



Current Report

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Wheat Basis

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Basis is an essential part of marketing. Yet, the basis is one of the least understood marketing concepts. Basis may refer to the difference between the local cash price and the price of a given futures contract. Or, the basis may refer to the difference between any two cash prices.

It is important that managers learn and understand basis patterns. Individuals who observe the basis carefully are likely to make more profitable decisions. With knowledge of the basis, individuals may more easily decide whether or not to accept a given price, whether or not to store the crop, and whether, when, and what delivery month to hedge. It is also easier to decide when to close or lift a hedge and when and how to turn an unusual basis situation into a profit opportunity. The basis is a key to good marketing.

The bases reported in this Current Report are the difference between Texas Gulf cash wheat prices and Kansas City Board of Trade (KCBT) wheat futures contract prices (Gulf wheat basis). The gulf wheat basis is the basis most often reported by price reporting services and agricultural news services. A basis calculated by subtracting a \$0.75 price margin from the Texas gulf basis will also be presented.

Basis

Basis is the difference between two prices. In the Oklahoma hard red winter wheat market, the Gulf basis is the Houston Gulf cash price minus the nearby KCBT wheat futures contract price. The nearby futures contract is the futures contract closest to a delivery month. There are five wheat futures contracts: March, May, July, September, and December. Starting at the beginning of the wheat marketing year, June, July is the nearby wheat contract. About July 1st, September becomes the nearby wheat contract; about September 1st, the nearby contract rolls over to the December contract; and etc. until on about May 1st, July wheat becomes the nearby wheat contract.

Bases are location specific. Thus, Oklahoma producers and elevators may need to localize the Gulf basis. Localizing may be done by subtracting transportation and handling costs (local margin) from

the Gulf basis. The local margin may be obtained from a local elevator or by subtracting the local cash price from the Gulf cash price.

The local basis may also be calculated by subtracting the KCBT wheat futures contract price from the local price. For example, the KCBT nearby wheat contract price may be \$3, the Gulf price \$3.50, and the local price \$2.75. In this example, the Gulf basis is:

	Gulf Price	\$3.50
(minus)	<u>KCBT Price</u>	<u>-\$3.00</u>
	Gulf Basis	\$0.50

The Gulf margin would be:

	Gulf Price	\$3.50
(minus)	<u>Local Price</u>	<u>-\$2.75</u>
	Margin	\$0.75

The Oklahoma wheat basis may be calculated as follows:

	Gulf Basis	\$0.50
(minus)	<u>Local Margin</u>	<u>-\$0.75</u>
	Local basis	-\$0.25

or,

	Local Price	\$2.75
(minus)	<u>KCBT Nearby Price</u>	<u>-\$3.00</u>
	Local Basis	-\$0.25

To determine the local basis, it does not matter which procedure is used. If only the Gulf basis is available, then the local margin may be used. If only the local price and the KCBT contract price are available, the basis may be calculated using the second method.

Basis Tables

Historical bases are often used to estimate future bases or to determine if the current basis is above or below "normal." There are no magic bases tables. In this report one-year and four-average

monthly bases were calculated. The bases were calculated by subtracting daily KCBT wheat contract prices from daily Texas Gulf wheat prices. To determine the average monthly bases, the daily bases were averaged for each month and each contract.

The one-year average bases were calculated for the 1987/88 marketing year (Table 1). The nearby bases will be used most often thus are shown in boxes. For example: If wheat is to be priced for November delivery, the nearby basis would be the November basis for the December contract. The average basis during the month of November 1987, for the December KCBT wheat contract, was \$0.29. This was found by going down to November and across to the December contract in Table 1.

The strength or weakness of the basis may help make marketing decisions. Because these terms are relative to the "normal" basis, the terms are hard to define. Lets start by defining a normal basis.

One method to define a normal basis is to calculate a four-year average monthly basis (Table 2). Note that the four-year average monthly basis for the KCBT December contract, in November, is \$0.35. A weak basis may now be defined as a basis that is less than \$0.35. A strong basis would be a basis above \$0.35. This implies that the average November 1987 basis was weak (\$0.29 versus \$0.35).

Localized Basis

The wheat margin (transportation and handling costs) between central Oklahoma and the Texas Gulf wheat price is about \$0.75 per bushel. For convenience, the one- and four-year average monthly basis tables were localized. Thus, \$0.75 was subtracted from each basis presented in Tables 1 and 2 to construct Tables 3 and 4.

Table 3 contains one-year average monthly bases for central Oklahoma. These bases are estimates of the average monthly difference between the KCBT wheat future contract price and central Oklahoma wheat cash price. For example, the average difference (basis) between daily KCBT wheat March 1988 wheat contract prices and the daily February 1988 central Oklahoma daily cash wheat price was -\$0.36. The four-year average monthly localized basis for February with the KCBT March Wheat contract is -\$0.34.

Using The Basis

Basis is essential information when making a marketing decision, pricing with the futures market, or using the futures market for information. The most common use of the basis is in pricing with the futures market.

Basis show potential price gains and losses (Table 4). The four-year average monthly basis for the KCBT December contract indicates that between July and November, the difference between the Gulf cash price and the December KCBT wheat futures price may be expected to increase \$0.08 per bushel (localized basis increases from -\$0.48 to -\$0.40). Thus on the average, the market normally offers \$0.08 to store wheat.

This does not mean that the wheat price will increase nine cents per bushel. The \$0.08 indicates that if the wheat is placed in storage and sold in the futures market (hedged), the net price increase during the last four years has averaged nine cents per bushel relative to the cash price on the day the hedge was placed. For example, the date is July 1st, the local cash price is \$3.25, and the December contract price is \$3.73. Thus, the December basis in July is -\$0.48 (\$3.25 - \$3.73). The four year average December basis in November is -\$0.40 (Table 4). And, for each 5,000 bushels of wheat placed in storage, a 5,000 bushel contract is sold.

In November, the cash price increased to \$3.30 and the December futures contract price decreased to \$3.69. The basis increased from -\$0.48 to -\$0.39 (\$3.30 - \$3.69), nine cents per bushel. The net price received for the wheat will be \$3.34 per bushel. This is the \$3.30 cash price plus the \$0.04 gain in the futures. Note that the net price is exactly nine cents higher than the \$3.25 July cash price. The nine cents is the result of the basis increase.

Now change the December contract price in July to \$3.93 rather than \$3.73. The basis is -\$0.68 (\$3.25 - \$3.93). Because the -\$0.68 basis is lower than the "normal" -\$0.48 basis, the basis is considered weak and has the potential to gain \$0.20. Using the same November prices--cash \$3.30 and December futures \$3.69--the net price would be \$3.54. This is \$0.29 higher than the July cash price and is the result of a \$0.29 cent basis gain (-\$0.68 to -\$0.39).

Basis information is essential for calculating a hedge. For example, wheat is to be sold in February and the KCBT March wheat contract price is \$3.25. Table 1 indicates that last year's average monthly Gulf basis was \$0.39 and the four-year average Gulf basis (Table 2) was \$0.41. Using the four-year average basis, the expected hedge price for February Gulf wheat delivery would be \$3.66 (\$3.25 + \$0.41).

Thumb Rules

There are some "Thumb Rules" presented in Table 5 that may be applied to the cash price and basis relationship. WARNING--Use these "thumb rules" as one piece of information for making marketing decisions. Never use the thumb rules as the only information used.

Summary

During the marketing year, the wheat basis tends to increase. In other words, cash prices tend to rise relative to future contract prices thus encouraging storage. If the basis is weak, lower than normal, the market may be signaling to store wheat. If the basis is strong, higher than normal, the market may be signaling to sell wheat rather than place it in storage. Thus, the basis performs a function of allocating commodities over time and space. In the case of wheat, the basis is said to be allocating wheat and wheat storage so that the flow of wheat to the market is efficient and timely.

TABLE 1. AVERAGE MONTHLY GULF WHEAT BASIS, JUNE 1987 THROUGH MAY 1988¹

MONTH	CONTRACT MONTH				
	JULY	SEPT	DEC	MAR	MAY
JUN	0.34	0.29	0.22	0.20	0.17
JLY	0.34	0.29	0.20	0.16	0.18
AUG	0.18	0.29	0.17	0.12	0.13
SEP	0.30	0.30	0.19	0.15	0.20
OCT	0.26	0.22	0.21	0.13	0.17
NOV	0.30	0.27	0.29	0.22	0.25
DEC	0.46	0.43	0.34	0.36	0.40
JAN	0.39	0.35	0.30	0.36	0.37
FEB	0.39	0.34	0.29	0.39	0.39
MAR	0.30	0.25	0.20	0.38	0.35
APR	0.29	0.22	0.15	0.08	0.35
MAY	0.32	0.26	0.18	0.13	0.38

¹Gulf cash price minus KCBT wheat futures contract price, daily

TABLE 2. FOUR-YEAR AVERAGE MONTHLY GULF WHEAT BASIS--JUNE 1984 THROUGH MAY 1988¹

MONTH	CONTRACT MONTH				
	JULY	SEPT	DEC	MAR	MAY
JUN	0.40	0.36	0.28	0.25	0.33
JLY	0.39	0.35	0.27	0.25	0.30
AUG	0.44	0.36	0.29	0.27	0.33
SEP	0.53	0.38	0.34	0.34	0.42
OCT	0.50	0.46	0.33	0.30	0.39
NOV	0.53	0.50	0.35	0.33	0.41
DEC	0.62	0.59	0.36	0.40	0.49
JAN	0.65	0.63	0.55	0.42	0.55
FEB	0.66	0.63	0.55	0.41	0.57
MAR	0.66	0.63	0.55	0.34	0.52
APR	0.64	0.60	0.53	0.50	0.52
MAY	0.47	0.43	0.36	0.33	0.34

¹Gulf cash price minus KCBT wheat futures contract price, daily

TABLE 3. AVERAGE MONTHLY LOCALIZED WHEAT BASIS: JUNE 1977 THROUGH MAY 1988¹

MONTH	CONTRACT MONTH				
	JULY	SEPT	DEC	MAR	MAY
JUN	-0.41	-0.46	-0.53	-0.55	-0.58
JLY	-0.41	-0.46	-0.55	-0.59	-0.57
AUG	-0.57	-0.46	-0.58	-0.63	-0.62
SEP	-0.45	-0.45	-0.56	-0.60	-0.55
OCT	-0.49	-0.53	-0.54	-0.62	-0.58
NOV	-0.45	-0.48	-0.46	-0.53	-0.50
DEC	-0.29	-0.32	-0.41	-0.39	-0.35
JAN	-0.36	-0.40	-0.45	-0.39	-0.38
FEB	-0.36	-0.41	-0.46	-0.36	-0.36
MAR	-0.45	-0.50	-0.55	-0.47	-0.40
APR	-0.46	-0.53	-0.60	-0.67	-0.40
MAY	-0.43	-0.49	-0.57	-0.62	-0.37

¹Average Monthly Gulf Wheat Basis Minus \$0.75

TABLE 4. FOUR-YEAR AVERAGE MONTHLY LOCALIZED WHEAT BASIS: JUNE 1984 - MAY 1988¹

MONTH	CONTRACT MONTH				
	JULY	SEPT	DEC	MAR	MAY
JUN	-0.35	-0.39	-0.47	-0.50	-0.42
JLY	-0.36	-0.40	-0.48	-0.50	-0.45
AUG	-0.31	-0.39	-0.46	-0.48	-0.42
SEP	-0.22	-0.37	-0.41	-0.41	-0.33
OCT	-0.25	-0.29	-0.42	-0.45	-0.36
NOV	-0.22	-0.25	-0.40	-0.42	-0.34
DEC	-0.13	-0.16	-0.39	-0.35	-0.26
JAN	-0.10	-0.12	-0.20	-0.33	-0.20
FEB	-0.09	-0.12	-0.20	-0.34	-0.18
MAR	-0.09	-0.12	-0.20	-0.31	-0.23
APR	-0.11	-0.15	-0.22	-0.25	-0.23
MAY	-0.28	-0.32	-0.39	-0.42	-0.41

¹Four Year Average Monthly Gulf Wheat Basis Minus \$0.75

Table 5. Market Signals and Marketing Strategies to consider.

<u>Market Signal</u> Basis	Price	Potential Strategies
Weak	Low	Store unpriced Deferred Contract Government Loan
Weak	High	Store unpriced Storage Hedge Do not contract
Normal	Normal	Buy put option Stager sells Sell and buy call option
Strong	Low	Sell cash and buy futures Sell cash and buy call Sell cash
Strong	High	Sell cash Forward contract Do not hedge



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