

The Joy Of SX

We all have our candidates for the Most Boring Person on Earth: Your corporate benefits administrator, the aging hippie trying to convince both you and himself that he really was at Woodstock, anyone returning from a Las Vegas vacation. None, however, come close to soybean traders who experienced the great bull markets of the mid-1970s. I can see them now, in their later years at the Retired Traders Home, ranting on about how they ran stops on some long-ago day when the market went limit in both directions. Sedatives will be administered quickly and frequently.

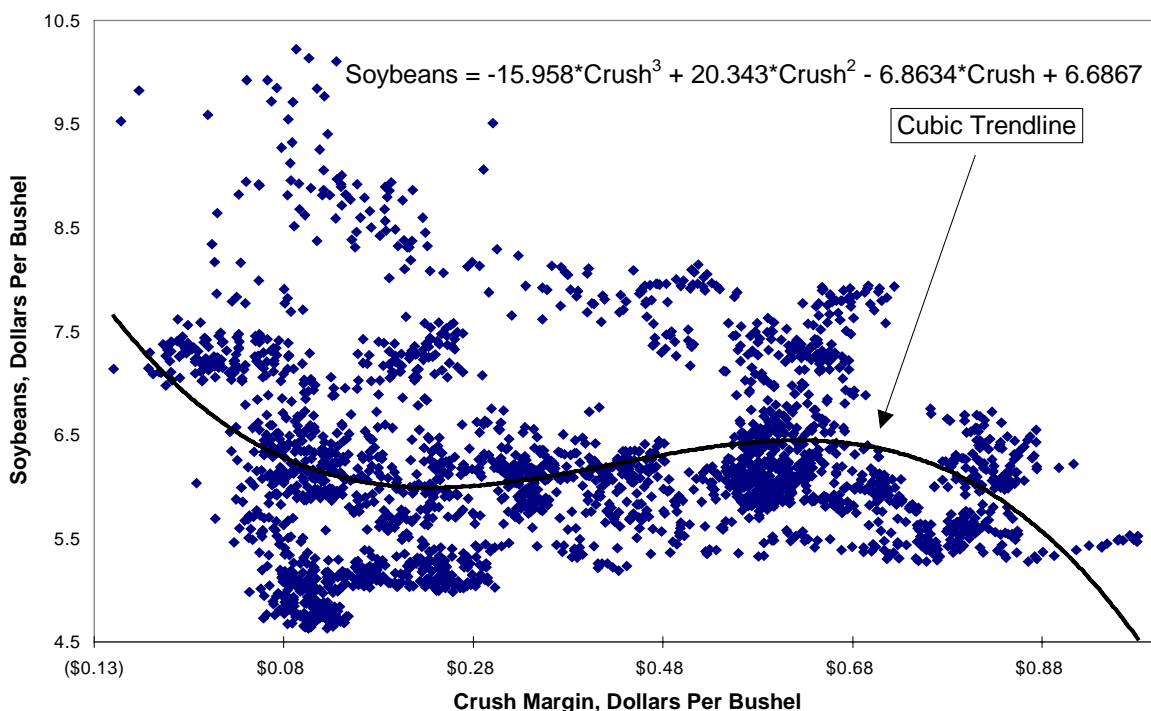
Other markets move, other markets are volatile, but only soybeans have a battle cry to call their own, "Beans In The Teens!" Just what is it that produces such passion? As we approach the active trading season for November 1997 soybeans -- SX on most quote screens -- let's look back on this illustrious contract using daily data on each November contract from 1960 to 1996 over the window from the first Monday in February to first notice day at the end of October.

A Crushing Experience

Soybeans share two characteristics with petroleum. First, with the significant exception of the Far East export market, they are seldom used without further processing; their value in the market is determined theoretically by the "netback," the total value of the soy products derived therefrom less processing and transport costs. Second, because soy products are found in so many markets, each of which is subject to differing levels of final demand and each of which has different levels of substitution, it is nearly impossible to determine this netback level.

In a significant difference with petroleum, there does not appear to be a contemporaneous negative correlation between soybean prices and crush margins except at historically extreme soybean prices. Crushes do expand when soybean prices are historically low, and contract when they are historically high. However, expanding crush margins do not seem to either "pull" soybean prices higher or "push" them lower. These tendencies are illustrated by the cubic nature of the trendline in the "Crush Margin" graph, which uses data from 1984 forward.

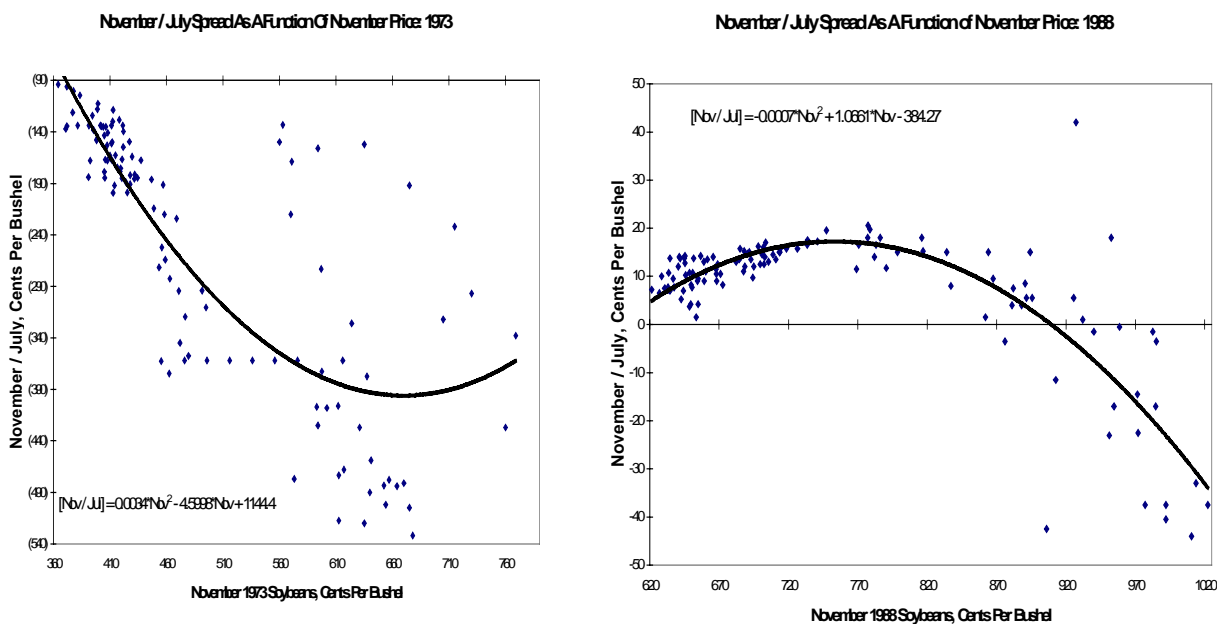
Soybean Price Relationship To Crush Margin, 1984-1996



The petroleum market is characterized by continuous production and inventories at all levels of consumption. In this market, rising spot prices often squeeze margins and lead to an increase in backwardation (inversion). Since soybeans are not produced continuously, surges in spot prices can occur both from increases in spot demand and from perceived production problems that can be expected to increase the spot price sometime in the future. Inverted grain markets present special trading problems and opportunities (see "Out With The Old Crop, In With The New," *Futures*, May 1996).

The pair of graphs below illustrates the behavior of the November / July spread during two of the more famous soybean bull markets, 1973 and 1988. The 1973 bull market was caused for the most part by export sales to the Soviet Union and by the economic mismanagement of the Nixon administration (Nixon later embargoed soybean exports to Japan in an attempt to limit prices; Japan responded by financing the nascent Brazilian soybean industry. Resignation soon followed.). The 1988 bull market was caused by a combination of drought and hot weather. The differences in the two years' spread-price relationship is striking both for the absolute levels of the spread -- 1973 always saw July over November, while in 1988 July did not go over November until prices reached the \$9.00 zone, and for the stability of the relationship - in 1973, spreads tended to disperse as prices rose, while in 1988 spreads maintained a much more defined relationship.

Market technicians and quantitative analysts often take a certain perverse pride in ignoring the "why" of price movements in their search for models. Intermonth spreads involving November soybeans require knowledge of "why." Since each bull market is unique, quantitative models of November soybean spreads that do not take qualitative data into account will be incomplete. Herein lies the rub: any statistical model that subjectively incorporates qualitative events is useless for forecasting.

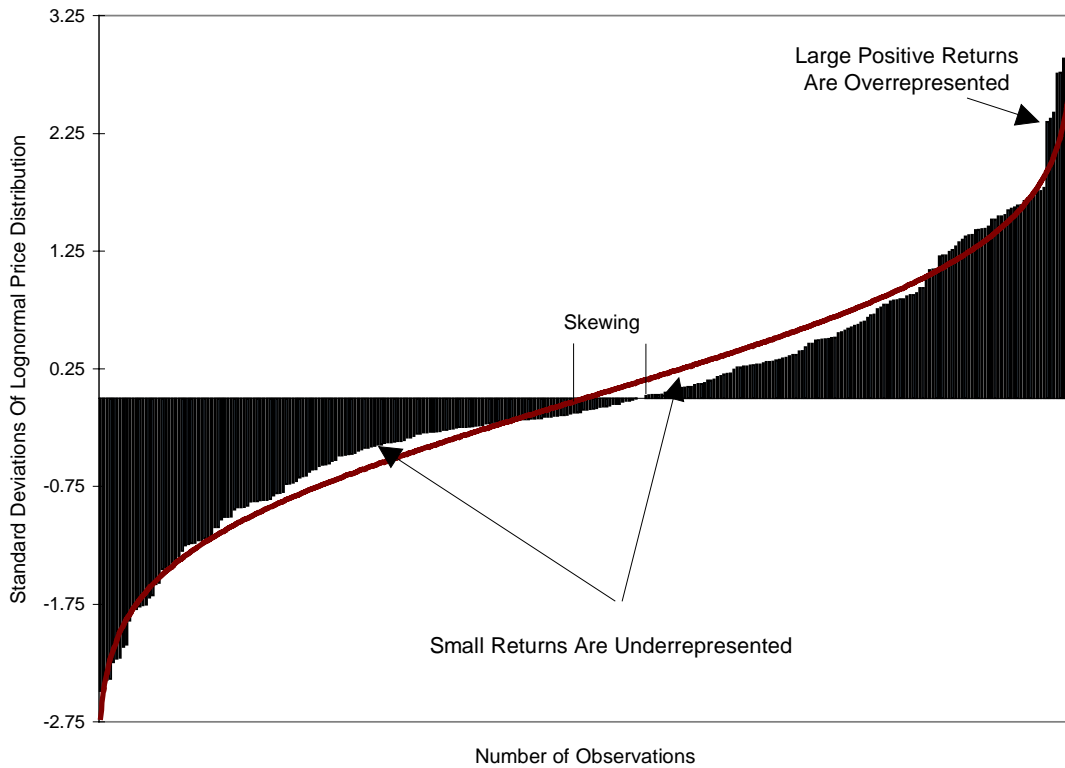


Monday, Monday

The drought of 1988 underscored the primal fear of soybean traders: one day it will stop raining. Forever. The start of this permadrought is observed best on weekends, when normal people are enjoying a sunny day at the beach or on the golf course. Under such circumstances, Beansies can't wait for the opening bell on Monday (or, now, Project A on Sunday night). As a result, the distribution of price changes on Mondays in June and July are skewed to the upside and are "leptokurtotic," or fat-tailed.

The chart "I Don't Like Mondays" examines the 298 June and July Mondays of trading between 1960 and 1996. The smooth curve depicts a expected lognormal distribution of price changes. There are far fewer small changes, both positive and negative, than what one should expect. More importantly, the number of large price changes, especially large positive price changes, is greater than what we should expect. The evidence confirms what traders have long suspected: summer Mondays in the soybean market take no prisoners.

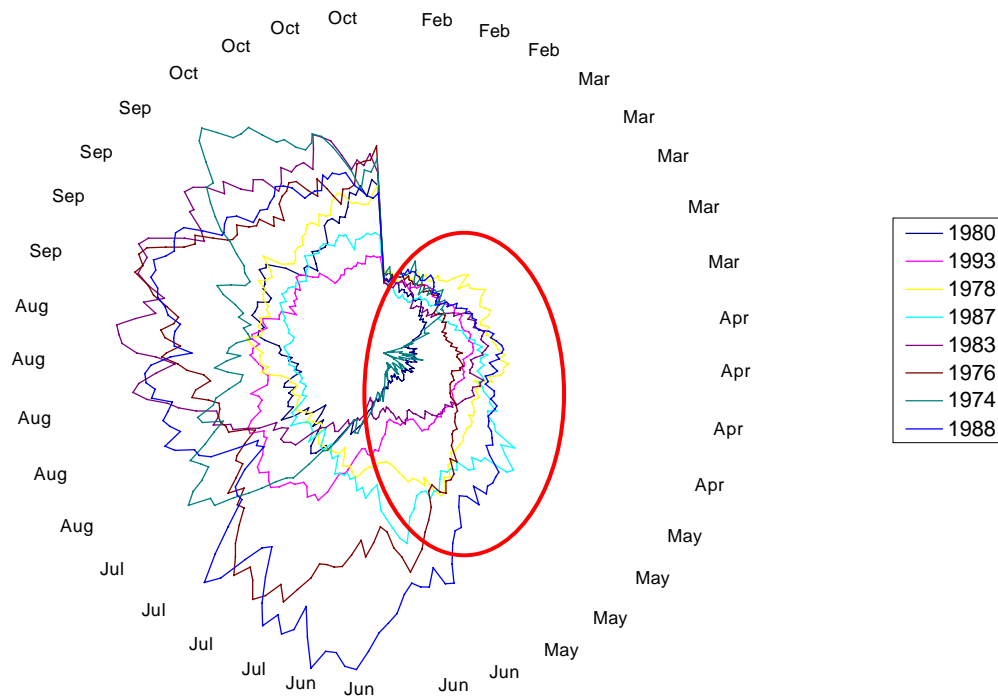
Tell Me Why! I Don't Like Mondays



Seasonal Patterns

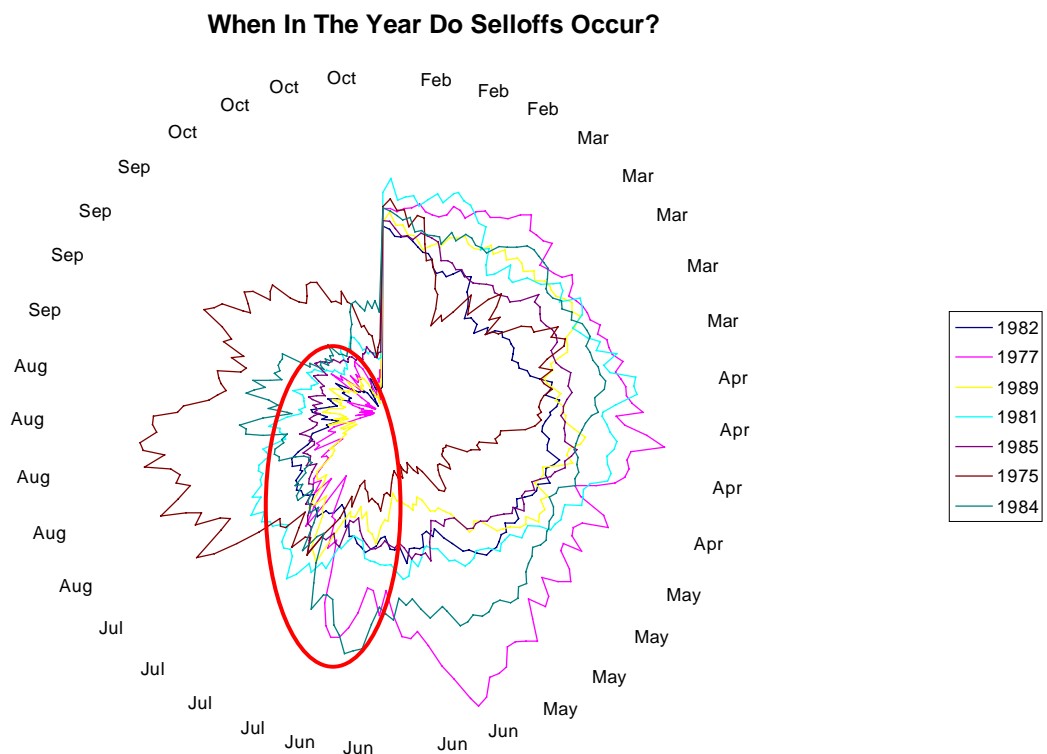
Since 1960, there have been eight years where soybeans have rallied 25% from their early-February levels. One of these years, 1973, witnessed such a huge, non-stop rally that it is excluded as a statistical outlier from the "When In The Year Do Rallies Occur" chart in order to preserve the scale.

When In The Year Do Rallies Occur?



Several interesting patterns emerge. The first is that with the exception of 1974, when the rally occurred quite late in the year, soybean rallies are an early phenomenon, shown within the highlighted oval zone. They start in April, accelerate in May, and reach their peak in June, when uncertainty about pod formation is greatest. They then tend to retrace in August and rally again as the harvest gets underway. Then, again with the exception of 1974, they fade again into delivery.

Just as rallies have their own pulse, so do selloff years. And, like bear markets everywhere, they strike quickly and without warning. In the seven years where soybeans have fallen at least 18% from their early February levels, in every year but 1975, the selloff occurred right at the critical pod formation time of early July, also shown within the highlighted oval zone. In several years -- 1977, 1981, and 1984 -- the early season pattern looked for all the world like a rally. The pattern of 1975 had two rallies of significance, early and late, and the late one looked pretty much like the late rally of 1974 up until it collapsed going into delivery.



SX And Romance

As we stand on the early February launching pad of another trading season, can we determine whether November soybeans in 1997 will be the Legume of Love or another sad reprise of the Musical Fruit? No we cannot, but neither is it necessary to do so.

Because bull markets in grains are exciting, traders love to see them occur; witness the pattern of the worst bear breaks occurring from early-seasons patterns that look like bull markets. Therefore:

Speculators should position themselves for early-season rallies in a limited risk fashion though the use of option spreads.

Given the mid-December 1996 time of writing, it is impossible to offer a specific recommendation, but the principle behind the trade is delta management (see "Why Johnny Can't Hedge", *Futures*, November 1996 or "Real Men Don't Index," *Futures Inside Option Trading* special issue, April 1996).

For example, if a November \$7.00 call has a delta (rate of change of the option price with respect to underlying futures) of .5 with the future at \$6.60, then you will need to purchase $(1/.5)$ or 2 calls instead of one future. Should the price rise, the delta will expand to, say, .67, meaning that you are now long $(1 / .67)$ or 1.5 futures. You can sell this "excess" delta back to the market. Moreover, as the market rises, the \$7.00 strike starts losing its gamma (rate of change of delta with respect to underlying futures). You can sell your \$7.00 calls and buy \$7.50 calls. Both steps generally involve recouping of initial premium; pretty soon, you are playing with the "house's money" in a bull market.

If the early-July collapse occurs, the remaining call positions will retain time value. Given the observed severity of bear markets when they do occur, 18% was the criterion used in the "Selloff" graph, the lost call premium will be a cheaper trade than the loss on a long futures position.