

THE 2008 COMMODITIES BUBBLE

Assessing the Damage to The United States and Its Citizens

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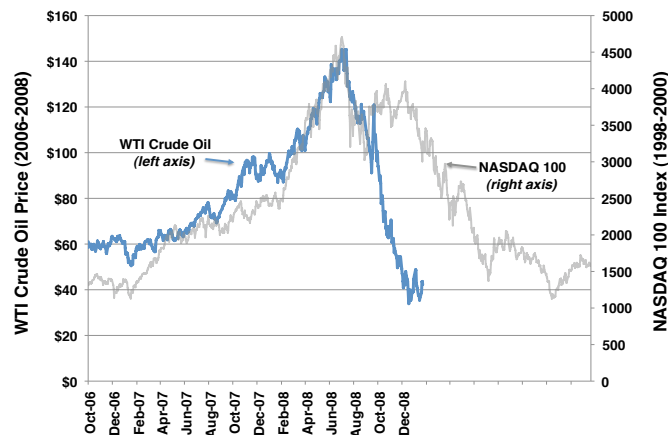
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- The U.S. entered a recession in December 2007. The supply of crude oil increased and the demand for crude oil decreased during the first half of 2008. During this time, crude oil prices defied the recession, defied the laws of supply and demand, and defied gravity by climbing an astonishing 60%, from \$90 per barrel in January to \$147 per barrel in July.
- Beginning in July 2008, the commodities bubble popped and crude oil and other commodities plummeted in price. Crude oil fell by more than \$100 per barrel (75%) in just six months. Never before in history has price of crude oil fallen this dramatically.

Chart 1. WTI Crude Oil Price 2006-2008 with NASDAQ 100 Overlay



Source: Bloomberg

- The bubble in crude oil, natural gas, and other commodities cost the U.S. more than \$110 billion in 2008, which translates to over \$846 for every American household. The effect was to take an already weak and frail economy and push it down the stairs.
- The commodities bubble amplified the effects of the housing bubble and financial crisis, making them much worse and leading to more bankruptcies, more job losses, and more foreclosures than we would have experienced otherwise.
- *This was completely avoidable.* If speculative position limits had been in place across commodities derivatives markets, then there never would have been a commodities bubble in 2008.

Special Report

February 4, 2009

“You have a generalized commodity bubble due to commodities having become an asset class that institutions use to an increasing extent.”

George Soros

One of the most famous and successful hedge fund managers of all time

April 17, 2008 Bloomberg article

“Oil is a huge mania, and it’s going to end badly. We’ve seen it play out hundreds of times over the centuries, and this is no different. It’s just the nature of a rip-roaring bull market.”

Paul Tudor Jones II

One of the most famous and successful commodities traders of all time

June 2008 edition of Institutional Investor’s Alpha Magazine

“You’ve got speculation in a lot of commodities and that seems to be driving up the price, . . . Movements are dominated by momentum players who predict price changes from Wednesday to Friday on the basis of the price change from Monday to Wednesday.”

Dr. Robert Aliber

Distinguished Professor at the University of Chicago

Co-author of “Manias, Panics & Crashes”

June 13, 2008 Bloomberg article

“Commodities followed the euphoria cycle that we had along with housing,”

Robert Schiller

Distinguished Professor at Yale University

Author of “Irrational Exuberance”

October 13, 2008 New York Times article

“This is a market that is basically returning to the price level of a year ago which it arguably should never have left, . . . We pumped up a big bubble, expanded it to an impressive dimension, and now it is popped and we have bubble gum in our hair.”

Tim Evans,

Energy Analyst at Citigroup

October 10, 2008 research report

This report is comprised of two parts. Part One discusses new evidence that has emerged which confirms the role of institutional investors in creating the commodities price bubble of 2008. Part Two talks about the devastating impact felt by America and its citizens as a result of the commodities price bubble.

PART ONE – NEW EVIDENCE EMERGES

We released two reports in 2008 that provided strong evidence that institutional investors had been responsible for inflating many commodity prices, including oil. Since those reports were released, we have seen three new and very significant pieces of evidence come to light that conclusively prove that oil and other commodities experienced a price bubble in 2008.

The United States Entered a Recession Prior to 2008

The United States economy is the largest in the world, contributing over 20% of the world's total economic output.¹ We are also the world's largest consumer of energy, with a similar share of the world's total energy consumption.² Looking just at oil, the United States consumes approximately 20 million of the 85 million barrels that the world produces each day.³

According to the Business Cycle Dating Committee of the National Bureau of Economic Research, the United States officially entered a recession in December of 2007.⁴ Real economic output peaked in the fourth quarter of 2007, and began to fall as we entered 2008, marking the beginning of an economic recession.

Given this economic backdrop, oil prices should have been falling rather than rising. What can explain how oil prices could rise by an incredible 60% - from \$90 per barrel in January to a peak of \$147 per barrel in July - while the world's largest economy and consumer of energy was moving deeper into a recession?

Clearly, oil prices were not responding the way the economic textbooks would expect. Something else was driving the price of crude oil higher.

¹ CIA World Factbook based on 2007 estimates. <https://www.cia.gov/library/publications/the-world-factbook/index.html>

² "World Primary Energy Consumption (Btu) 1980-2006," Energy Information Association - United States Department of Energy, December 19, 2008. <http://www.eia.doe.gov/pub/international/iealf/tablee1.xls>

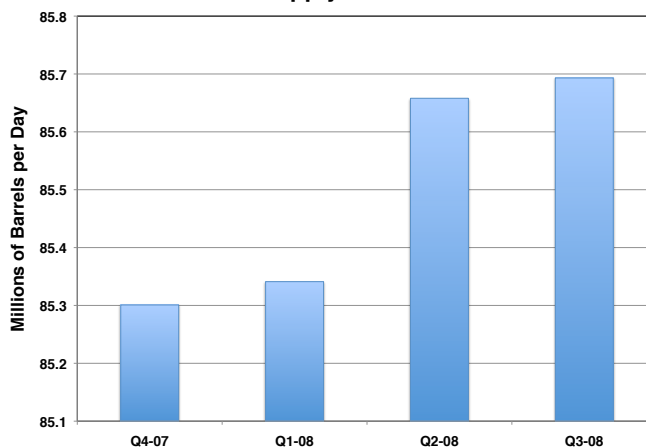
³ "World Oil Balance 2004-2008," Energy Information Association - United States Department of Energy, December 19, 2008. <http://www.eia.doe.gov/emeu/ipsr/t21.xls>

⁴ "Determination of the December 2007 Peak in Economic Activity," Business Cycle Dating Committee, National Bureau of Economic Research, November 11, 2008. <http://www.nber.org/cycles/dec2008.html>

World Oil Supply Was Rising While World Oil Demand Was Falling During the First Half of 2008

Almost every explanation proffered by anti-bubble theorists for oil's dramatic rise in the first half of 2008 focused on the supply and demand for oil. But we now have hard data that proves that the world supply of oil was actually rising while the world demand for oil was falling in the first half of 2008.

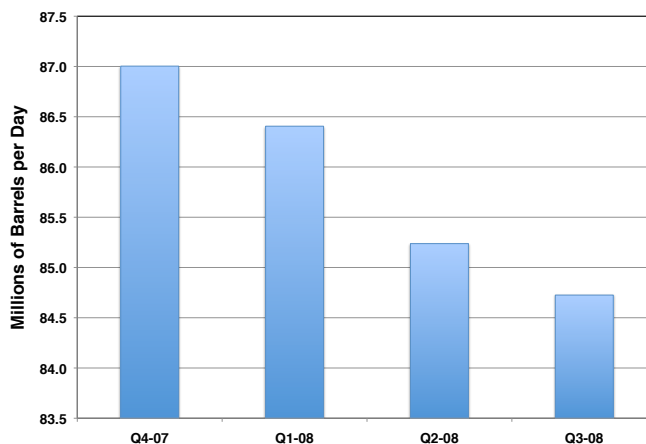
Chart 2. Worldwide Oil Supply



Source: Energy Information Administration, U.S. Department of Energy, "World Oil Balance 2004-2008," January 13, 2009.

The Energy Information Administration (a department within the United States Department of Energy) has released figures for world oil supply and demand. These figures (depicted in Chart 2 above) show that world oil production rose in the first quarter of 2008 and rose again in the second quarter of 2008. At the same time, as Chart 3 below shows, world oil consumption fell in the first quarter of 2008 and fell again in the second quarter of 2008.

Chart 3. Worldwide Oil Demand



Source: Energy Information Administration, U.S. Department of Energy, "World Oil Balance 2004-2008," January 13, 2009.

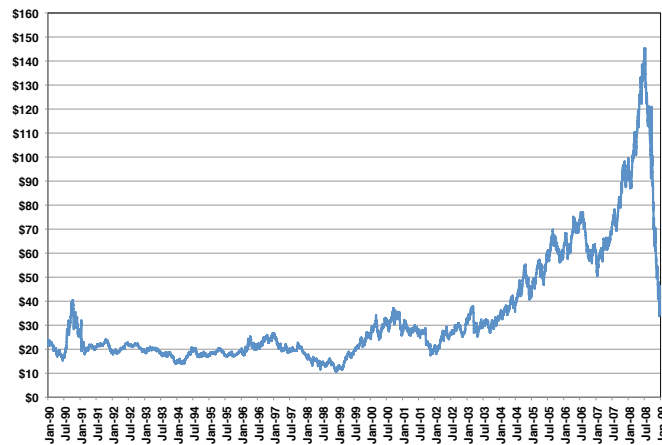
With supply increasing and demand decreasing, economic textbooks would predict that prices would fall substantially. How, then, can we explain the spike in the price of crude oil?

It was easier to theorize that the oil price spike was a function of supply and demand when there were no supply and demand figures to reference. But now that the EIA has released the supply and demand figures, we know that they cannot explain the price increase. Oil prices in the first half of 2008 defied a recession, defied the laws of supply and demand and defied gravity with their meteoric rise.

The Crash in Oil Prices Reveals Oil Was a Bubble

The recent crash in oil prices from a high of \$147 to a low of \$33 in less than 6 months is the greatest evidence that oil prices were grossly inflated at the peak. Never before in history have we seen a \$100 drop in oil prices. Never before in history have we seen a 75% drop in oil prices in such a short period of time.

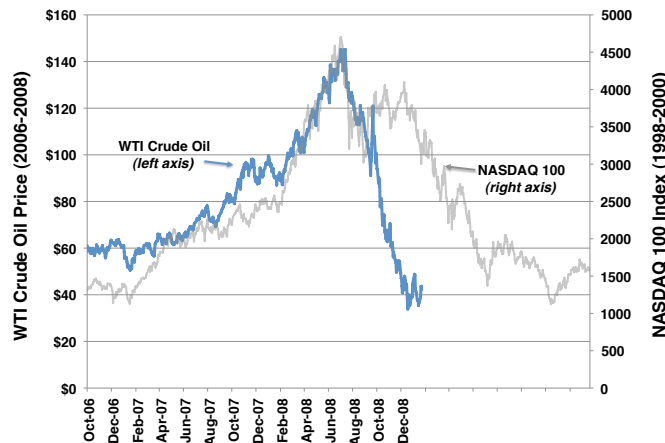
Chart 4. WTI Crude Oil Price 1990-2008



Source: Bloomberg

In the capital markets, where bubbles are commonplace, most oil watchers will privately agree that oil and other commodities experienced a bubble that finally popped in 2008. In Chart 5 we compare the bubble in oil to one of the most famous bubbles – the Internet / Tech Bubble of 1998-2000. As you can see, the Oil bubble expanded nearly as much as the Tech bubble, and burst much more violently.

Chart 5. WTI Crude Oil Price 2006-2008 with NASDAQ 100 Overlay



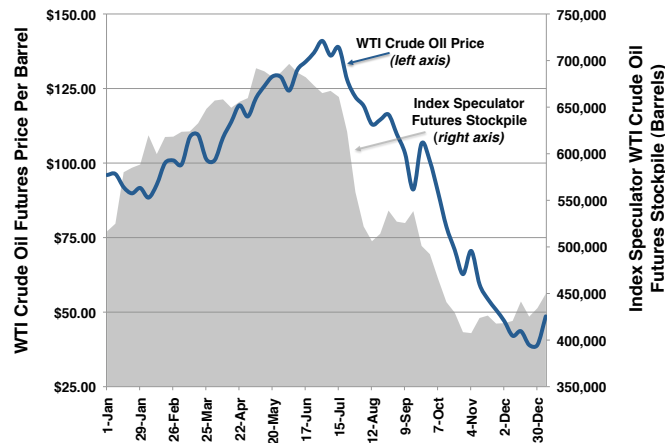
Source: Bloomberg

The Best and Simplest Explanation for the Oil Bubble Is the Flow of Speculative Money into and out of Crude Oil Futures

We have continued to track the flow of Index Speculator money into and out of crude oil futures through the end of 2008. In the first six months of 2008, Index Speculators poured between \$50 and \$60 billion into commodity indices such as the S&P-GSCI and the DJ-AIG, raising total investment from approximately \$178 billion in January to \$317 billion in July. This resulted in the buying of between 130 and 170 million barrels of WTI crude oil in the futures markets, and raising Index Speculators' stockpile of crude oil futures from approximately 517 million barrels to 665 million barrels. We believe this was the primary factor driving the rise of crude oil prices from \$90 in January to \$140 at the end of June.

In July, Index Speculators began to pull money out of commodity indices causing the bubble to burst. In the last six months of 2008, we estimate that between \$60 and \$80 billion flowed out of these trades causing total investment to fall from \$317 billion in July to approximately \$87 billion at the end of December. This resulted in the selling of between 220 and 240 million barrels of crude oil in the futures markets, and taking Index Speculators' stockpile of crude oil futures from 665 million barrels in July down to 435 million barrels by the end of December. This selling on the part of Index Speculators, combined with the de-leveraging of hedge funds and other traditional speculators, were two of the major factors behind oil's historic crash from \$140 to \$40.

Chart 6. WTI Crude Oil Price Versus Index Speculators' WTI Crude Futures Stockpile



Source: Bloomberg, Standard & Poors, Dow Jones, calculations based upon Commodities Futures Trading Commission's COT/CIT report

Chart 6 shows the price of crude oil graphed against Index Speculators' stockpile of crude oil futures expressed in barrels. One can see that as Index Speculators were buying large amounts of crude oil futures and increasing their stockpile, the price of crude oil was rising. As they were selling large amounts of crude oil futures and reducing their stockpile, the price of crude oil was falling. The buying and selling by Index Speculators correlates closely with the rise and fall of crude oil prices. In contrast with explanations offered by others, this is the only one that correlates with the facts.

PART TWO – ASSESSING THE DAMAGE

We have experienced the first bubble in commodity prices since the Commodity Exchange Act was passed in 1936. This historic price bubble was made possible by the deregulation of the commodities derivatives markets and the effective elimination of speculative position limits.

Commodity price bubbles are much more devastating than asset price bubbles. While asset price bubbles are expanding, people feel good about the fact that their paper wealth is increasing. But commodities are not assets; they are raw materials consumed by each and every person on the planet. So as commodity price bubbles expand and prices rise dramatically, the negative impact is felt by every human being around the globe.

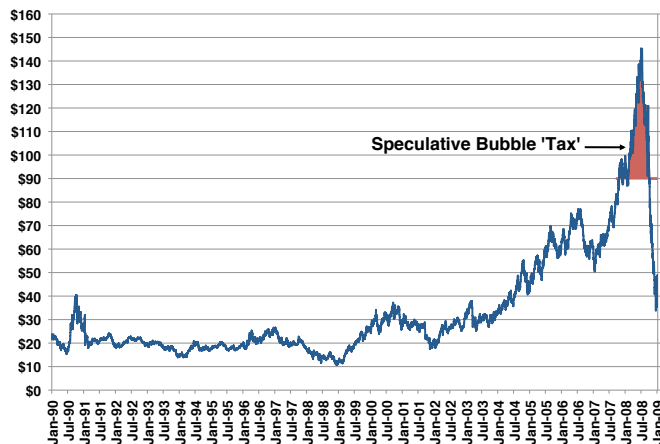
The 2008 commodities bubble has now burst, leaving in its wake a devastating impact on the world economy. We must assess the true cost of this commodities bubble so that society might resolve to never let this happen again.

The Oil & Gas Bubbles Cost Americans More Than \$110 Billion

The oil bubble could not have peaked at a worse time for the American economy. We now know that the United States was already entering a recession as 2008 began. The average oil price in the fourth quarter of 2007 was \$90.50, and oil started the year in the low to mid \$90s. As supply was rising and demand was dropping, the price of oil should have been falling instead of rising.

It is our strong belief that every dollar above \$90 per barrel represented a “tax” imposed by excessive speculation upon oil consumers (see Chart 7 below). Ed Morse, former oil analyst at Lehman Brothers (now with Louis Capital Markets), was recently quoted saying essentially the same thing: “the move above \$90 a barrel was driven by financial flows rather than fundamentals” of supply and demand.”⁵

Chart 7. \$93 Billion ‘Tax’ Imposed by Excessive Speculation in Oil



Source: Bloomberg, author estimates

⁵ “OPEC Calls for Curbing Oil Speculation, Blames Funds (Update2),” Maher Chmaytelli, Bloomberg News, January 28, 2009.
<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a44ddDuoFSe8>

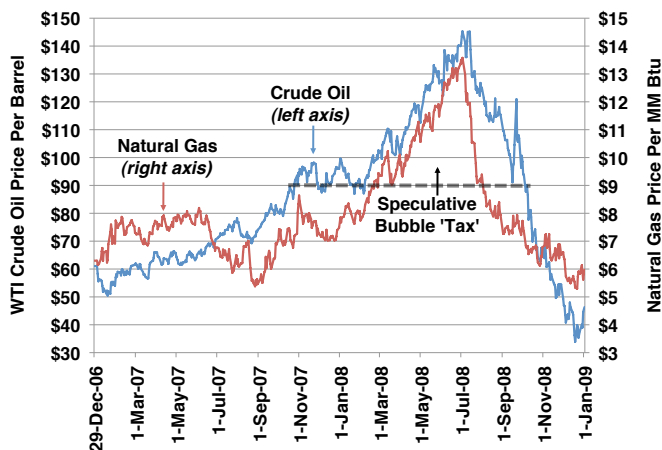
This is a conservative statement to make, considering that oil experts have consistently estimated that oil's marginal cost of production ranged from \$60 to \$75 per barrel in 2008.⁶ With oil around \$40 per barrel today, even a \$90 per barrel price seems grossly inflated. It is hard enough to come up with a rational explanation for \$90 per barrel, let alone \$147.

If we seek to quantify the direct cost to Americans from the oil bubble, it is fair to say that every dollar spent over \$90 per barrel was an unnecessary "tax" imposed by excessive speculation. Let's begin with the fact that Americans consume 20 million barrels of oil per day. If we calculate the daily premium above \$90 and multiply it times this figure, we can arrive at how much the oil bubble directly cost Americans. By our calculations, we estimate the direct cost of the oil bubble to be \$93 billion. The direct cost to the world was approximately \$393 billion.

If we had chosen a less conservative and more realistic assumption by considering anything over \$75 per barrel to be excessive then the total cost to America would be \$170 billion just from the oil bubble, with a cost to the world of \$724 billion.

Turning to natural gas, we believe that every penny over \$9 per thousand cubic feet can be attributed to excessive speculation. Chart 8 below shows that natural gas has historically traded around one-tenth the price of crude oil and that both commodities experienced a bubble in 2008. By our calculations, we conservatively estimate the direct cost of the natural gas bubble to be \$17 billion. Combined with crude oil the cost of these two bubbles was \$110 billion. That means the average American household was forced to pay \$846 more for energy in the first half of 2008 because of excessive speculation.

Chart 8. WTI Crude Oil and Natural Gas Bubbles 2007-2008



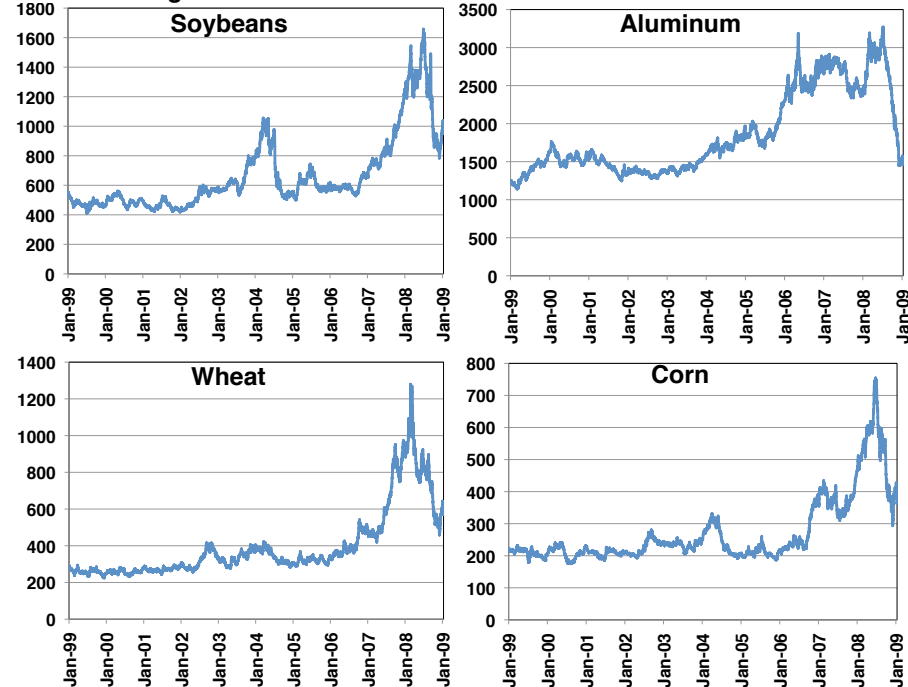
Source: Bloomberg, author estimates

This figure only represents the direct cost of excessively high energy prices. It does not attempt to estimate any of the economic multiplier effects that result from such a large "tax" being imposed. It also does not take into account the bubbles in other commodity prices.

⁶ "Energy Speculation: Is Greater Regulation Necessary to Stop Price Manipulation? – Part II," House Energy Committee, Subcommittee on Oversight and Investigations, June 23, 2008. http://energycommerce.house.gov/cmte_mtgs/110-oi-hrg.062308.EnergySpec.shtml

While we have not performed the same in-depth supply and demand analysis for other commodities to assess the cost of excessive speculation, simply looking at their long term charts in Exhibit 1 shows that many commodities experienced bubbles that popped in 2008.

Exhibit 1. Long Term Charts – Selected ‘Bubble’ Commodities: 1999-2008



Source: Bloomberg

The fact that unrelated commodities such as aluminum, soybeans and natural gas all demonstrate very similar price patterns is further proof that Index Speculators and other institutional investors have been driving commodities prices. While we cannot put a price tag on the cost to America of these inflated prices across all commodities we are confident that the total cost to Americans from the commodities bubble easily exceeds \$110 billion.

In our new world of trillion dollar Wall Street bailouts, \$110 billion does not seem as shocking as it once did, but this number must be put in perspective. The U.S. Congress and President Bush passed the Economic Stimulus Act of 2008 in February of last year. It called for tax rebates of between \$300 and \$600 per person.⁷ By the time this stimulus finally reached the average American, the high cost of energy and food prices had nearly canceled out the entire economic benefit of the bill. At that point, the Stimulus bill simply helped Americans pay the “excessive speculation tax” levied on energy and other commodities.

⁷ http://en.wikipedia.org/wiki/Economic_Stimulus_Act_of_2008

The Commodities Bubble Inflicted Pain on American Businesses

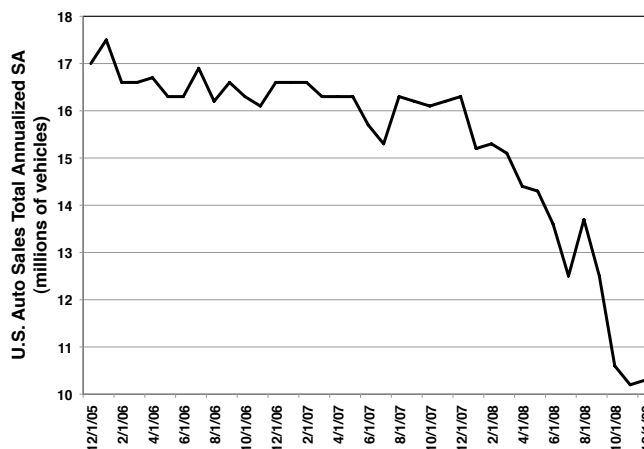
High energy costs made almost everything in America more expensive. It takes energy to produce goods, and it takes energy to transport them through the supply chain. Petroleum is the basis for petrochemicals such as plastic, so the cost of packaging for most goods increased as well.

A single company, Proctor & Gamble, experienced annual cost increases of \$2 billion due to high energy costs.⁸ Dow Chemicals, one of the largest petrochemical manufacturers, was forced to announce an across-the-board 20% price increase for all of their products.⁹

These companies were actually the fortunate ones. Many companies that are more directly impacted by rising fuel costs, such as airlines and trucking companies, were forced into bankruptcy. Many retailers were also forced to go out of business because high food and energy prices led to weak demand for non-essential goods. Against this backdrop of flat to weakening retail prices, many retailers could simply not absorb the rising costs.

For the U.S. Auto Industry, which directly and indirectly employs approximately 2.1 million Americans, the oil bubble was a crushing blow that might yet prove to be fatal.¹⁰ With astronomically high gas prices, consumer preferences shifted away from SUVs, trucks and other “gas guzzlers” to smaller, lighter, more fuel-efficient cars, and as a result, Detroit suffered huge declines in car sales.

Chart 9. U.S. Auto Sales 2006-2008



Source: Bloomberg

The Commodities Bubble Led to Increased Unemployment

As American consumers were forced to spend dramatically more on food and energy, they were forced to cut back spending on non-essential items. Facing weakening demand, businesses were squeezed between rapidly escalating raw materials and

⁸ “Oil Prices Raise Cost of Making a Range of Goods,” Louis Uchitelle, New York Times, June 8, 2008. http://www.nytimes.com/2008/06/08/business/08oil.html?_r=1

⁹ *ibid.*

¹⁰ “One in 10 jobs Tied to Autos? Not so Fast,” Russell Goldman, ABC News, December 19, 2008. <http://abcnews.go.com/Business/story?id=6491455&page=1>

transportation costs on the one side, and weak or no pricing power on the other. While their costs were going up, their revenues were stagnant or declining.

Many businesses went bankrupt, and most that were able to stay in business were forced to cut workers' hours or lay them off completely. This, of course, fed a vicious cycle that continues to play itself out in the economy today.

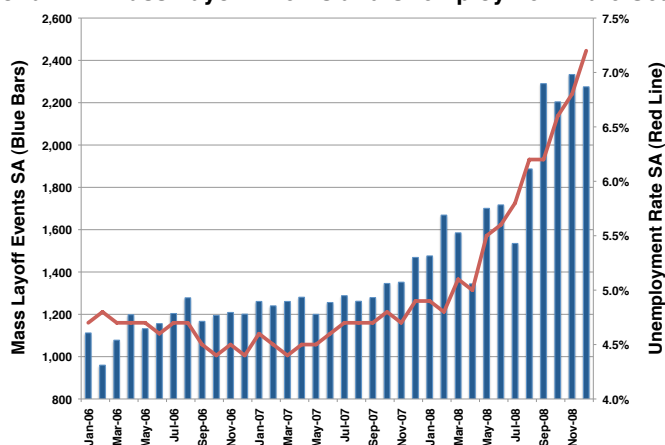
Chart 10. Average Weekly Hours Worked and Overtime Hours Worked SA 2006-2008



Source: Bureau of Labor Statistics

Chart 10 above shows that average weekly hours worked has been dropping since mid-2007. Not coincidentally, oil prices doubled from mid-2007 to mid-2008. Chart 11 below shows the number of mass layoff events along with the unemployment rate. Again, one can see that layoffs and unemployment began to rise in earnest in mid-2007 and have continued to increase since then.

Chart 11. Mass Layoff Events and Unemployment Rate Seasonally Adjusted



Source: Bureau of Labor Statistics

The Commodities Bubble Made the Banking Crisis Much Worse

Because of the commodities bubble, Americans were forced to pay dramatically more for food and energy, leaving them with less money to use to pay their debts. Many were faced with the grim choice between filling up their gas tanks and feeding their families or making their debt payments.

Looking at quotations by James Chessen, the Chief Economist of the American Bankers Association, one can clearly see the role that high food and energy prices played in debt delinquencies.

*"No relief for consumers is in sight as food and gas prices remain stubbornly high and income growth is anemic."*¹¹

- Q4-07 comments on delinquencies

*"It was a tough quarter for some people. . . . Faced with rising food and gas prices and little income growth, fewer resources have been available to manage debt."*¹²

- Q1-08 comments on delinquencies

*"The tax stimulus is helping to boost personal income, but persistently high gas and food prices will eat away at overall resources."*¹³

- Q2-08 comments on delinquencies

In addition to the direct tradeoffs between paying for food and energy versus paying down debts, there was also a disturbing trend in 2008 that was widely reported: consumers opted to pay their credit cards bills rather than make their home mortgage payments. One credit counselor described it this way "Their homes are at risk, and they know it. But people say, 'I don't want to let my credit cards go because that's my cash flow.'"¹⁴ Many people were forced to rely on credit cards to purchase the gas and groceries that they needed, even if it meant risking losing their house to foreclosure.

The Commodities Bubble Made the Housing Crisis Much Worse

We discussed how inflated food and gas prices made it more difficult for people to make their mortgage payments, and how some of those people lost their homes to foreclosure, which put downward pressure on home prices. But that is not the only way high gas prices affected home prices and new home construction.

A study by Joe Cortright, an economist with the non-profit "CEOs for Cities," published a white paper entitled "Driven to the Brink: How the Gas Price Spike

¹¹ "Consumer Delinquencies Up In Fourth Quarter," American Bankers Association press release, April 3, 2008.

<http://www.aba.com/Press+Room/040308ConsumerDelinquencyBulletin.htm>

¹² "Weak Economy Pushes Consumer Delinquencies Higher in First Quarter," American Bankers Association press release, July 2, 2008.

<http://www.aba.com/Press+Room/070208DelinquenciesFirstQuarter08.htm>

¹³ *ibid.*

¹⁴ "More Americans Using Credit Cards To Stay Afloat," Kathy Chu, USA Today, March 30, 2008. http://www.usatoday.com/money/perfi/credit/2008-02-28-credit-cards_N.htm

Popped the Housing Bubble and Devalued the Suburbs.”¹⁵ In the report, he presents very compelling data that shows that as gas prices rose dramatically, so did the transportation costs for families living in the suburbs and exurbs. This made living in the ‘burbs much less desirable, reducing the demand for homes, and causing home prices to drop. Since most of the new home construction was taking place in the ‘burbs, high gas prices undermined the demand for new home construction and contributed to the housing crisis.

Summary

The bursting of the housing bubble and the financial meltdown of Wall Street have had huge negative effects on our economy. Those effects would have been very painful for America even if there had been no bubble in commodities prices. Knowing that the commodities bubble directly cost Americans at least \$110 billion, and understanding that there were many indirect costs as well, we know that it made our present situation dramatically worse. The commodities bubble had the effect of taking a weak and frail economy and pushing it down the stairs.

The extreme volatility that we have seen in commodity prices has been unprecedented in history. This volatility is bad for consumers and producers alike. No one has escaped the damage that this bubble has inflicted.

There is no way to know how our economy would have been performed if there were no commodities bubble in 2008. Perhaps we would have endured a Category 3 storm instead of the Category 5 we are experiencing today.

We do know this: the commodities bubble was completely preventable. If Congress will take action to impose speculative position limits across all commodities derivatives markets, then we can be assured that it will never happen again.

¹⁵ “Driven to the Brink: How the Gas Price Spike Popped the Housing Bubble and Devalued the Suburbs,” Joe Cortright, CEOs for Cities, May 2008.
<http://www.ceosforcities.org/newsroom/pr/files/Driven%20to%20the%20Brink%20FINAL.pdf>