Basis: The theory of (price) relativity

Truly understanding how the basis works can help you with your marketing plan

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While there are always opportunities in the daily, weekly and monthly price fluctuations of an underlying commodity, there are also potential profits in the less well-known fringe areas of the markets.

Last month's article discussed the spread between different futures delivery months and how keeping a close eye on prices along the futures curve can improve your marketing decisions and hedging strategies. This month we look at the benefits of gaining a deeper understanding of basis levels and how it too can help enhance your marketing plan.

Basis and futures spreads react to similar market factors — essentially whether the market wants your grain now or in the future. Basis is just the difference between a local cash price and a futures price.

The local basis level is often a negative number since it reflects pricing differences between your cash commodity relative to the delivery specifications referenced in the futures contract including:

- Local supply and demand factors;
- Transportation and handling;
- Grade or quality differences; and
- Storage opportunities and carrying charges.

Just as the velocity of money is an economic term used to describe how quickly money moves around the economy, basis levels can be thought of as an indication of the velocity of grain moving through the elevator pipeline system.

When velocity is slow, grain stocks build and the basis price level decreases. When velocity picks up, grain stocks drop and the basis price level increases.

Seasonal patterns

This grain velocity has its seasonal biases. Based on research from John DePape at FARMCo., the accompanying chart compares average 10-year primary elevator stocks to the canola basis in the Par Region in central Saskatchewan. It illustrates the classic relationship between supply and price.

CANOLA BASIS RANGE AS A % OF PRICE RANGE

CROP YEAR	PRICE RANGE	BASIS RANGE	%
2013 - 2014	$144	$58	40%
2014 - 2015	$148	$42	28%
2015 - 2016	$88	$32	36%
2016 - 2017	$87	$34	39%

The chart shows a 52-week canola crop year from the beginning of August (Week 1) to the end of July (Week 52).

The chart shows a 52-week canola crop year from the beginning of August (Week 1) to the end of July (Week 52). As canola elevator stocks build at harvest, the basis (in blue) reaches its lows coming in to September/October (Week 10) and then gradually improves as elevator stocks (in red) begin declining near Week 13 of the crop year. From there, basis typically climbs as canola stocks dwindle until the next crop year when this process starts all over again.

While this basis behaviour is quite strong year after year, seasonal patterns are only tendencies and won't necessarily work every year. However, being aware of basis levels at different times of year can help improve your selling process.

Basis volatility

Not only does basis have its own seasonal pattern like many commodities, the basis price also has its own level of volatility. This basis level fluctuation can have a significant impact on the overall price you receive for your grain. Once again using research from FARMCo., you can see that in the table called "Canola Basis Range as a % of Price Range," the overall top to bottom price range for canola futures varied from as much as $148/tonne to as little as $87/tonne, with an average of about $177/tonne in the past few years.

Meanwhile, the canola basis fluctuated from as high as $58/tonne to as low as $32/tonne, with an average $40/tonne over the same past four crop years. The basis volatility averaged around 36 per cent of the range of the underlying canola futures contracts. Clearly it pays to pay attention to the basis levels.

Keeping track

So how can you best track your basis levels?

One method is to use your own historical data and track your own price experience to figure out if and when basis levels are high or low in your specific area.

A good third-party resource is www.PDQinfo.ca, which provides average cash and basis levels for five commodities across nine Prairie regions. I've always found it to be quite reflective of the basis levels when speaking with farmers across the Prairies.

Most of the commodities on PDQ have related exchange traded options and futures contracts:

- Canada Western Red Spring, which is priced off the Minneapolis hard red spring futures contract;
- Canada Prairie Spring Red, which is priced off the Kansas City hard red winter futures contract;
- Canola, with the associated futures contract on the ICE Futures Canada exchange.

The other two commodities are Canada Western Amber durum wheat and yellow peas, neither of which have any futures contracts.

Another important factor that is imbedded either explicitly or implicitly within the basis level is the C$/US$ exchange rate. This is especially true when dealing with commodities like wheat or soybeans that have US$ based futures contracts.

This is where it can get confusing since different grain companies factor in the exchange rate in different ways. However it's quoted, just make sure you crunch the numbers yourself so it makes sense to you. And remember, you can use Canadian dollar options and futures contracts to manage some of the basis risk that results from the currency fluctuations.

Bottom line, it helps to think in relative terms. Compare the current cash or deferred delivery bid to the futures prices. Look at the steepness of the three-month versus the six-month futures curve. Understand how currency is factored in to the basis. Always be aware of these opportunities to not only capture those extra profits in the basis or along the futures curve, but also to avoid poor price levels that aren't in your favour. Sometimes it makes sense to get paid to wait by earning those carrying charges that compensate the farm hedger for storing grain or deferring delivery.

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