



Minneapolis Grain Exchange

Hard Winter Wheat Futures Analysis Fixed Price Flour Example

Situation

A flour miller needs to fix the price of 2,000,000 bushels of wheat on June 15 to cover fixed price flour sales that will be completed on December 1. The miller cannot buy adequate cash coverage, but can long hedge hard red winter wheat by buying either Kansas City Board of Trade (KCBT) futures or Hard Winter Wheat Index (HWI) futures traded at the Minneapolis Grain Exchange (MGEX) beginning May 9, 2003. For this analysis, the spot HWI is used as a proxy for HWI futures.

This analysis compares the miller’s hedging instrument alternatives: KCBT wheat futures versus HWI futures. Wheat futures are purchased on June 15 to cover 2,000,000 bushels of hard red winter wheat, futures are sold on December 1 to offset the hedge, and wheat is purchased simultaneously on December 1 at the western Kansas price for hard red winter wheat.

Data

For this analysis we are using the following data:

- ?? KCBT Futures – the closing price of the KCBT December futures
- ?? HWI Futures proxy – the daily reported price of the Hard Winter Wheat Index (HWI) plus the proportional KCBT carry according to the following table

	1999	2000	2001	2002
6/15 actual HWI	241	244	277	297
Proportional carry	22	20	20	6
Synthetic December HWI Futures on 6/15	263	264	297	303

- ?? Kansas cash wheat – the price of #1 HRW for western Kansas as reported by the USDA

Hedge Analysis

The KCBT/HWI hedge comparison is shown for the years 1999-2002 using historical prices for KCBT futures, the synthetic HWI futures and western Kansas cash prices. The total cost of the wheat procured is found by adding the hedging gain/loss to the December 1 western Kansas cash wheat price.



HWI versus KCBT Hedge Analysis (all prices in cents per bushel)

	1999		2000		2001		2002	
	Dec KCBT	HWI	Dec KCBT	HWI	Dec KCBT	HWI	Dec KCBT	HWI
6/15 (buy futures)	313	263	321	264	330	297	319	303
12/1 (sell futures)	264	218	312	287	286	274	431	413
Futures gain/loss	-49	-45	-9	23	-44	-23	112	110
12/1 W. KS price	215	215	282	282	265	265	405	405
Net Price Paid	264	260	291	259	309	288	293	295

HWI Hedge Savings Versus KCBT Hedge

	1999	2000	2001	2002
Cents per bushel	4	32	21	-2
HWI Savings on 2,000,000 Hedged Bushels	\$80,000	\$640,000	\$420,000	\$-40,000

Hedge Summary

During this period the HWI outperformed the KCBT hedge in 3 out of 4 years. The KCBT hedge outperformed the HWI hedge by a slight margin of 2 cents per bushel during 2002. This points out that there could be situations where it may be favorable to place hedges in KCBT due to certain moves in the basis.

The total procurement savings during the study period by using HWI was \$1,100,000. The range of the gain or loss by using the HWI was from positive \$640,000 to negative \$40,000. The average annual savings by hedging in the HWI was \$275,000.

The information presented in this document is for educational purposes only and should not be construed as trading advice or a recommendation by the Minneapolis Grain Exchange.



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