

# **From the Desk of the CIO: Chain-Reaction Economics<sup>1</sup>**

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<sup>1</sup> Adapted and updated from a speech originally presented in London on June 20, 2008



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Good day. Let me take a moment to thank you all. I am pleased by the enthusiasm of the crowd here at the Bloomberg Inflation Conference, and I am humbled by the welcome I have received in recent months, since announcing my departure from PIMCO, and my establishment of Armored Wolf.

It is an honor to address you today. I look forward to sharing with you my comments, which reflect my personal views, and not those of any organizations with which I am, or have been, affiliated.

Anyhow, among the distinguished, and the inspired attending, I am glad to see the friendly, but lined, faces of experienced inflation market veterans, and fresh new faces of the young, bright, and ambitious Generation Xer's.

This conference is hugely oversubscribed, and of course we are not surprised. Inflation is the topic of the day, and for me, has been a key topic of my career. The intense study and management of inflation has catapulted me from the ranks of obscurity.

No one welcomes inflation. For most people it is among the most devastating of afflictions. We are starting to see this now, in locals ranging from Orange County, to Dubai; and from Shanghai to Ankara.

Yet we should not conclude that inflation is a new affliction, or even a modern affliction.

3000 years ago, the first strike in recorded history occurred in Egypt. Records

indicate that the cause of societal stress was clear: rising prices for grains and goods were becoming unbearable, and workers rebelled.

1000 years ago the Chinese invented paper money. It was scarcely a hundred years before the runaway inflation debased that currency, and wreaked havoc on the local economy.

Despite history, technocrats, and populist seem perpetually intent on bartering monetary vigilance in exchange for a quarter or two of higher real growth, or in hopes of finding political cover from rising unemployment.

It seems that they think that by being serial money printers, and currency debasers, they will somehow fool, or forsake, investors, savers, risk takers, and international capital providers. They hope to magically and permanently lift domestic spirits. Such attempts are not only short sighted, but ultimately, always ineffective and damaging.

This seems to be a lesson that needs to be continually relearned. Today, in my speech, I will hopefully challenge you in that regard.

I will not stop there. In addition, to addressing inflation, I will talk about commodities, cyclical challenges and financial market disfunction.

Before I dig down into all that, I will take a step back, and introspect.

I will talk about where we came from, and where we, that is the global population of seven billion people, are going. I will start with you, the audience.

I know some of you are here from London, while others are from far away

places like NYC and, speaking for me, sunny California.

So we, here in this room, come from the recognized global urban centers of the universe. However if, instead this room reflected world populations more broadly, we would have equal representations from Nairobi, Caracas, Mexico City, Mumbai, Ho-chi-min City, Hong Kong and Beijing.

Is that our composition here? I suspect not. Our make up here reflects the past. It reflects the world distribution of wealth and influence, not of current world populations, or future influence. In the nineteenth and first half of the twentieth century, expertise, access, infrastructure, and wealth were concentrated in the hands of the few.

That was the case, and to a large extent still is the case, but in about 1946, the middle class started to grow. The middle class was increasingly empowered. In particular the masses, in Europe, America, and industrialized Asia were enriched economically by industry, democracy, and the end of fascism. The birth of the great civilian economies around the world has already paid handsome dividends.

I am a believer that this empowerment will continue and accelerate, not just locally in NY, and London, but globally. If I am right, by the end of the twenty-first century, we may be able to witness almost universal economic empowerment of the earth's 7 billion inhabitants.

We are not all optimists, there are great temptations, drawing analysts toward pessimism. For an analyst, or an expert, who is paid to sound educated, erudite, profound, and grave, it is much easier to sound

important by being a pessimist, than an optimist.

In in the short term, pessimism, and risk-management down to the quantifying down to the last dollar counter-party exposure is called for. Portfolio risk-metrics become meaningless in the context of the recent collapse of Fannie Mae, Freddie Mac, Lehman, ML (merger), AIG, money market funds, and most recently unprecedented government policies. In a span of 7 days we had announcement of policies relating to Open Market purchases of distressed assets by the Treasury (\$700 Billion), bans on short sales by the SEC, government guarantees on 2(a)7 Money Market Funds.

The Fed has been in play as well, though not lowering the official target there has been in effect, a complete disintermediation of the private money markets by the Fed injection of hundreds of billions of high-powered bank reserves, which have been in effect sterilized, by similarly sized, emergency sales of T-Bills by the cash management officers at the Treasury.

I will, nevertheless, remain an optimist, particularly given the current wave of global empowerment. The median income person in the world is only just now beginning, for the first time, to enjoy the fruits of industrialization, described by the Scottish social philosopher Adam Smith, 232 years ago.

Though Smith found it easy to describe efficient organization of production, the reality is that it is very difficult for societies, particularly ones with limited means and limited capital, to implement the shift Smith prescribed.

Moving from low productivity manual labor, to high productivity industrial

production is hard. It took Smith's Scotland, perhaps 100 years to move from a majority agrarian society to a majority industrial society. It has taken another 100 years for this shift to be propagated to newly industrialized countries like Taiwan and Korea.

It is not the slow spreading of this transformation which brings me to the podium today.

Something different has been happening in the last 5 years, and its been driving growth, its been driving inflation and its been driving investment returns. This shift, which was occurring slowly is now accelerating. In particular, it is now occurring in an accelerating chain-reaction fashion.

The results are striking. It is this chain-reaction, using terminology from Einstein, that is growing global GDP at better than 5% not just in 2007, but for the past 5 years! 5% real growth is high, it is among the highest sustained levels the globe, and humanity going back to the beginning of recorded history, has ever seen!

Are these record rates of global growth coming at the cost of income equality? Not-at-all.

To understand income inequality one need not consider the calculus of sociologist, or economists; we need not consider Gini coefficients or the like. We know that bringing 4.5 billion people up, and out of poverty, reduces income inequality. Empowering a hand-to-mouth hunter, gatherer, farmer, or peasant, and bringing him, or her, into the global economy involves a huge equalization of global welfare!

I will transition here, and start to tie this back to inflation, which is, after all, the topic of this gathering, and try my hand at answering some of the big questions we are all asking, like why is inflation now rearing its head?

Previewing the punch line of today's presentation, let me point out that all the important global phenomena which have driven inflation to its current level, remain in place. Inflation is with us now, it is here to stay, and it will only get worse in the future.

If you want to hear what, where, when, who, and how much, stay tuned.

With that as my introduction, and promise, let me give you a quick preview of some the topics which I will touch upon in today's talk...

Inflation: the forces that create inflation, have been in place, and they remain in place, so inflation will be on the rise.

Crisis: The primary current impulse from this crisis is deflationary. 100,000 Wall Street layoffs and redundancies are the immediate impact of just the latest chapter in the Housing/Banking crisis. Beyond Wall Street, in states where Ford, GM, HP, Dell and others have announced layoffs are on top of this.

However, with the hundreds of billions if not a trillion or more of taxpayers money, not to mention direct monetization, the ultimate effect will clearly be inflationary. A greater risk facing us now is that the liquidity injections and the extension of safety nets may already be sewing the seeds of the next bubble.

Regulation: big government works better when it emulates markets, and works best when it re-inforces the harsh penalties for incompetence of the private sector.

While the recent unprecedented government intervention deeply concerns me, I trust in the inherent market focus which I believe Secretary Paulson will try to maintain in crafting a solution to the mortgage crisis.

Growth: Global growth is currently high. Inevitably it will slow in the coming quarters. Following the cyclical impact of the financial crisis, and the cyclical impact of the balance sheet implosions we are now in the midst of, the after effect of the policies will come to bear. Nominal growth, perhaps partially inflationary in nature, will eventually go higher as global populations continue to be empowered.

Global growth may cyclically slow to 3% real, given the current financial turmoil. However, I expect it to return to 5% real, given development dynamics, once the current financial turmoil is stabilized

Oil Prices: are in a super-secular bull market; though there will be pauses and corrections, the trend is clear. Expect retracements, even to as low as \$60-70/barrel, but bank on \$200/bbl by 2012.

Well, before we dive into that ambitious agenda let me share with you my uniquely LA perspective.

As you know, I hark from California. So I thought, I'd take a moment to share with you, a reporter's view of what we are experiencing there.

One of the biggest issues is gasoline prices. On a daily basis, my wife, and my soon-to-be-driving teenage son, tell me about the latest developments in gasoline pricing. Oh trust me, though neither my wife, nor my son manage a commodity fund, they are not shy about explaining to me the mechanics of how gasoline prices are determined.

Beyond my family, local TV station reporters run around with microphones in hand, asking "what's going on!" Well, the humorous thing for us in California, or the sad thing for you here in London, is that in America Gasoline is almost free by UK standards.

The five dollars a gallon, which creates sticker shock in California, amounts to just seventy pence a liter! Anyone in London, want to buy petrol at seventy pence a liter? I know we'd have a gaggle of takers!

Let me now turn to the economy.

Virtually my whole adult life, I have been the beneficiary of one of the greatest tailwinds ever experienced.

Economists, call the period of the past 30 years the great moderation. It is a period of managed inflation, relatively robust growth, and perhaps most importantly, extraordinarily low volatility in real GDP growth.

However the great moderation is by and large a developed world phenomena. It involves management of the monetary policy in the major currencies, and financial innovations that fosters growth.

Recently, in the past five years the action has been in the developing world, and that is where my comments will now focus.

The global investment environment is in the midst of the massive, and far-reaching trend that I alluded to earlier. The central role of this migration is just now becoming recognized by leading investors and capital allocators. This trend has been the driver of investment returns for the past 5 and 10 years. I expect will be instrumental in driving returns going forward for the next 5 and 10 years, once current markets stabilize and recover.

Succinctly this wave involves the migration of 4.5 billion farmers from the countryside of developing countries, into cities and regional urban centers.

This unleashing of labor on the global market has been both a boon and a bust. It has certainly resulted in some stress, as the massive changes it implies, results in some adjustments.

Wages earned for unskilled labor, and prices paid for mass produced products are experiencing rapid convergence to the lowest common denominator. This has been a boon to companies, and consumers that use such resources.

On the other hand, prices for raw materials, industrial goods, and energy have skyrocketed. Though use of, for example, crude oil among developed nations has been falling for a number of years, as their growth has been tepid, and their energy intensity decreasing, use of crude oil in developing countries has absorbed all of this, as well as the modest increases in global production.

As their economies experience explosive growth, and a shift from agriculture to industry, they are becoming increasingly dependent upon imports of industrial scale energy products.

While these forces conceptually have both disinflationary aspects in the finished goods and wage sectors, and inflationary aspects in the raw materials and commodity sectors, the overall effect has been clearly on the side of reflation, and now inflation.

This is far from a tautology, or inevitability. As always, inflation is everywhere and anywhere a monetary phenomenon. Monetary policy across the major currencies, and in the Global Reserve currency, has been on balance accommodative for the better part of a

decade. Given the intensive management of the current financial crisis, this policy stance is set to continue for the foreseeable future.

I'd like to tie these comments on global population empowerment into commodities, with some GDP, and commodity consumption arithmetic.

Recently, the globe experienced GDP Growth of 5%. As I said earlier, that is a blockbuster number, even though it is likely to slow down some, to perhaps 3% next year.

This is still high, and it is a surprise to some, or even many, because the developed countries are not growing robustly. As you are all reminded daily by our media, US is flirting with recession, or worse stagflation. For 2008, developed economies I suggest will grow a modest average rate of 1.0%.

The developing world, on the other hand, is growing rapidly. It is not news that China, not a small country, grew at 11.9% in 2007. On average the developing world will likely grow at about 8% in 2008. That shouldn't be news either.

Industrializing developing countries have always grown rapidly, whether it was Japan in the 70s, Korea and Taiwan in the 80s, or China now. So what has changed, why is such developing country growth now important, not just for development economists, but for global financial markets?

The answer is simple. Scale. The scale of growth is no longer measured in the thousands or millions. It is measured in the tens of millions, hundreds of millions, and billions!

About 70 years ago, as I mentioned earlier, Einstein popularized the term, "chain-reaction."

For nuclear fission, the term chain reaction describes the process that occurs once you have a “critical mass” of Uranium-235 confined to a small space. In such circumstances once the first Uranium atom spontaneously splits, it results in collisions of subatomic particles with neighboring Uranium atoms, triggering their not-so-spontaneous ebullience. This in turn releases multiplicatively more subatomic particles with each generation of collisions.

Within a few milliseconds you have a multi-kilo ton, or today giga-ton, release of nuclear energy, and a mushroom cloud rising.

As far as the spread of industrialization goes, we are there. We have critical mass. The chain reaction has begun. The empowerment of a few villagers of one generation of workers, now leads to the empowerment of multitudes in the next. On even shorter timeframes, we are seeing migration, and distribution of infrastructure, and even technology and information, at accelerating, chain-reaction rates.

Some of the most industrious regions are even skipping-over 50 or a 100 years of technological development, as western companies are installing helicopter pads, mobile phone towers, and manufacturing centers in rural communities!

In the past such growth was exclusively export oriented. However, that has changed. When trillions of dollars reside in Sovereign Wealth Funds’ aching to get deployed in tangible investments, it is difficult imagining that infra-structure projects and industrialization more generally will be put on hold due to cyclical considerations.

So what does this mean for global growth. We can look at the arithmetic.

We have developed countries accounting for now about three quarters of Global GDP, and Developing Countries accounting for just one-quarter.

Working through the math, however, if next year the developing world grows three times faster than the developed world, the respective contributions to world GDP growth in 2008 will be about equal.

So what does that mean for commodity demand. The calculus is obvious.

When *developed* countries add a trillion dollars of GDP to the world pie, they generate that income through the expansion of services, intellectual property, and royalties. Sure an iPhone, blockbuster movie, or road-show for a bond offering, involves some material resources, but not so much so.

Given the secular rise in trend commodity prices, and the strong incentives therefore to reduce consumption, so not surprisingly, total volumes of commodities consumed among *developed* OECD nations overall has been shrinking, and we will likely see that trend continue for the indefinite future.

How about in the *developing* countries? Though some of the GDP growth is intellectual in nature, much of it comes down to industrialization. We know from experience that in such circumstances the use of commodities moves up with output, in about a one to two ratio. For each 10% growth in developing country GDP, we see about 5% increased use of commodities.

Bottom line is that global commodity consumption, averaged over business cycles, will likely grow at about 2.0% per year for the indefinite future.

This provides a super-secular backdrop with which we can understand commodities and inflation.

## Cyclical Factors

I will discuss the business cycle, and technical factors that drive growth, inflation and the financial markets over shorter horizons. In particular, I would like to briefly touch on Housing and the Consumer; Bank De-leveraging, SIVs, and ABX.

This year's market action did not just suddenly fall upon us, it had roots. We know those roots were housing, and perhaps before that monetary policy. I will touch on housing.

We have a bit of Ying and Yang going on in housing. We have greed and fear; we have boom and bust; we have predator and prey. Essentially we had 10 years of building euphoria, mostly in the US, UK, Australia, Spain and Ireland, followed by now 24 months of trepidation and finally panic.

The beginning of the end was a flattening out of house prices. The signs were there in summer of 2006, almost exactly 2 years ago today. For you see, without appreciation, the Ponzi nature of the scheme is exposed. The band stopped playing; and only the most drunk of the party goers continued stomping their feet and clapping their hands.

This led to the first cracks of a financial nature. Not far from my offices in Orange County California, New Century Financial, one of America's largest sub-prime lenders, imploded in March of 2007.

Three months later, by June of 2007, the Leveraged Loan Pipeline got indigestion. Sadly, still no one told Chuck Prince, the

now former CEO of Citicorp, that the music stopped. He, and CEOs of most other firms, kept dancing.

This brings us back to housing. The financial contraction, which was initially triggered by weakness in housing, had, in turn feedback to housing, resulting in a second round of stress, and markdowns. Soon housing, financial assets, and obviously bank capital, were sliding.

Canadian SIV's were partially levered, and exposed to the slide. These cousins to money market funds used financial derivatives to enhanced yields on CP they issued and rolled, as well as to pay their premium management fees. Conceptually the derivatives they entered into were sound. However implementation was amateurish at best.

First, the super senior derivatives structures were levered, perhaps in an attempt to target an 80 basis points premium. Second, there was minimal or inadequate disclosure, and the CP buyers seemed to be unknowing participants, or wrongly assumed that there were robust back-up liquidity lines in place.

Third, there was no investment judgement involved. As spreads on Super Seniors tightened, gains accrued. But rather than reducing leverage as reward to risk fell, leverage was increased in order to maintain the targeted yield.

Eventually, when super senior spreads got inside of 8 bps, to achieve targeted yield enhancement of 80 or more basis points, these super-senior notional exposures had to be levered 10 or more times.

When the music stopped, party goers found that many were left without a seat.

So that is the horror story, the black comedy of errors, on which the curtain started to fall 24 months ago, and seems to have reached in 2008.

When did it end, or better yet, is it over? Is the worst behind us? I will try to answer. First we should look into this a little deeper, and quantify it somewhat.

Now I already warned you that I am an optimist, so already you may not be in my camp.

I'd like to separate the wheat from the chaff in this financial crisis, and provide perhaps a counterweight to the chorus highlighting the risks.

First, we can ask, is US housing grossly overvalued? My answer is no, particularly now that administered interest rates, market clearing yields, and the dollar have fallen dramatically.

The world is afloat with wealth, and trillions of dollars, in both visible funds, and hidden capital are on the sidelines, waiting to be deployed. In addition to the well advertised sovereign wealth fund war-chests, corporations have been hoarding cash, and keeping gun-powder dry.

The industrialization of third world countries, and the technological revolution going on in computer hardware, software, communications, pharmaceuticals and entertainment are creating herds of new wealthy.

There's no doubt that condos in NY, Washington, and even Newport Beach are hundreds of thousands of dollars cheaper than comparable ones in London, Paris, or Tokyo. One need not focus merely on these

international crown jewel cities of the global economy in order to see that US real estate is trading at a discount, however.

Premium condo owners in virtually all major global cities: Sydney, Dublin, Nice, Hong Kong, Shanghai, Mumbai, Singapore, and Moscow, to name a few, could trade into similar US flats and take out similar dollar amounts.

Some in Washington have complained about the alchemy of mortgage engineering.

While it is prudent for lenders to demand down payments, and to maintain an equity cushion, the reality is with low interest rates and lower home prices, eventually buyers will return to the housing market. National Association of Realtor housing affordability indexes are well off their lows, and prior to the recent back up in yields were back to normal levels for both the first time, and composite indexes.

What about the losses and de-leveraging? Sub-prime losses, that is write-downs of principal and interest on these lower rated loans are manageable. While no one is pleased to hear about 1 million foreclosures, if the net loss is, say \$100,000 on each such foreclosure, the total loss to date, is a very manageable \$100 billion.

This number will increase, so raise these losses ten-fold, assuming the crisis spreads beyond this small corner of the mortgage market, and you get 1 trillion dollars. Now that's a lot, but its comparable in size to an ordinary down week in the stock-markets! With global stock markets capitalized at well over 25 trillion dollars, a 4% down day in the markets amounts to the same 1 trillion dollars.

Do derivatives magnify these losses? Yes, Technically derivatives add to losses:

there are more losers, and bigger losers. Some of these have been publicly acknowledged, and undoubtedly thousands more hiding in shadows.

News flash: every derivative has a payer and receiver, so the net loss from foreclosures is still just the \$100 billion or 1 trillion dollars, arrived at above.

We can count, and already did count, the loss of principal and interest due to foreclosures, but all additional losses for derivatives are off-set by equal size gains to someone, assuming there is no counter-party default.

Arguably, since derivatives dissect losses into sequential tranches, and disperse the riskiest pieces across larger pools of capital around the globe, they facilitate efficient risk sharing.

The 4 Norwegian villages whose municipal pension were over-exposed to sub-prime CDO's were profiled in the NY Times as an outrageous example of fraud and mismanagement, rather than the typical situation.

What about de-leveraging, and the wealth effect. Well, yes, de-leveraging does involve the dramatic shrinking of balance sheet. We are already seeing this. One has to ask what exactly was on those balance sheets. Fundamentally, risk on a balance sheets has to go somewhere.

Balance sheets themselves, liabilities funding risk-less assets, however can expand or shrink without any economic consequences.

To the extent simple transactions involving little risk were made into complex transactions, involving a large off-balance sheet liabilities and risk-less assets, those transactions can be unwound with no macroeconomic implications whatsoever. Of

course the toll taker charging fees on risk-less balance sheet will notice, and such fees are substantial. But I don't think they were ever the *raison-d'être* of either the US, or the global financial system.

In the case of the Canadian SIV's the derivatives are being acknowledged and the winners and losers netted, or the terms of the derivatives being allowed to run out. Though these derivatives, have incurred huge mark to market losses, short of a financial Armageddon, most of these derivatives can literally mature without a loss.

In an Armageddon scenario, I would suggest, you, like Sara Connor from Arnold Schwarzenegger's movie the Terminator, would be better protected by a side-arm than a credit-default-swap anyhow!

The remaining money good assets in the Canadian SIVs are being netted against money good liabilities, and cancelled with no economic impact.

Since the SIVs served little economic purpose to begin with, I don't suspect that the economy will suffer much from the absence of Canadian SIVs, or any other SIVs!

Might there not be a wealth effect associated with the housing decline? Much is made of the wealth effect, however, little of it is born out in the real world. Some years ago while at the Fed, Greenspan and Maki, for example examined econometrically the relationship between housing wealth and spending. The results were striking.

According to their work, the relationship is quite weak. Homeowners hesitate to spend housing wealth, and the little they do, occurs with long and variable lags.

Cash-out refi's, which are famously known as being the source of ski-boats, and family vacations, Maki argues generally go into payoff loans from 401K plans, or are more directly used to bolster retirement assets.

Now, I agree, incurring economic losses is different from de-leveraging. But most of the hype we have been reading is about de-leveraging, and derivative losses.

De-leveraging and derivatives are canards--real losses, and tangible risk-taking on the other hand are what I focus on, and though obviously not pleasant are far from cataclysmic.

Short Term Supply. Longer Term Supply

There has been unrelenting news coverage of the volatility in commodity prices we have experienced recently, and I have been watching it closely. Commodity experts of all stripes, and a number who claim to be experts in other fields entirely, have weighed in.

Of course there must be a villain responsible, and Congress and the media have been on a hunt. OPEC is a target, as are oil companies, refiners, and even local gasoline stations. Some are also beginning to target the investment community, including short-sellers and commodity investors.

This is sadly misguided, along a number of dimensions.

First, a close scrutiny of commodity markets shows that increases in commodity volatility is widespread across all products. In particular, though prices have skyrocketed and then plummeted for a number of products that are exchange traded, and included in broad commodity

indexes used by financial investors, price volatility has also been dramatic in virtually all commodities that are traded exclusively Off-the-Exchange. Some of these off-exchange commodities are only traded directly between producer and consumer.

Now wouldn't it be odd, wouldn't the witch hunters want to know, if volatility in commodities that were traded exclusively off exchange, between producers and consumers directly, occurred earlier in the day, and only later in the day triggered volatility in the prices of exchange traded commodities? Wouldn't it be odd if OTC commodities rallied as much, or more, than the supposed "financially driven" exchange traded commodities?

Phil Verleger, a distinguished MIT trained Petroleum Economist, former Valero board member and mentor of mine, suggested that in 2006 and 2007 jet fuel prices, which are not in any financial commodity indexes, or traded on any futures exchanges had just such characteristics. Similarly, he has suggested, that in 2008, OTC trading of European Distillates, including Diesel Gasoline and Heating Oil, have been driving the exchange traded energy complex.

He alludes that their intraday moves lead price moves on futures exchanges, and over time, these commodities' moves were larger than the more financially oriented contracts into which long only index funds move huge sums.

A second fallacy is that investors hoard, or consume, commodities. Financial participants in commodity markets generally are not involved in spot markets. Their positions, sometimes large, are typically in the second month commodity contract. Long-only index mutual funds NEVER take

delivery of commodities, and they certainly never consume commodities.

Only commercials, or more precisely, end-user of commodities consume, commodities, and therefore, it is only consumers that can define demand curves.

Ultimately, it is intersection of the spot supply curve, that shows where actual physical oil is supplied, and the spot demand curve, that shows where actual oil is consumed, that determines spot prices.

Though spot supply, and spot demand determine prices, Joseph Stiglitz, the Nobel Laureate Economist, has eloquently pointed out that expectations might play a role in setting spot supply and demand curves.

He resurrected a theoretical model that suggests the supply and demand curve may include backward bending sections. Due to the interaction of expectations and supply, these backward bending slopes can result in cross-overs, or what economist call multiple equilibria.

Consequently, if consuming nations, like US and China, misplay their hand badly enough, and appear excessively desperate in their efforts to secure strategic oil supplies, they may shift prices from the low “equilibrium” price to the “high” equilibrium price.

In the high equilibrium, not only are consumers so panicked, and stressed that they pay high prices, but producers are so awash in financial liquidity that they can easily meet their local social obligation, build up cash balances, and pump less oil than they would need to at low prices to meet those same need. In the high price equilibrium, both suppliers and consumers are driven to exchange dollars for barrels at a premium level.

What incentive, aside from outright charity do producers have to engage in fierce bidding war for scarce geological and petroleum engineering talent. If they expand output, the liquid reserves they control in the ground, will merely be replaced with liquid reserves of dollars, earning a mere 2% at the Fed window, and more than likely depreciating in value against other currencies.

Perhaps it is merely a coincidence that this shift from a low equilibrium price, to a high equilibrium price, occurred just as major super powers like US, China and Russia, sought to replace market mechanisms of 1990s, with the “strategic/military” acquisition policies that have characterized this decade.

Major papers, and local discussion groups are quick to raise other concerns, or distractions, regarding oil market dynamics. Flavors vary.

One concern is that some countries subsidize their citizen’s internal consumption. Is this true? Yes. But does it somehow distort the world supply of oil? No.

While the consumers in these nations most certainly are underpaying for gasoline they are consuming, their governments are paying the difference. Whether such government policies are good politics or cost effective is not really for me to say. Obviously such governments are realizing huge losses on the gasoline they are securing and such programs fall more in the category of social spending than some kind of conspiracy against the global energy markets.

Ultimately, beyond vague commentaries, I and international organizations can do little more than advise

or recommend countries on how to run their internal social programs. Ultimately, in this world, sovereigns are free to decide how to spend or not spend their national wealth.

In any case, most countries do not fall into the subsidizing energy use camp. Most countries, few more than the UK, tax energy consumption. This presumably has exactly the opposite effect. Hard to say, in global aggregate, what the net affect of these two phenomena is, but I suspect governments globally levy more in taxes, than they pay out in subsidies.

Bottom line regarding oil markets is that jaw boning, strategizing, and central planning on a local or global scale are distractions and ineffectual.

While there are limits to rationality, all my work in oil over the past 20 years, suggests that its not friendship, alliances, treaties, or altruism that motivate consumers or producers.

Forget about nationality, religion, race, or history when it comes to forecasting oil flows; profit maximization, including the present value of future revenues for producers, and utility maximization for consumers are the best spectacles serious analysts can wear.

Conclusion/Back to California

As I wrap up here, I'd like to bring you back to California.

We are all creatures of habit. Few of us are petroleum economists, captains of supertankers, or run refineries. We judge prices based on experience. So for Californian's gasoline at five dollars creates sticker shock. It creates conservation.

I have witnessed this first hand. The world famous "Los Angeles Freeways,"

known for their crawling gridlock, known for the oxymoronic eight hour, "rush hour" are flowing freely, like wine at Bacchus's afternoon orgy.

There may be a few in California without sticker shock, and given that I have been running the worlds largest commodity fund for the past 5 years, I fall into that category. Given the widespread sticker shock among my friends and neighbors, however, Southern California has taken a pause. They have taken a sabbatical from car worship. Now you can experience freeways where the only traffic on it is you, and your friendly California Highway Patrol Officer!

Is there a lesson? The lesson is that the economy works, and it is eventually self correcting. Demand does respond to prices. Excesses are being reigned, albeit in a very violent way, and eventually productive effort will resume. But do not get too comfortable.

There is a bigger world out there, now. LA is not the center of the universe. In Mumbai, and Shanghai, the motors are starting, and the chain-reaction is progressing. There are long-term, fundamental forces driving the markets. These longer term forces must remain the compass by which we guide our secular investment themes.