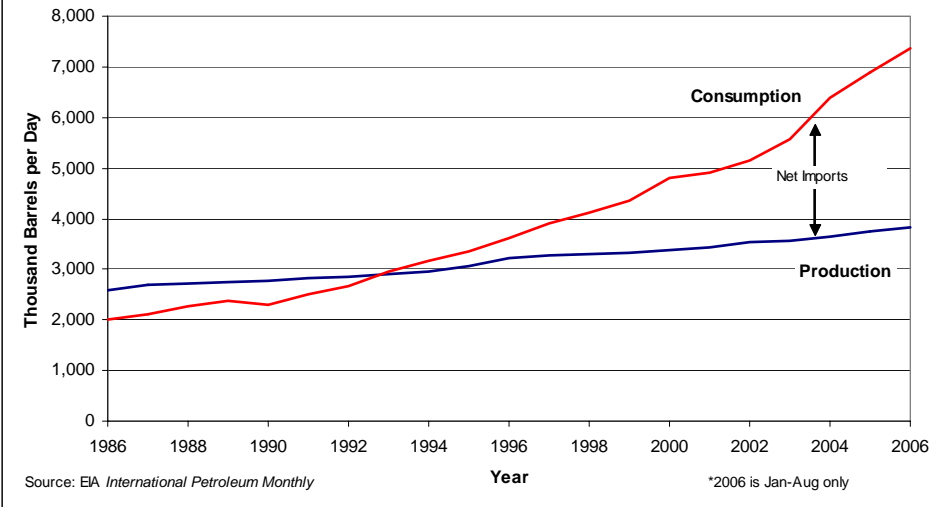


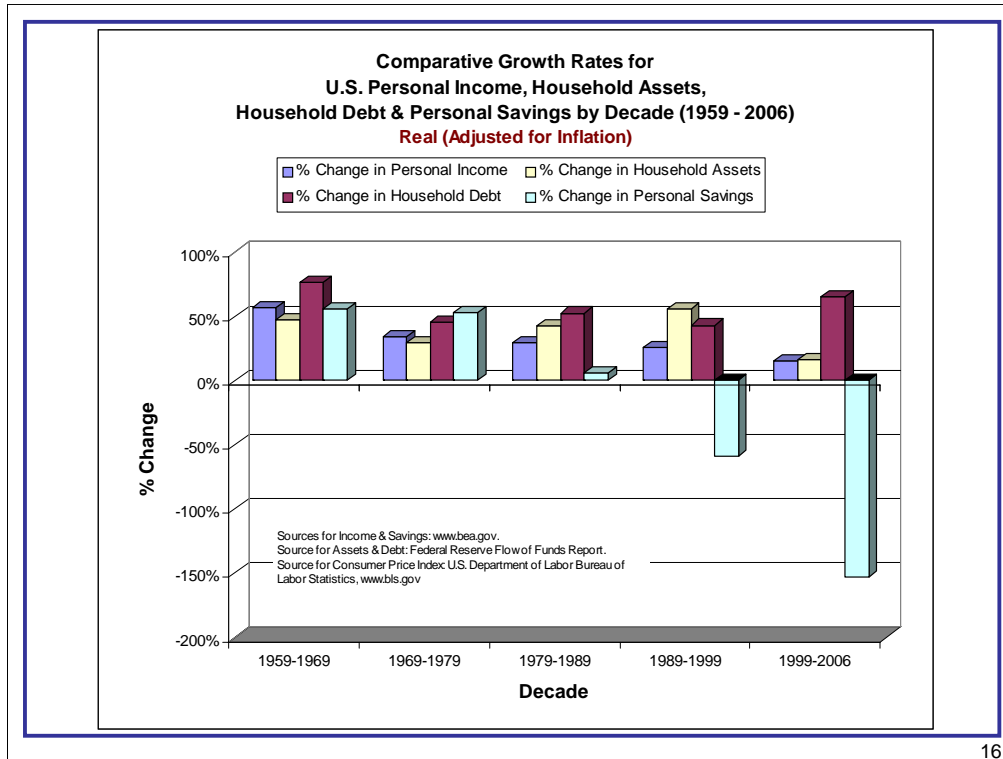
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U.S. and Chinese Oil Production and Consumption

The next two charts demonstrate the challenge in an oil short world. U.S. production peaked in 1970 and Chinese production is expected to peak in the near future while demand is growing rapidly in China and steadily in the U.S. In an oil short world, countries competing for resources will be on a collision course.

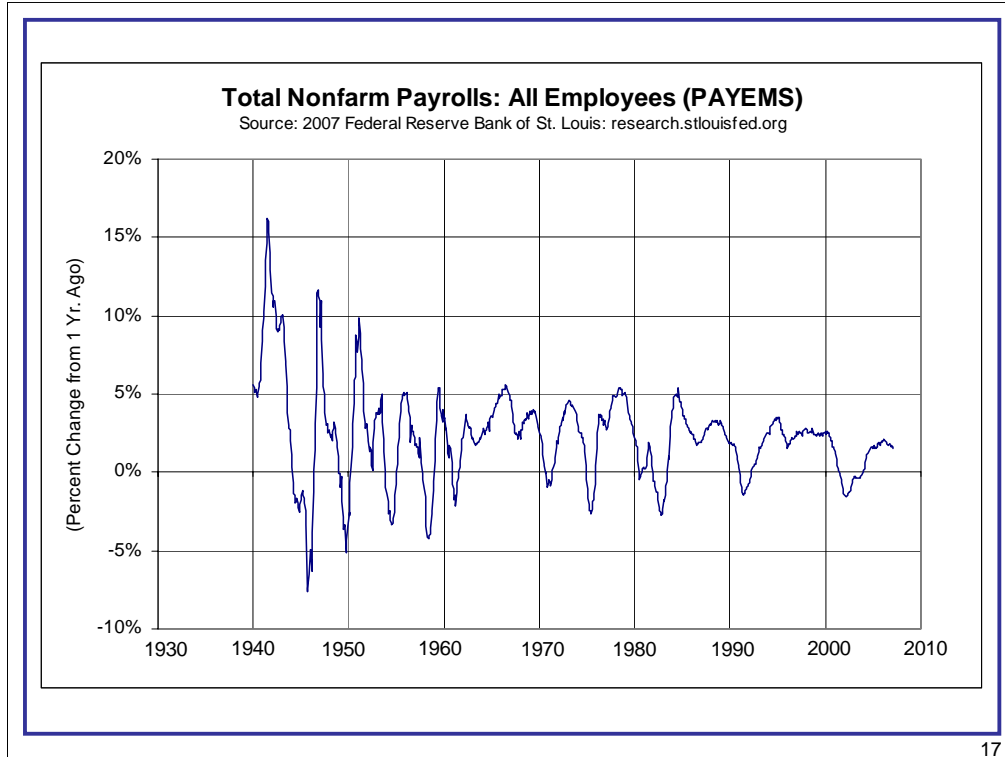
China's Oil Production and Consumption, 1986-2006*





Assets and Debt are Rising Faster Than Incomes or Savings

Indicative of the bubble environment is the artificial inflation of assets and accompanying debt to support the economy. We are on a merry-go-round that we can't get off.

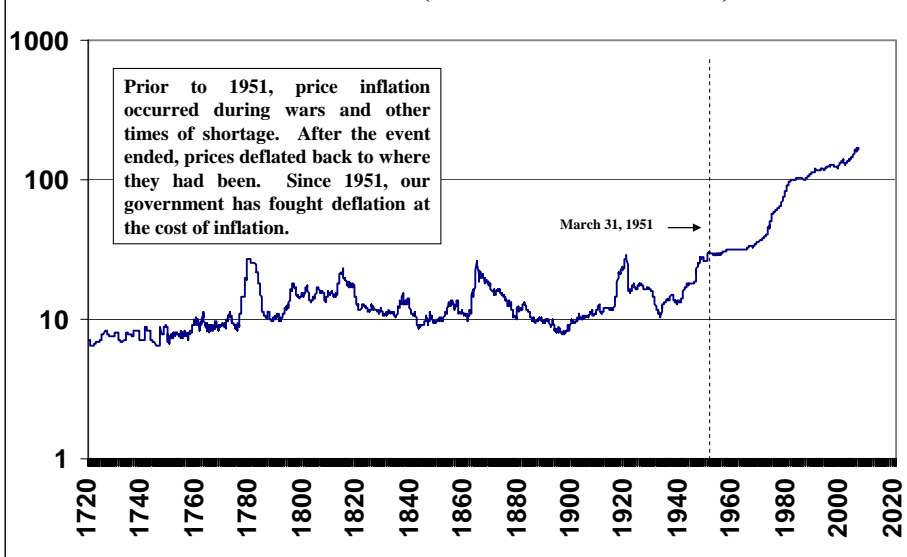


Employment Growth Continues to Deteriorate in Each New Cycle

The U.S. can no longer compete in the global economy and the political repercussions could be significant.

The Impact of Government on Inflation

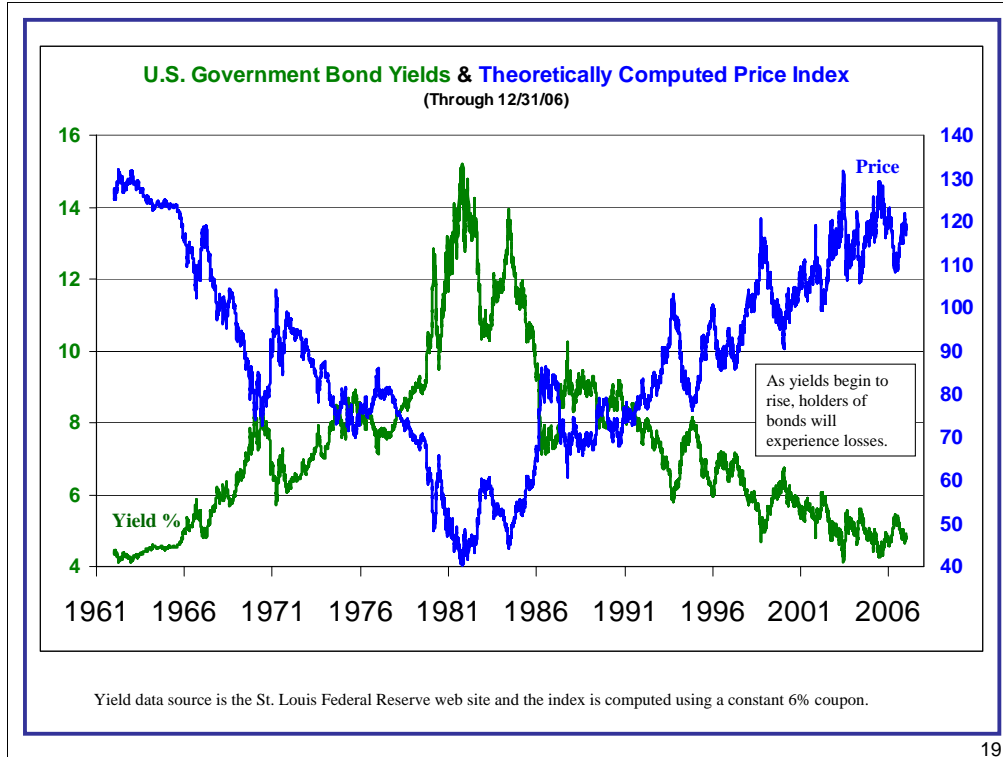
Producer Prices (1720-December 2006)



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Impact of Government on Inflation

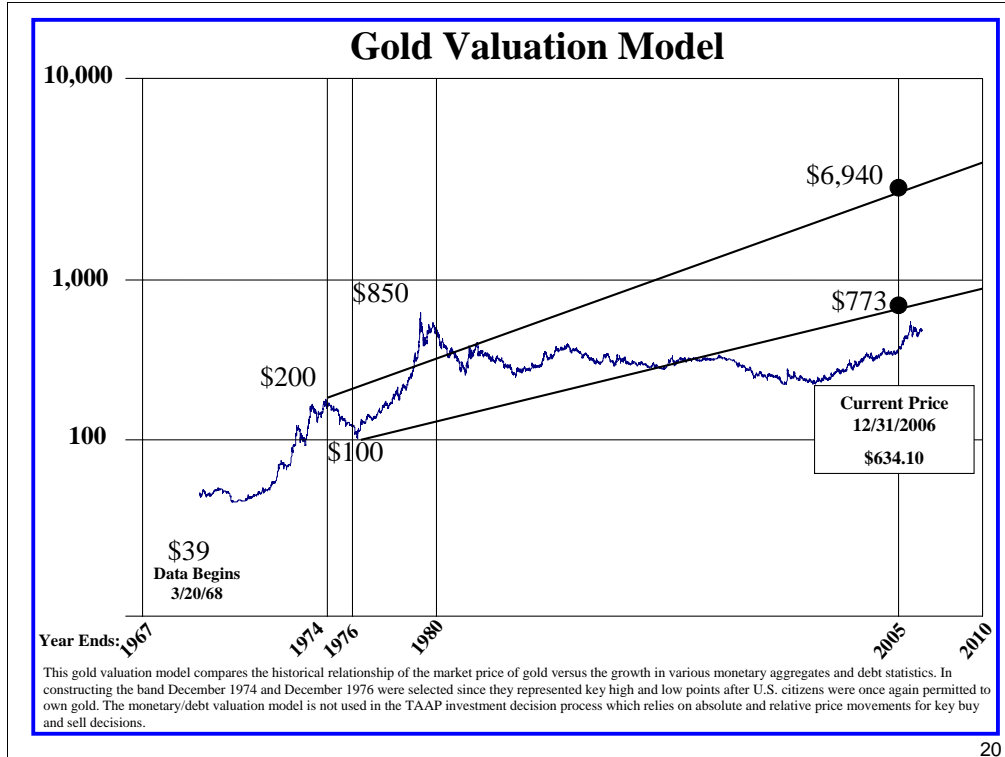
Historically the economy experienced inflation during wars and had a natural tendency to revert to deflation until equilibrium was restored. The increasing influence of the government and the Federal Reserve since the middle of the last century has created an inflationary bias in the economy. It ebbs and flows from moderate to accelerating inflation. Given the political realities this is unlikely to change.



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Long-Term Interest Rates

Anticipating a weak dollar and a continued stimulus bias by the Federal Reserve, it is highly probable that the next major move in interest rates will be to much higher levels.



Gold Valuation Model

The growth in monetary aggregates in the past several decades suggests that the price of gold could go significantly higher if there is turmoil in the financial markets and a general lack of confidence in the dollar.

World With Excess Supply

Exporters Will Support \$ To Remain Competitive

World With Scarce Resources

Exporters of Resources Have No Reason to Support \$

Ergo:

Importers of Scarce Resources Have Reason to Sell \$

The Vicious Cycle Commences?

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Part III What Does the Future Hold

Scarce Resources Create an Environment that could weaken the Dollar

When multiple exporters of manufactured goods and services, have excess labor, there is an incentive for each country to support the dollar in order to keep their exports competitive.

However, an exporter of a scarce resource has no incentive to support the dollar. He wants the highest price and will exchange an overvalued currency for more valuable assets. He sells dollars quickly.

Importers of scarce resources have an incentive to sell dollars to make their rising import prices less expensive. Thus if we are entering a period of rising raw material prices countries such as China and India may find it more beneficial to have a strong currency rather than an undervalued currency. Japan in the 1970s is a prior example of a resource poor exporter that benefited from a rising currency.

What has been a virtuous cycle for dollars could become a vicious cycle leading to a significant dollar decline.

Surmising the Future

U.S. Federal Reserve Will Continue to Finance the “Bubble”

Current Dollar Reserve System Breaks Down in Raw Material
Scarce World

- Sellers of Scarce Commodities Will Not Want Dollars
- Other Buyers Will Revalue to Gain Price Advantage

Government to Government Long-Term Supply Contracts Create
Political Tensions



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Surmising the Future

U.S. Federal Reserve will continue to finance the “Bubble”.

The alternative of a debt implosion is too politically unacceptable.

Current Dollar Reserve System Breaks Down.

What replaces it is the unknown. History demonstrates that major changes to monetary systems have taken place every 30 to 60 years.

Foreign Government Supply Contracts for basic raw materials will create tensions in a supply short world.

The Chinese understand this better than anyone. With the U.S. dependent on corporations operating in the free market, it may be at a major disadvantage.

Surmising the Future – continued

Governments Will Confiscate “Excess” Resource Profits

U.S. Will Initiate a “Manhattan Project” for Alternative Energy

Are Long-Term Dollar Denominated Bonds – World’s Most Expensive Wallpaper?

Are OTC Derivatives the Current Equivalent of Equity Portfolio Insurance in 1987?

Commodities Will Be Best Performing Asset Class

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Governments have a history of rewriting contracts when rising prices create higher profits.

Price controls, excess profits taxes, and confiscation were evident in the last energy crisis. Owning futures contracts may have less political risk than owning equities.

U.S. will initiate a Manhattan Type Project to Deal with Energy Problem

Unfortunately this may not occur until after a major supply crisis impacts the economy.

Long-Term Dollar denominated bonds will be expensive wall paper.

Bonds of a weak currency country are a very poor investment.

Over-The-Counter Derivatives Could be the Current version of 1987 equity portfolio insurance. A trend to significantly higher long-term interest rates could uncover some serious derivatives risks. After two decades of declining interest rates, and declining volatility, investor assumptions could be skewed and vulnerable to a new environment of rising long-term rates.

Commodities will be the best performing asset class.

Undervalued and in short supply commodities could continue to outperform equities in this decade. Furthermore, futures on commodities could have less political risk than equities.

Summary

The price of gold relative to Treasury bonds is sending a serious message for investors that should not be ignored. The present dollar reserve system operated successfully in a world of excess raw materials, labor, and capital. However if the world has entered a period of increasingly tight supplies of raw materials, the competitive scramble for available supplies could lead to a major dollar decline.

The Federal Reserve is more concerned about domestic economic growth. This will take precedence over supporting the dollar.

Dollar weakness will weaken the long-term bond market. In turn this will uncover flawed assumptions in the over the counter derivatives markets. The future is likely to be filled with some surprises for investors.

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