Basis Explained

A basis if a difference between cash-Futures, or in other words : Cash-Futures = basis

A complete cycle of hedge involves

a) Cash market price at the inception of the contract

b) Futures contract price at the inception of the contract

c) Cash market price at maturity

d) Futures price at maturity.

The Futures and cash move in tandem to each other and consist of an inherent cost of carry which makes the futures a bit more expensive than the cash market price.

Therefore if cash market price today is X, the futures prices are assumed to consist a carrying

cost which makes it (futures price) X+cost of carry. This cost of carry is the reference basis at the beginning of the contract.

For example: A farmer enters into a contract on July to sell soybean on Sep, the equation of the cash and futures could be say cash at 360 cents, Sep futures at 375 cents and hence the basis stands at -15 cents(360-375). Which in other words is just talking about the cost of carry.

The process of hedge:

Since the farmer is a seller of a commodity he takes a short hedge that is selling futures for the value of his inventory to protect from price decline.

On July assume cash is at 360 cents and assume farmer sells futures at then prevailing price of Sep contract at 375 cents.

So the hedge position is for July Cash reference 360 cents the Farmer is short Sep contract at 375 cents.

Maturity:

When the contract matures say, on sep when the farmer finally has to deliver soybeans against his contracts, the cash market prices “then” would obviously be function of existing cash market demand/supply situation.

In Sep there could be 2 scenarios the farmer can see – a price drop – or a price rise.

If price drops: The farmer has 2 situations again that the

Cash market doesn't drop the same way as the futures or
The futures doesn't drop the same way as the cash market.

A brief description is given below

Price drop
Cash(a)
Futures(b)
Basis(c)
Futures* Gain/Loss(d)

Selling price(a+d)

360

375

-15

0

0

355

365

-10

10

365

350

355

-5

20

370

345

335

10

40

385

335

315

20

60

395

330

310

20

65

395

More negative reading is a weakening of the basis or that cash market is performing poorly to fu

More positive reading is a strengthening of the basis or that the cash market are performing bet

***Gain from futures is calculated assuming the farmer has sold futures from 375 and the profit fr**

Price rise

Cash(a)

Futures(b)

Basis(c)

Futures* Gain/Loss(d)

Selling price(a+d)

360

375

-15

0

360

370

390

-20

-15

355

375

400

-25

-25

350

380

410

-30

-35

345

400

415

-15

-40

360

415

420

-5

-45

370

430

425

5

-50

380

More negative reading is a weakening of the basis or that cash market is performing poorly to

More positive reading is a strengthening of the basis or that the cash market are performing b

***Gain from futures is calculated assuming the farmer has sold futures from 375 and the profit f**

The Farmer in this case is said to be “Basis Long”.
A widening basis that is a higher cash market price compared to futures will help realize better selling price.
A weakening basis that is cash market performing poorly to futures market dose not benefit a farmer, but benefit a buyer/ intermediary etc.

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