

## Natural Gas: (Forward) Curves You Can't Ignore

You shouldn't kick someone when they are down, we are told, but this is foolish advice for traders and investors. Our mission, which we've already chosen to accept, is to find the path of least resistance in a market and to fight on the side of the winner. That this is so very hard to do, that it so violates the sense of sportsmanship and fair play inculcated in us since infancy, may be a hallmark of civilization, but it also helps explain why few traders feel comfortable letting their profits run.

The natural gas market of 2000-2001 exhibited no such sense of fair play. It kicked the economy when it was down. Along with the unwinding of the technology bubble and the Federal Reserve's excessive tightness in the period, the quadrupling of natural gas prices in 2000 was one of the major contributors to the poor economy and stock market of 2000-2001.

Now that natural gas prices have returned to the lower end of their 1991-1999 trading range, on the order of \$2.25 per million BTU, should we assume that we'll be free, this winter at least, from price and supply shocks? In a word, no. The forward curve of natural gas futures is signaling a great deal of anxiety about the market's course. More important, the curve's shape is raising hedging costs for natural gas consumers.

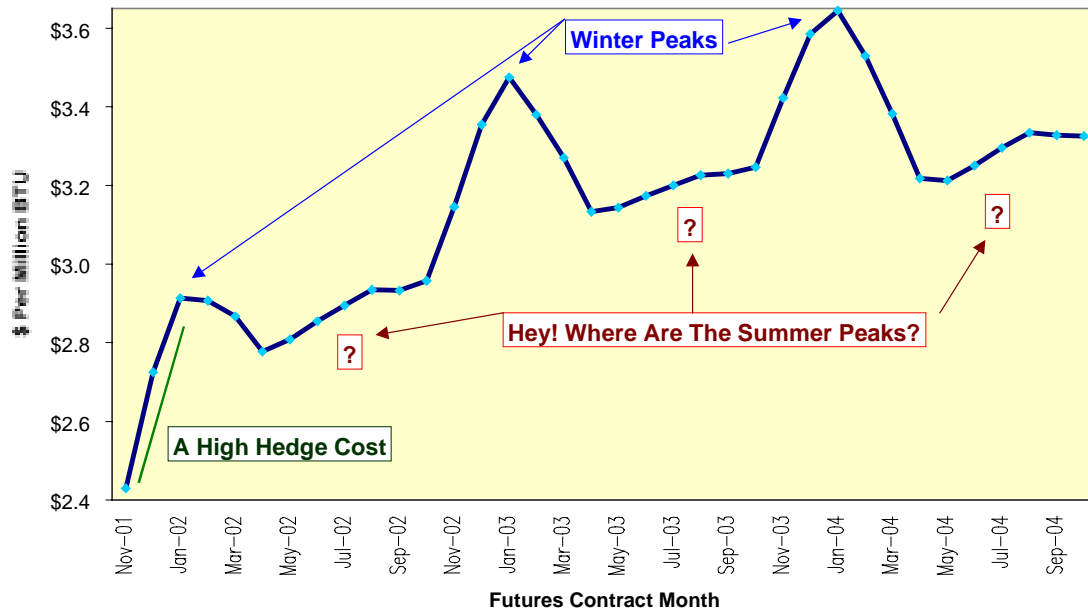
Unless you happen to be a net producer of natural gas, the affected group includes you.

### Forward Curves

The relationship between different delivery months of a physical commodity contains information on price expectations. If the market were trading in "full carry," each succeeding month would be higher than the one before it by the physical and financial costs of storage. This is the way both stock index and bond futures trade, and the way we should expect the upcoming single stock futures to trade.

Physical commodity markets are affected by capacity constraints on production, transportation and storage, and are buffeted by seasonal fluctuations. As a result, they seldom trade in the classic full carry situation. Natural gas, in particular, almost never trades in a full carry. A snapshot of its forward curve from Friday, October 12, 2001 shows how uneven and unusual this curve is.

## Natural Gas Forward Curve October 12, 2001



How should we read this curve? The first feature to stand out are the winter price peaks. Nothing unusual here, we should expect natural gas demand to rise during the winter. But, the expected secondary price peaks for the summer months are conspicuous in their absence. These peaks have become an increasingly important aspect of the natural gas market in recent years as more and more electricity generation is fueled by natural gas (see "The Gas Bubble," May 29, 2000). That these summer peaks are missing from the curve suggests that either electric utilities are carrying excessive risk or that natural gas supplies are going to be more than ample each and every summer.

If the supply picture were that rosy, however, we wouldn't see either the gradually higher price trend over time or the winter peaks. The conclusion we should draw is that our electric utilities are not as hedge as they should be, and that they are planning on passing any higher fuel costs onto you, the consumer.

A third feature stands out on the chart, and that is the rather abrupt price increase between November 2001 and February 2002. This sort of curve, called a contango, (no e-mails asking me the origin of this goofy word, please!) develops when current supplies are seen as abundant and prices are low, but future prices are seen as rising. Contango curves make life expensive for natural gas buyers wishing to hedge. Not only do they have to pay all of the costs of carry, they have to pay a premium reflecting the expectation of rising prices.

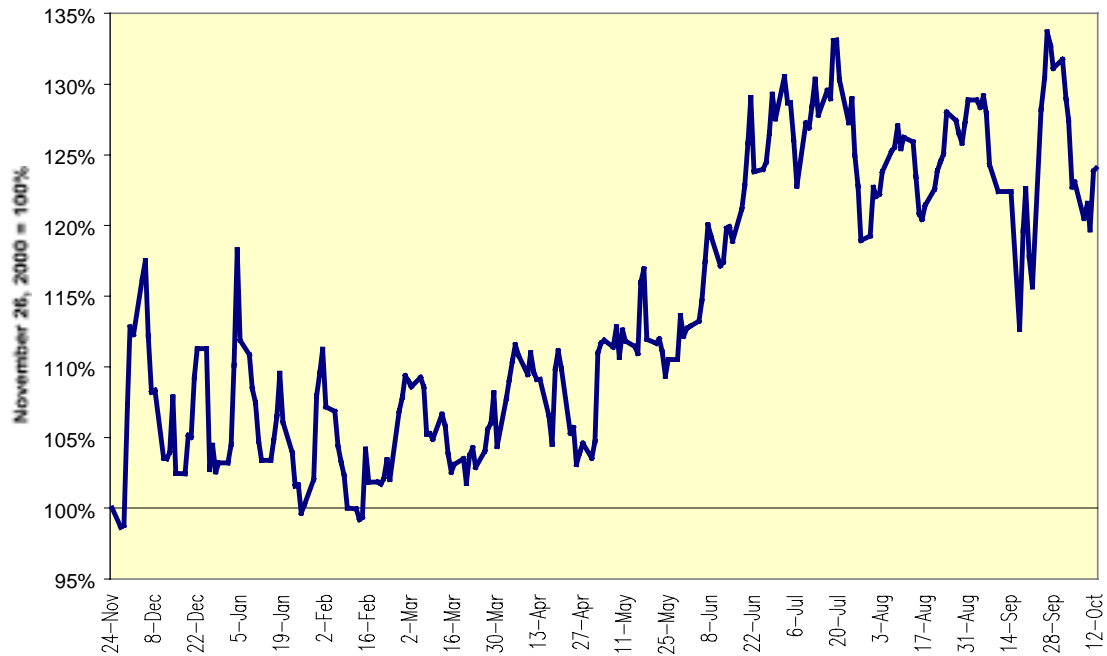
How expensive is this premium, you ask? Well, if the natural gas forward curve was in full carry, we should expect January 2002 to be trading near \$2.54 instead of \$2.91. If we annualize this difference from the November price of \$2.43, as illustrated below, we get a hedge cost of 127%. That's enough to make your hand shake while pulling out the checkbook, and these high hedge costs definitely discourage active risk management by natural gas buyers.

$$\text{HedgeCost} = \left[ 1 + \frac{(2.913 - 2.540)}{2.43} \right]^6 - 1, \cong 127\%$$

### Investing Implications

Last November, I wrote that the extreme backwardation, or declining forward curve of natural gas futures suggested that a time was imminent and that the S&P Chemical Index should start to outperform the Amex Natural Gas Index (see "Contrarian Time In Natural Gas," Nov. 26, 2000 on TheStreetPros.com). Gas prices peaked within a month, and despite a worsening manufacturing economy, the chemical stocks, largely Du Pont and Dow, have outperformed the natural gas stocks since then.

## Relative Performance Of S&P Chemical Index To Amex NG Index



The opposite call obtains today. While a rise in natural gas prices is less than certain, the high hedge costs for natural gas and the obvious lack of hedging seen in the summer months indicates the surprises will be on the upside. The uninsured risk-seeker gets hosed in this world. This will hurt consumers relative to producers, so we should be buying the beaten-up stocks of the Amex NG index and walk away from chemicals and utilities.

Is this kicking them when they're down? Maybe, but the trade is at your risk. Would they do it to you?