Natural Gas Heats Up Inflation

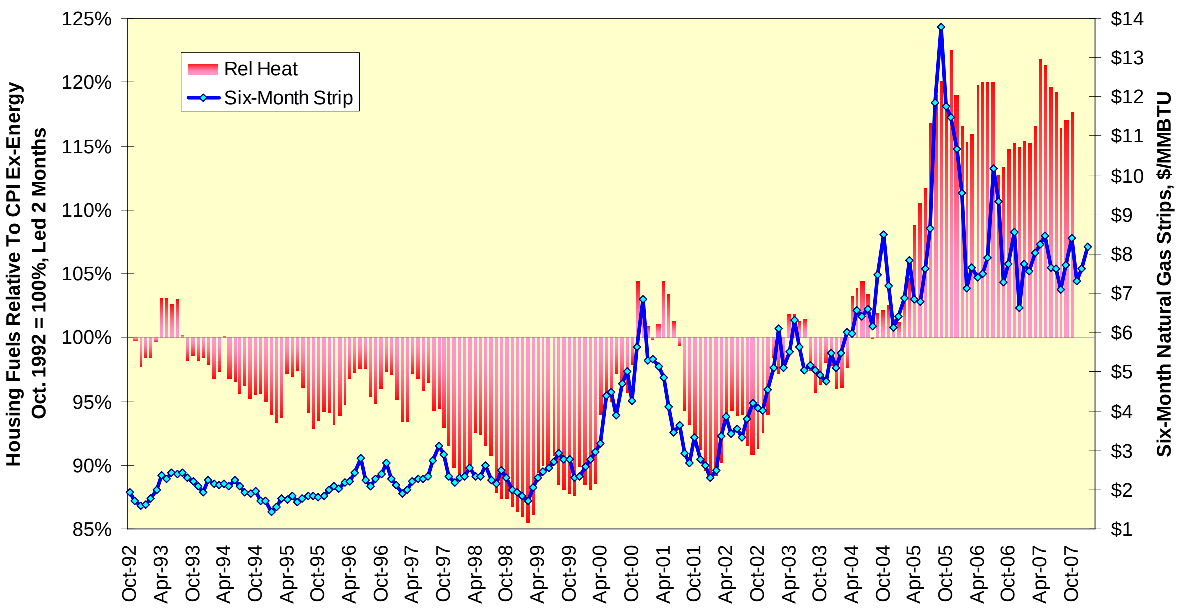
Was it only last week I was decrying the fraud of core inflation in regards to food prices? So many bad economic policies; so little time. Maybe I should start a daily blog before someone else gets that idea.

We always can count on natural gas to provide a few interesting financial and economic tidbits, such as last week's story in *The Wall Street Journal* how higher home heating prices were really starting to bite household budgets. In addition, a story was circulating amongst energy traders how someone was on the wrong side of the March-April 2009 natural gas spread trade in a manner reminiscent of 2006's Amaranth trading fiasco.

Given the awful winter we have been having in Chicago and the generally high demand for space-heating fuels throughout the eastern half of the country, the time has come to ask the question whether high and rising natural gas prices will push the whole Consumer Price index higher relative to core inflation.

The answer is, "Yes." And the bad news is home heating prices have been rising relative to the CPI ex-energy even during a period when six-month strips of natural gas futures have not risen anywhere near as fast as have petroleum prices. As half the country heats with natural gas, this suggests a great vulnerability to rising natural gas prices in the future and the potential for an even-greater divergence between "headline" and "core" inflation.

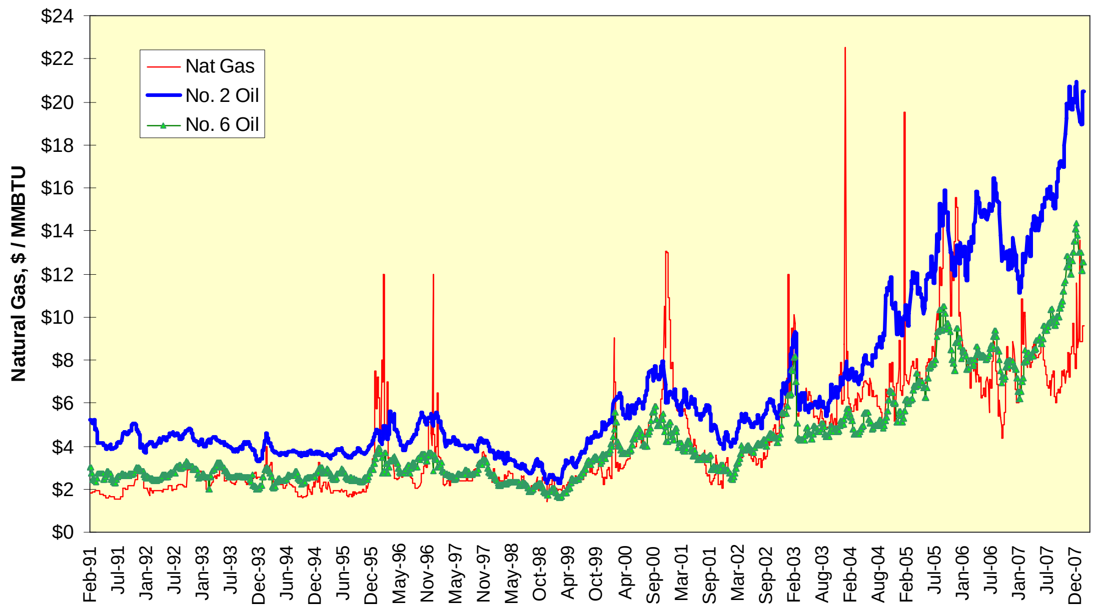
Home Heating Costs Have Been Exceeding CPI Ex-Energy



Relative Pricing

Even though crude oil and natural gas prices often are unrelated, a topic I last discussed in January 2006, as long as there are possibilities for substitution it is important to compare them in local markets. Natural gas often competes with No. 6 residual fuel oil in industrial applications and with No. 2 heating oil in residential and commercial space heating applications. If we compare the three fuels in New York, the epicenter of heating oil usage, we see how natural gas and No. 6 oil are starting to converge, but that No. 2 oil is still vastly more expensive than natural gas.

Comparative Delivered Prices In New York

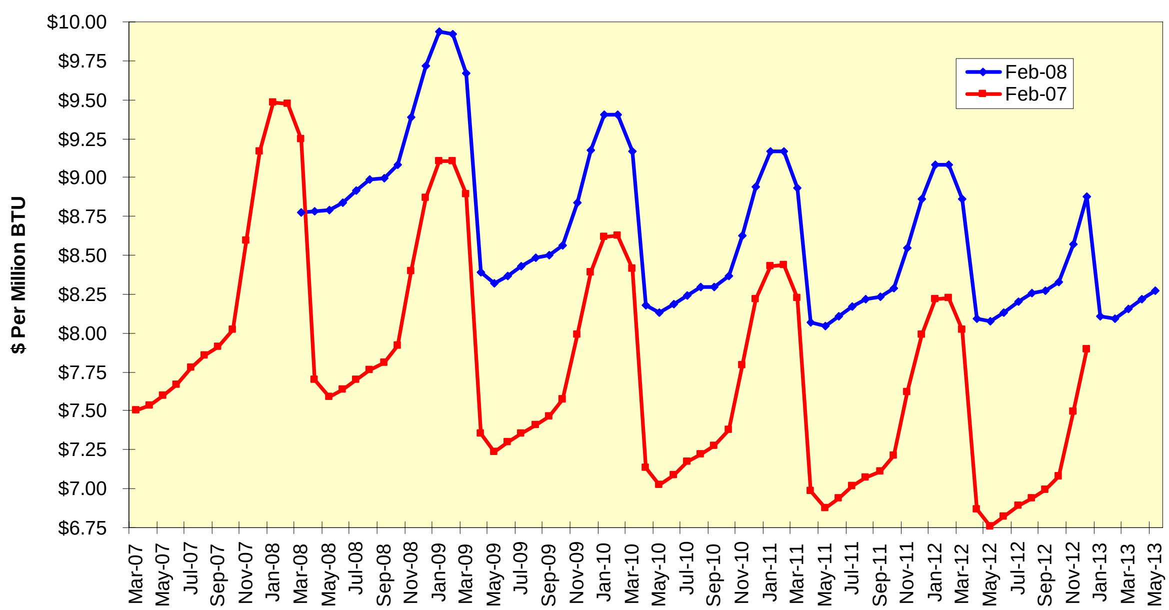


The conclusion is simple and obvious: Unless petroleum markets collapse, natural gas has room to rise in competition with other fuels.

Comparing The Curve

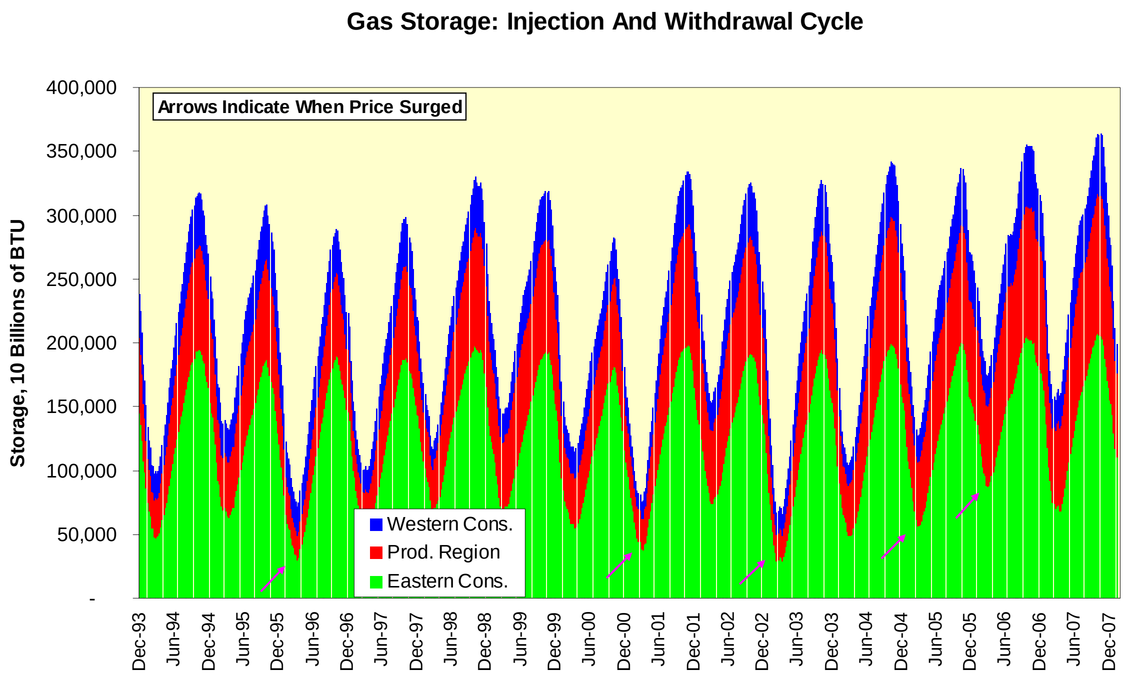
If we compare the forward curve of natural gas futures to where it was last year at this time, two changes stand out immediately. First, with the exception of the soon-to-expire March contract, current prices are much higher than they were in 2007. Second, the seasonal dip in the summer months is much shallower than before. For example, while January and February 2009 are about 8.7% higher than they were a year ago, June, July and August 2009 all are about 13.6% higher than year-ago levels.

Year-Over-Year Change In The Natural Gas Forward Curve



This flatter forward curve is the result of both lower production levels and of increased demand for natural gas as an electricity peak-load generating fuel in the summer. Utilities who need natural gas to meet air conditioning demands in the summer can bid it away from utilities who are trying to fill storage in the consuming zones for winter heating demand.

In addition, the shallower summer-to-winter discount reduces the incentive for utilities to build natural gas storage for the winter. Lower storage levels have consequences: If we map the Department of Energy's weekly natural gas storage levels, we can point to the times when low storage led to price surges. Fortunately, we are nowhere near such levels in the current winter.



Stock Market Impact

Even though natural gas prices are going to exert an upward push on inflation and stretch consumer budgets, we still have that odd paradox last noted in a May 2007 discussion of crude oil, and that is higher natural gas prices are not a negative for equities.

Let's return to an analysis first introduced in February 2005 on assessing the impact of factor prices on S&P industry groups, and add the twist introduced in November 2006 on weighting these factors by the groups' representation in the index, we can construct a table of groups both helped and hurt by rising natural gas prices at a 90% confidence interval.

There are 41 industry groups accounting for 45.14% of the S&P 500's market capitalization with statistically significant negative relationships to natural gas prices. These are not concentrated in any one economic sector in particular, but rather are distributed widely.

There are nine industry groups accounting for 13.06% of the S&P 500's market capitalization with statistically significant positive relationships to natural gas prices. These are concentrated, as we should expect, in the energy sector.

If we combine the two effects, we get a net weighted beta of 0.54%. Each 10% increase in natural gas prices should lift the S&P 500 by .054%, all else held equal. The industry group with the highest positive beta, 0.174, is oil & gas exploration. This confirms the larger study reported here in December 2007.

Natural Gas Beta-Weighted Impact On S&P 500

	SPX Weight	NG Beta	Weighted Beta
Industrial Conglomerates	3.71%	0.024	-0.09%
Pharmaceuticals	6.43%	0.014	-0.09%
Integrated Telecommunications	3.14%	0.020	-0.06%
Other Diversified Financial Services	3.87%	0.012	-0.05%
Diversified Banks	1.92%	0.021	-0.04%
Hypercenters & Superstores	1.23%	0.031	-0.04%
Aerospace & Defense	2.98%	0.010	-0.03%
Multiline Insurers	1.47%	0.021	-0.03%
Regional Banks	1.22%	0.024	-0.03%
Movies & Entertainment	1.64%	0.017	-0.03%
Household Products	2.38%	0.012	-0.03%
Drug Retailers	0.79%	0.029	-0.02%
Home Improvement Retailers	0.72%	0.030	-0.02%
General Merchandise Retailers	0.41%	0.051	-0.02%
Asset Management & Custodial Banks	1.37%	0.015	-0.02%
Broadcast & Cable TV	0.98%	0.020	-0.02%
Thrifts & Mortgages	0.69%	0.029	-0.02%
Air Freight & Logistics	1.03%	0.019	-0.02%
Restaurants	0.87%	0.021	-0.02%
Packaged Foods	1.30%	0.013	-0.02%
Department Stores	0.43%	0.035	-0.01%
Diversified Chemicals	0.83%	0.018	-0.01%
Property & Casualty Insurers	1.10%	0.012	-0.01%
Consumer Finance	0.76%	0.017	-0.01%
Data Processing & Outsourcing	0.78%	0.016	-0.01%
Internet Retailers	0.27%	0.034	-0.01%
Hotels	0.36%	0.024	-0.01%
Automobile Manufacturers	0.24%	0.033	-0.01%
Computers & Electronics Retailers	0.22%	0.030	-0.01%
Brewers	0.36%	0.017	-0.01%
Auto Parts & Equipment	0.17%	0.033	-0.01%
Apparel Retailers	0.29%	0.017	-0.01%
Environmental Services	0.17%	0.028	0.00%
Apparel & Accessories	0.22%	0.018	0.00%
Specialty Stores	0.22%	0.016	0.00%
Airlines	0.08%	0.038	0.00%
Household Appliances	0.15%	0.019	0.00%
Leisure Products	0.11%	0.017	0.00%
Office Services & Supplies	0.12%	0.016	0.00%
Distributors	0.06%	0.029	0.00%
Diversified Commercial Services	0.07%	0.025	0.00%
Subtotal:	45.14%		-0.84%

	SPX Weight	NG Beta	Weighted Beta
Integrated Oil & Gas	7.61%	0.082	0.62%
Oil & Gas Exploration	1.65%	0.174	0.29%
Oil & Gas Equipment	1.90%	0.143	0.27%
Oil & Gas Drilling	0.63%	0.148	0.09%
Oil & Gas Refining	0.37%	0.140	0.05%
Diversified Metals & Mining	0.32%	0.070	0.02%
Steel	0.32%	0.046	0.01%
Gold	0.19%	0.070	0.01%
Gas Utilities	0.09%	0.028	0.00%
Subtotal:	13.06%		1.38%
Total:	**58.20%**		**0.54%**