Agricultural And Commodity Marketing

Chapter seven: Introduction to Agricultural Futures Markets

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7.1 introductions

- **THE PORPUSE OF FUTURS MARKET**
  - Revenue risk
  - Futures market manage the fluctuation & risks via:
    - Discovering information and future contract

❖ **Basically futures markets are used to:**

- **create and trade futures contracts between a buyer and seller of a commodity.**

Why did futures markets come about?

1. Transportation distances increased-higher price volatility followed.
2. **No central information source**, such as ECX, Banks and media
3. **No standardized trading rules and measures.**
   a) **Commercial law**
   b) **Units of measurement**

6.2 contract farming

7.2.1 Definition

- **Contract farming** involves agricultural production being carried out on the basis of an agreement between the buyer and **farm** producers.

7.3.2 The types of contract farming

1. **Forward Contracts**
2. **Futures contract-**
   - **SIMILARITIES:**
     - **statement signifying a promise between a seller and a buyer.**
   - **DIFFERENCES:**
     - **formality as a POD…..**
     - **IN FORWARD CONTRACT ….private negotiation…..OVER-COUNTER-TRADE**
     - **FUTURE…..standardized**

The components of futures contract-

- A contract specify the following:
  - An obligation of the seller
  - An obligation of the buyer
  - An expiration date (time of delivery).
  - Place of delivery
  - Other standardized measures
    - quality
    - quantity
    - Units of measurement

contract price information

- **Where do you get contract price information?**

1) **Exchange organization**
2) **notice board**
3) **web page**
4) **Banks**
5) **Mass-medias**- business news

7.3 Introduction to Futures Contracts

- **DEFINITION**
  - **Legal agreement to sell and buy a commodity at a predetermined price at a specific time in the future.**
- **WHAT DOES FUTURES CONTRACT PROVIDE?**
  - **The formality of the exchange**

❖ **futures contract provides:**

❖ **the standardizations that exist in each futures contract:**

1. **Measures**
   - 5,000 quintal, wheat, corn, soybeans, etc.
2. **Quality**
3. **Delivery location**
4. **Contract end date**
5. **Pricing units**
   - ETB 200/k.g, coffee
   - ETB 1500/quintal, taff

7.3.1 Purchasing a Futures Contract

- **Every contract requires two parties:**
  - **Buyer and Seller**

6.3.2 Offsetting Contracts-

- **Purpose:**
  - **Risk Hedging**
- **Short position…….offset by buying a contract (long position).**
- **Long position……..offset by selling a contract (short position).**
- **The obligation:**
  - **Assuming the difference**

7.3.3 Mechanics of a Futures Market

- **The approaches:**
  - **Open outcry**
  - **Electronic exchange**

1. Times vary, but usually markets are open between 9 a.m. and 2 p.m.

2. Buying and selling occurs simultaneously.

3. Two types of participants:

i. Exchange members.

ii. Non-members.

Cont'd…..from…. the mechanics FM

4. Clearinghouse overlooks positions and obligations.

- **THE TASKS:**
  - Notifies buyers and sellers of obligations.
  - Matches open positions …….open interest
  - Margin requirement……**5% - 20% of a contract's value.**

7.4 Example of Futures Market Participation

- **Consider the following scenario:**
  - **Current date (t_0): November 1**
  - **July wheat futures contract is trading @ ETB 5.50/kg**
  - **You believe that the actual price in July will be ETB 4.00/kg.**

7.4.1 Deciding what position to take?

The properties of market position

- Short position – if FP reduces
- Long position- if FP rise

7.4.2 Entering the market

- **Suppose you want to sell ten (10) July contracts @ 5.5/kg (i.e., agree to deliver 50,000 kg in July).**
- To do so, you would take the following steps:

1. Call a broker or exchange member and inform them of your intentions.
2. **Pay a commission fee-** 1 cent per kilo gram ($0.01 x 50, 000 = $500)
3. **Put up a margin deposit-10%**
   - **Margin deposit: 10% x 10 x 50,000 x $5.50 = $275,000**

- **So the total funds needed to sell 10 contracts in November: $280,000.**

7.4.3 Actions at Delivery Time

- After seven months, you are near the delivery time in July. At this point, **you have two options:**

1. Deliver on the contract

purchase the wheat and deliver the wheat to the delivery location.

2. Take a long position on an off-setting contract by buying a July contract at the going price.

($5.50 - $4.00) x10 x50,000 = $750, 000

7.4.4 Additional problems- market participation

- **Consider the following scenarios:**

1. You believe that the price of corn will rise in September to $4.50/kg. It is currently July and the price of futures contracts is $4.25.
2. The Ethiopian Development Agency comes out with a report that the soybean harvest in September will be well below expectations. Using an EDM calculation, you find that prices will change by 25%. One soybean contract is 5,000 kg and the current price is $8.00/kg.
3. From a friend working in the Ethiopia Senate, you found out that there is a policy in the works that will place a tax on chat producers. This policy will go into effect in December. You know that this policy will change the price of chat by 10$. Chat contract is 40,000 kg, and the price in June is $1.00/kg.

Question

- **For each scenario, do the following:**

1. Decide which position you should take given that you know the information.
2. Decide how much you will profit per unit (kg).
3. Decide how many contracts you should buy/sell in order to profit by at least $20,000.

7.5 Market Risks - price variability

- **What if price changes?**
  - **Profit/loss**
- **How to measure the profit/loss?**
  - **Marking-to-market**
- **6.5.1 Example-Marking-to-Market**
- Example of typical futures market day-to-day operations:
- **Day 1**
- You take a short position a July futures contract for 100,000 kg of wheat at $3.50/kg. You pay 10% into the margin account: $35,000.
- **Day 2**
- July wheat futures prices fall to $3.40/kg. Since you are short, a decrease in price implies that you profit by $0.10/kg. In other words, your futures contract is now worth ($0.10/kg x 100,000) = $10,000 more.
- **So, $10,000 is deposited into your margin account at the end of Day 2**

- **Day 3**
- July wheat futures prices rise to $3.45/kg.
- Since you are short, an increase in prices implies that you lose by $0.05/kg. In other words, your futures contract is now worth ($0.05/kg x100, 000) = $5,000 less.
- So, $5,000 is taken out of your margin account at the end of Day 3. However, this implies that your contract has been marked to market- it is now a contract that would require you to sell at $3.45/kg, not $3.40/kg.

7.6 Hedging Risk using Futures Markets

- **Markets can be very risky……solution…Hedging**
- **What is hedging?**
- is the process of taking opposite positions in commodity markets (typically, local cash and futures markets) in order to guarantee a certain profit.
- **6.6.1 Local vs. Futures Markets**

7.6.2 Hedging Local Market Price Risk

- Suppose that in November, an operator of a grain storage facility buys 100,000 kg of wheat from a farmer at $4.00/kg. You now own the wheat and will sell it to processors at the local market price in July.
- **How do you hedge this price risk? your position?**
  a) **if July price is 6/kg**
  b) **if July price is 3/kg**

7.7 BASIS

- **What is basis?**
  - "Basis" is the difference between local cash price and a nearby futures price, quoted in common currency.

Basis = Local Cash Price - Nearby Contract Price

B = P - F

  - For example, if futures price is $4.75, and cash is $4.55, then basis is $0.20 under (-$0.20).
  - If futures price is $4.75 and cash is $4.95, basis is $0.20 over (+$0.20).

7.8 Futures Market Practice

- **7.8.1 Speculator Approach**
- **Who are speculators?**
  - Speculators are people who attempt to profit through buying and selling, based on price changes, and have no economic interest in the underlying commodity.

❖ **Consider the scenario:**

- It is currently November. The July wheat futures contract is trading at $3.50/kg.
- **Answer following:**

1. You believe that the price of wheat will fall. What position should you take? Ignoring commission, calculate your rate-of-return on investment for 10 contracts if the margin requirement is 10% and the July prices are:
   - $3.25
   - $2.00
   - $4.50

7.8.2 Hedger Approach

- **What is hedging?**
  - To hedge is to take a futures position that is ***equal*** and ***opposite*** to a position held in the cash market.
  - **Hedging :** It is a trading technique of transferring the price risk.
  - "Hedging is the practice of buying or selling futures to offset an equal and opposite position in the cash market and thus avoid the risk of uncertain changes in prices

- **The objective is to:**
  - mitigate the risk of an adverse move in prices.
- **Offsetting-hedging position:**

a) **Short Hedging**

b) **Long Hedging**

7.9 Options

types of option	Holder (Buyer)	Writer (Seller)
Call Option	Right to buy	Obligation to sell
Put Option	Right to sell	Obligation to buy