



## Why are gasoline (and oil) prices so low -- and where are they headed?

Posted by [Gail the Actuary](#) on December 8, 2008 - 11:20am

Topic: [Economics/Finance](#)

Tags: [debt](#), [gasoline](#), [oil](#), [oil prices](#), [original](#) [[list all tags](#)]

Why are gasoline prices so low? And why do they continue to drop? The recent drop in oil prices has truly been extra-ordinary. Gasoline prices are down almost as spectacularly, and the price of diesel is down as well. If we look at the graph, it doesn't look at all like anything we have seen before. What is happening, and where is this headed?



Figure 1 - EIA Graph of West Texas Intermediate (WTI) Crude Oil Prices, through 12/2/2008

I am becoming more and more convinced that the drop in gasoline prices has a huge amount to do with all of our credit problems (which in turn are related to limits on the oil supply). These credit problems are causing more and more defaults on debt and more and more bankruptcies. These defaults and bankruptcies have a double impact on oil prices--partly from reduced demand, and partly from distressed sellers disposing of futures contracts at low prices, because they are easy assets to sell.

We often hear that "soon" oil prices will hit a bottom, and start shooting back up again. I am less and less certain that this will be the case. Instead, I am concerned that we may be on a relentless path to a point far below the point where energy companies can expect to have any chance of making money. We may be on a path toward more and more bankruptcies and defaults of all types--energy companies, owners of commercial real estate, homeowners, financial institutions, auto makers, airlines, and many more. If this is the case, there will be a huge strain on governments, and some may find it necessary to default on their debt.

In order to ultimately get past this crisis, it may be necessary for governments to establish new currencies in which debt is severely limited, and at the same time unwind the debt in the existing currency. I expect that a huge amount of derivatives of all types will need to disappear as well, so that financial assets start bearing a close relationship to physical resources.

## Supply and Demand

Most of us who have taken any economics courses have some idea of the expected workings of supply and demand.

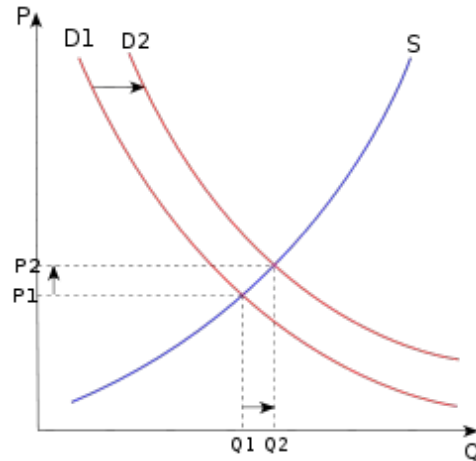


Figure 2 - Graph from [Wikipedia](#). Caption says *The price  $P$  of a product is determined by a balance between production at each price (supply  $S$ ) and the desires of those with purchasing power at each price (demand  $D$ ), along with a consequent increase in price and quantity  $Q$  sold of the product.*

The theory is that in a competitive market, price will act to even our supply and demand imbalances. If supply is too great, price will drop, and more users will find themselves able to purchase the products and use them at the lower price, bringing supply and demand back into balance again.

### Is oil priced too high, or is credit too unavailable?

I think what we have happening now is a mixture of (1) supply and demand of the physical product, and (2) credit issues, both of which are focusing on commodity prices of all types--oil, natural gas, coal, copper, corn, and many others. With respect to supply and demand of the physical product, when the US was busy building huge numbers of houses to keep the economy going, and workers around the world were buying many new cars, there was a great deal of demand for these commodities. Once we started building fewer houses and cars, less oil was needed for manufacture and transportation. This type of physical supply and demand is what we expect to underlay a curve of the type shown in Figure 2.

The second problem is debt, and it doesn't work as nearly as rationally. Debt, and the repayment of debt, works as long as there is a growing economy, because with the growth, there are funds for a reasonable percentage of debtors to pay back their debts with interest. When a government senses that the economy is not growing as fast as it would like, it can encourage more and more debt, to try to keep the economy going. It seems to me that since 2001, we have had a considerable amount of government encouraged debt, to try to get the economy to expand faster than its natural rate.

It is not entirely clear what the impact of the growth of credit on real GDP is. One estimate might

The Oil Drum | Why are gasoline (and oil) prices so low -- and where are they headed? <http://www.theoil Drum.com/node/4846>  
 be that an additional dollar of debt adds an additional dollar of real GDP. One could debate whether this relationship is correct, but clearly there is some impact. Using total debt amount estimates from [economagic.com](http://economagic.com), this is a rough calculation of real GDP, without the inclusion of debt:

### Calculation of Real GDP, Adusted for Debt Increase

Amounts in Billions \$

Year	US Debt Total	Debt Increase	US Debt 2000\$ Increase	Nominal GDP	Nominal GDP Adjusted for Debt Increase	US Real GDP 2000 \$	Real GDP Adjusted for Debt Increase
1976	2,789	267	664	1,825	1,558	4,541	3,877
1977	3,164	375	877	2,031	1,656	4,751	3,873
1978	3,624	460	1,005	2,295	1,835	5,015	4,010
1979	4,108	484	977	2,563	2,079	5,173	4,197
1980	4,532	424	785	2,790	2,366	5,162	4,377
1981	5,044	512	866	3,128	2,616	5,292	4,426
1982	5,562	518	826	3,255	2,737	5,189	4,363
1983	6,242	680	1,043	3,537	2,857	5,424	4,381
1984	7,199	957	1,415	3,933	2,976	5,814	4,399
1985	8,381	1,182	1,695	4,220	3,038	6,054	4,358
1986	9,561	1,180	1,656	4,463	3,283	6,264	4,607
1987	10,566	1,005	1,373	4,740	3,735	6,475	5,102
1988	11,597	1,031	1,362	5,104	4,073	6,743	5,381
1989	12,552	955	1,216	5,484	4,529	6,981	5,766
1990	13,450	898	1,101	5,803	4,905	7,113	6,012
1991	14,073	623	738	5,996	5,373	7,101	6,363
1992	14,842	769	890	6,338	5,569	7,337	6,446
1993	15,716	874	989	6,657	5,783	7,533	6,544
1994	16,770	1,054	1,168	7,072	6,018	7,836	6,668
1995	17,907	1,137	1,234	7,398	6,261	8,032	6,797
1996	19,155	1,248	1,330	7,817	6,569	8,329	6,999
1997	20,521	1,366	1,432	8,304	6,938	8,704	7,272
1998	22,555	2,034	2,108	8,747	6,713	9,067	6,959
1999	24,658	2,103	2,149	9,268	7,165	9,470	7,321
2000	26,328	1,670	1,670	9,817	8,147	9,817	8,147
2001	28,462	2,134	2,084	10,128	7,994	9,891	7,807
2002	30,757	2,295	2,203	10,470	8,175	10,049	7,846
2003	33,354	2,597	2,441	10,961	8,364	10,301	7,860
2004	36,371	3,017	2,756	11,686	8,669	10,676	7,920
2005	39,739	3,368	2,980	12,422	9,054	10,990	8,010
2006	43,467	3,728	3,195	13,178	9,450	11,295	8,100
2007	47,744	4,277	3,570	13,808	9,531	11,524	7,954

Note: US Debt total based on annual average from [economagic.com](http://economagic.com)

Figure 3. Calculation of US Real GDP, adjusted for growth in credit. Click for larger image.

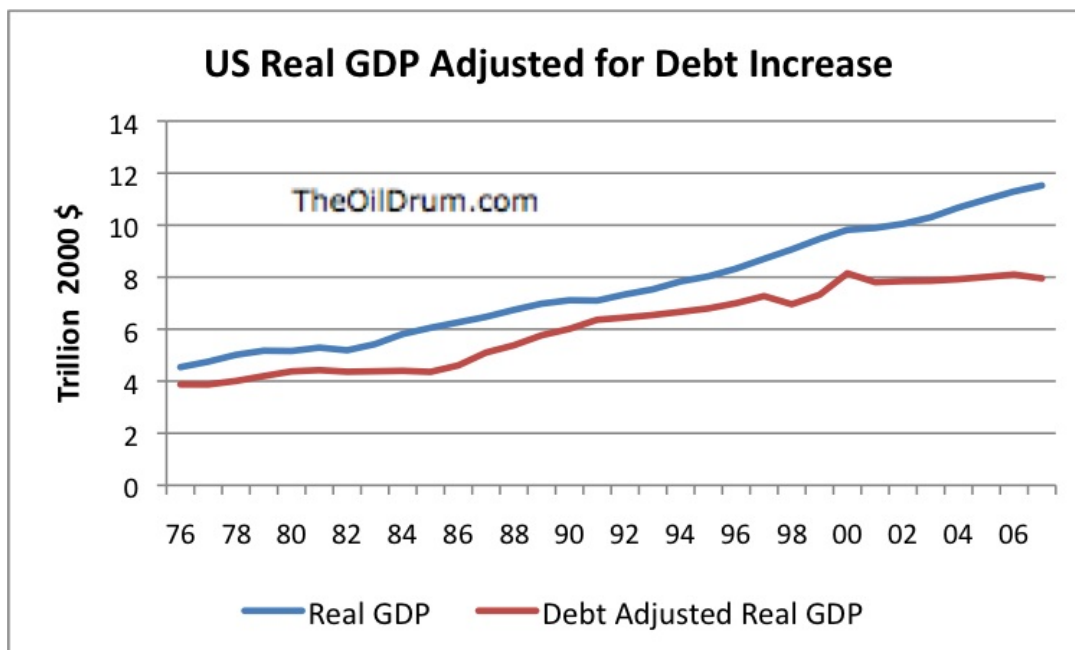


Figure 4. US Real GDP, adjusted for growth in credit. Click for larger image.

Based on the calculation shown in Figure 3, and graphed in Figure 4, there has been no real growth since 2000. Instead, we have been seeing more and more debt-based pseudo-growth.

Without real expansion, debt will eventually start to unwind--there start to be too many defaults. The debt probably would have started to unwind on its own, because of the slowed growth rate, even apart from the oil price increases. The increases in oil and food prices between 2005 and mid 2008 helped prick this debt bubble, but the underlying debt set the stage. The underlying issue that slowed the growth rate was limitations on resources. These resources are not becoming more abundant, so it seems to me that it will be virtually impossible to get the real growth to increase again to the point where it again makes sense to have very much debt. I would argue that it probably never made sense to have the level of debt that we have had in the past few years.

So what does this have to do with the supply and demand curve? Oil prices can be expected to keep dropping, as long as there is more and more credit imploding, resulting in fewer people being able to buy products made with oil. Given the huge amount of debt outstanding, and the lack of growth to make this debt "repayable", more and more defaults seem likely.

We can ask ourselves, "At what price of oil (or of gasoline) will credit stop imploding?" since the answer to that question will tell us when the price of oil can be expected to start rising again. I believe the answer is, "Whenever governments can figure out a way to get the economy to start growing fast enough so that debt (and its repayment with interest) 'works' again." I would argue that governments will never be able to make this happen. We have reached a point where resources (oil and other finite resources) are in such limited supply that the best we might be able to hope for is a level economy for a while. More likely, we are going to see decline. Because of the lack of growth, we are at a point that we need to unwind the debt we have, and learn to live without the vast majority of it.

## What does this mean going forward?

To me, Figure 1 is truly scary. If the price of oil and other commodities continues to drop, we are likely to see more and more energy companies going bankrupt. Some of these may be large--we have heard rumors about the financial problems of [Glencore](#), a large privately owned international trading company. The economies of Texas and Louisiana are likely to take major hits, as will Russia and some Middle Eastern countries. Even with the low energy prices, many of the problems the US has are likely to continue (too few houses and cars being built to "pump up" the economy, declining prices on homes and commercial property, and many workers laid off).

The amount of debt we have outstanding is extremely high. The debt shown in Figure 3 is not really all of the obligations of the US public and US government, since it excludes things like Social Security and Medicare liabilities. According to [one web site](#), the amount of debt Americans have outstanding is \$53 trillion, plus unfunded governmental promises (including Social Security and Medicare) of \$64 trillion, and plus trillions of dollars of related to derivatives. Not counting the derivatives, this amounts to \$386,091 per person. I don't know whether these numbers are precisely correct, but it is clear that with limited resources and a declining economy, there is no way that amounts similar to these amounts are going to be paid in full.

I am sure that the Bush and Obama administrations and other administrations around the world will try to fix the problems, but I fear many may not be successful. If they somehow are

The Oil Drum | Why are gasoline (and oil) prices so low -- and where are they headed? <http://www.theoil Drum.com/node/4846>  
successful, the current oil price collapse may lead to a rebound, but it is likely that we will still have to face the need to unwind our debt later, even if we somehow make it past our current crisis.

I don't know whether it is necessary to go through a full economic collapse and restarting process, to get past all of this debt. I find it hard to imagine that governmental leaders will sit down, look at the situation rationally, and start thinking about how to unwind the debt. But eventually, and I fear, sooner rather than later, we will need to get rid of most of this debt, and start over again with a monetary system that is more closely tied to resources and discourages debt. It is possible that forward-looking leaders could even start the new monetary system before the old one is phased out. The new monetary system might, for example, start out as more of a rationing system for food and energy products, and eventually be expanded to cover other products as well.

I am afraid I don't have all of the answers. My problem is that when I see a trend line based on oil prices pointing almost straight down, and I can't see a good reason for prices to suddenly start rising, I start worrying that the consequences of the current price collapse could be far worse than any of us on The Oil Drum have been talking about.

These are a few of my recent posts that are related:

[Impact of Credit Crisis on the Energy Industry - Where Are We Now?](#)

[An Overlooked Detail-Finite Resources Explain the Financial Crisis](#)

[Jeff Rubin: Oil Prices Caused the Current Recession](#)

[Oil Prices - A Little More of the Story](#)

[Why are oil \(and gasoline\) prices so low?](#)



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](#).