

# Cotton

## FUTURES & OPTIONS



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**The New York Board of Trade® (NYBOT®) provides the world's premier futures and options markets for several internationally traded agricultural commodities: cocoa, coffee, cotton, frozen concentrated orange juice (FCOJ) and sugar.**

The trading of agricultural commodities represents one of civilization's oldest commercial activities. Crop commodities, such as cotton and sugar, have been in use for around 3,000 years. Basic commodities with universal value in different cultures could be described as the first international currencies of exchange. With such a long history as a basis of commerce, it is easy to understand how the marketplace value of each commodity could play a major role in the rise and fall of empires.

The shape and scope of commodity trading has evolved since the early trading routes were established, but the role of commodity trading still remains a fundamental economic component in world economic development. The price fluctuations of a basic commodity can still shock the economy of a country or an entire region. The price of the latest yield of the citrus grove or the cotton field matters a great deal. The central importance of commodity pricing gave rise to the commodity exchanges and their principal pricing tools – futures and options contracts.

For well over a century, cotton, coffee, sugar, cocoa and citrus industry representatives have joined traders and investors in the New York Board of Trade (NYBOT) futures and options markets to engage in price discovery, price risk transfer and price dissemination for these internationally traded commodities. Each day, people from around the world look to the NYBOT markets for a benchmark price.

While the pricing role of the NYBOT markets has remained the same, the exchanges have changed their names, merging, expanding and adding new agricultural products over the years.

## New York Board of Trade Historic Timeline

- 1870**     **The New York Cotton Exchange (NYCE®) trades first cotton futures contracts**
- 1882**     Coffee Exchange of the City of New York trades first coffee futures contracts
- 1914**     Coffee Exchange adds sugar futures
- 1916**     Coffee Exchange becomes the New York Coffee and Sugar Exchange
- 1925**     New York Cocoa Exchange begins trading cocoa futures
- 1966**     **New York Cotton Exchange adds Frozen Concentrated Orange Juice (FCOJ) futures**
- 1979**     New York Coffee and Sugar merges with New York Cocoa Exchange forming the Coffee, Sugar & Cocoa Exchange, Inc. (CSCE)
- 1982**     CSCE introduces options on sugar futures, first U.S. exchange-traded option
- 1984**     **NYCE introduces cotton options**
- 1985**     NYCE adds FCOJ options
- 1986**     CSCE adds cocoa and coffee options
- 1998**     **CSCE and NYCE form New York Board of Trade (Board of trade of the City of New York, Inc.)**
- 2004**     **CSCE and NYCE become the New York Board of Trade (NYBOT)**

*Potential users of the NYBOT Cotton Futures and Options markets are encouraged to read a companion NYBOT publication entitled "Understanding Futures and Options" for an overview and explanation of the basics of these markets. More information is also available at [www.nybot.com](http://www.nybot.com) and [www.nybotlive.com](http://www.nybotlive.com).*

## COTTON – A UNIVERSAL COMMODITY

Cotton throughout history stands as a prime example of the power and influence of a single commodity on the political, economic and social lives of all the citizens of the world. The importance of this single crop can be felt in its complex history of rural land and urban industrial development. Because of its universality, the price of cotton wields enormous influence in the world economy. The arena of cotton pricing – **the cotton futures exchange** – therefore plays a major role in the history of this basic commodity.

Cotton has been in use for over 5,000 years. This remarkable fiber is not only one of the oldest known to man, it is also one of the most common and adaptable plants with a myriad of uses. The variety of cotton goods from basic essentials to luxury materials is as great as the range of the grade, type and quality of the raw cotton itself.

Each of the earliest civilizations developed its unique textiles: Egypt had flax; China had silk; Mesopotamia had wool; but cotton was the staple in two widely separated and independently advanced civilizations. Archeological discoveries give cotton a birthday somewhere before 3000 BC in India (the region that is now Pakistan) and 2500 BC in Peru. Rising empires soon moved cotton over expanding trade routes.



The Persians imported cotton from India. Traders carried it into China. It grew wild on the coast of East Africa. From Peru it migrated north up the American continents. The legions of Alexander the Great brought cotton back to Europe, but it was a luxury only the very rich could afford. Arab traders brought cotton to Europe on a larger scale by the ninth and tenth centuries. Before long the Spaniards and the Italians were weaving cotton. Cotton continually increased its value – for clothing, for blankets, for packaging for bindings and harnesses.

The Persians and the Romans were among the first great empires that valued, traded and spread this universal commodity. Cotton goods, common to many cultures, came to represent a kind of universal “currency” of world trade. From the beginning, traders understood the significance of placing a particular value on a commodity, controlling that value and enhancing it – **the fundamental power of price.**

While cotton was a major factor in the trade of many nations, it took a bit longer for cotton trade and manufacture to spread to northern Europe where wool dominated. The British Empire used the economic power of cotton in a new way. The British Colonies in the Americas and elsewhere around the world often began as business entities, corporations chartered by the king to provide the realm with raw materials of value to be transformed by skilled workman into goods of greater value. The British understood that they could more effectively determine the values (price) by controlling the source of production and the means of manufacture.

At first cotton was valued in England as a desirable luxury item, but it soon became even more widely useful. The new fabric became so popular in the 17th Century that the wool weavers’ guilds in England saw it as a threat to their long established trade. Protestant weavers, driven out of Flanders by the Catholic Spanish, arrived in England and settled in Manchester. They turned their craft skills to fashioning cotton goods.

When technology created the necessary tools, the production moved from cottage to factory, employing these same craftsmen. With the industrial revolution in Europe, English technological discoveries transformed cotton, which had been a handcrafted luxury item for centuries, into a mass-produced necessity, further entrenching the power of the English economic model.

**Two political and technological circumstances** radically changed the course of the growth and development of the cotton industry: the cultivation of cotton in England’s American colonies beginning in 1621 and the rise of the industrial revolution in Europe and the United States.



The growth of cotton production in the United States offered England, a major manufacturer and consumer, a critical source of raw cotton. Cotton began as one of several important subsistence crops acquired from Native Americans and quickly evolved into a major cash crop for the colonists. The British control of key supply/demand circumstances allowed them to dominate cotton pricing.

England strengthened its manufacturing position with the advent of important technological inventions during the Industrial Revolution that shifted the cotton industry from a largely rural handicraft system to a mechanized urban industry. The spinning jenny, spinning machine, steam engine and telegraph transformed cotton, and cotton, in turn, changed world trade.

When Samuel Slater “exported” the milling technology to Rhode Island, the shape of the world cotton trade shift radically again. The arrival of this technology, which led to the first American mill in 1793, coincided with Eli Whitney’s introduction of the cotton gin - a machine that separated cotton fiber from the seed. With this expansion of production capability, the economic power of cotton grew enormously. With cotton production and manufacture now moving close together within common borders in the U.S., the cotton industry again grew in power and influence. The American Civil War, the end of slavery and the post-war reconstruction era brought further transformation to the industry.

## FORWARD CONTRACTS

The development of the steam ship changed the way cotton was bought and sold. When information could travel faster on a steamship ahead of the actual goods that followed on a sailing ship, the process of negotiating cotton price became more complex and speculative. Forward contracts on expected delivery of cotton still on the docks on the other side of the Atlantic began to replace immediate transactions of cotton arriving in port.

**Movement of market information** instead of the physical arrival of the commodity in port became a dominant factor in pricing cotton. Moreover, the successful installation of the transatlantic cable and the use of the telegraph made key market information instantaneously available on both sides of the Atlantic (New York and Liverpool), and intensified trade of forward contracts on cotton. As the practice of forward pricing increased and market information played a greater role, the need to bring some order to this process necessarily led to the creation of the cotton futures exchange – a place where market information, competitive buying and selling and the shifting of a risk exposure could take place in an organized manner.

## **FUTURES CONTRACTS**

**Futures trading** started on the American side of the Atlantic in 1870 in New York because cotton traders could no longer agree on who should assume the price risk inherent in a forward contract during the six weeks time it took for a shipment to make its way across the Atlantic.

**The increasing levels of price uncertainty finally led 106 cotton merchants and brokers in 1870 to organize the New York Cotton Exchange (NYCE), the oldest commodity exchange in New York. The Exchange quickly grew into a highly visible, liquid futures marketplace. The addition of options on cotton futures in 1984 affirmed NYCE's central role.**



## THE FUNDAMENTALS OF COTTON SUPPLY AND DEMAND

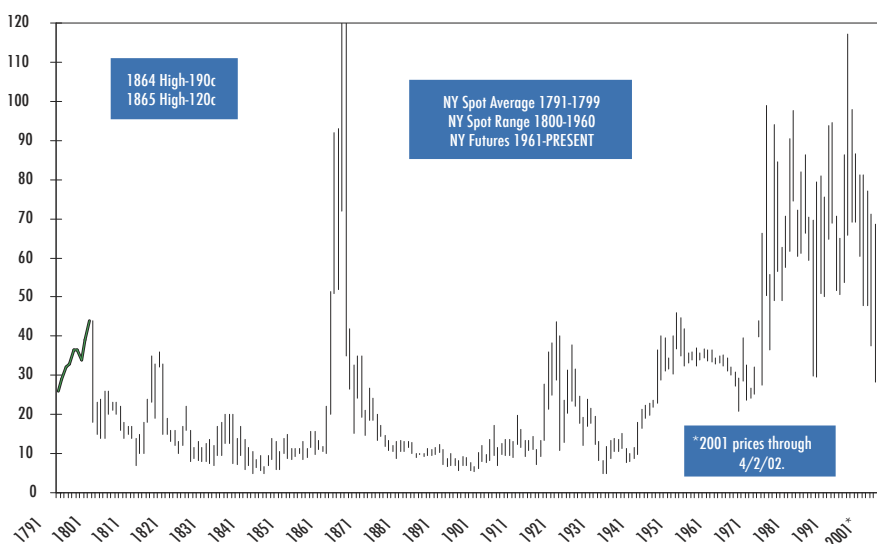
Unlike other basic commodities that are more land and climate specific, such as cocoa or coffee, cotton can grow nearly anywhere that has the requisite 200 frost-free days and the basic water supply. While on the supply side cotton is relatively easy to grow, it varies widely in terms of grade. This means that the quality of cotton grown and the availability and desirability of each grade becomes a major pricing factor on the demand side. Cotton grading from coarse to premium is a critical economic issue for the end user. Coarse cotton can be used for such things as denim where premium cotton is necessary to make soft sheets and shirts. The market continually shifts and favors different growths in different countries depending on growing conditions and the type of cotton suitable for the region.

The hardy nature of the cotton plant has made it a common cash crop for many countries in both the developed and developing world. In some developing nations, over half the Gross Domestic Product (GDP) is represented by cotton production. Like sugar, virtually every country in the world uses cotton in some form. Cotton's ease of growth, the seemingly endless variety of potential goods that utilize it and the commodity's vulnerability to unforeseen natural and man-made events raise the economic stakes for cotton and ensure its enduring place in the world economy. Cotton's primary economic position and the impact of cotton pricing help to explain the significant role of a cotton futures exchange.

The raw cotton fiber has certain qualitative and quantitative characteristics that can be standardized, making it a commodity well suited for a futures market. The success of a futures market also should involve a broad range of participants with competing price goals and be subject to uncontrollable and unforeseen events, such as drought or flood, which will create price shocks and thereby expose all levels of the industry to price risk. Cotton fulfills all these criteria but it presents some unique characteristics as well. The price history of cotton tells the story of the ever-present price risk.



## COTTON PRICE HISTORY



## TRADING COTTON FUTURES AND OPTIONS

In spite of all of the changes in the cash market, the cotton futures market today still provides the same primary functions: **price discovery, risk transfer and price dissemination**. The world prices its cotton at a premium or discount to the **Cotton No. 2<sup>sm</sup>** futures contract traded in New York. The stability and continuity of the futures market function is based on the contracts ability to reflect cash market conditions and practices.

The unique characteristics of cotton as a plant are revealed in the complex grading standards of the cotton futures contract. In 1887, the NYCE implemented the Certificate System. Under the system, a certificate stipulating the grades of cotton became good for delivery, passing from hand to hand like a stock certificate.

This became the standard for recording and guaranteeing the quality of each specific bale of cotton, a measure necessary to ensure the validity of the futures contract as a benchmark for pricing. The United States Department of Agriculture (USDA) is the source of grading cotton for certification in the U.S. The certificate functions as a kind of “currency” that facilitates the trading of cotton futures.

The current NYBOT Cotton No. 2 contract, at 50,000 pounds (approximately 100 bales of cotton), uses Strict Low Middling,  $1\frac{2}{32}$  inch staple cotton as the cash price equivalent for quality specification and delivery purposes. In the case of delivery, the certificate for each bale of cotton would have to satisfy the contract’s minimum standards. The five active delivery months are March, May, July, October, and December. Early in the 20th century the contract could be traded up to 12 months, but now the current month plus one or more of the next twenty-three succeeding months are available for trade. A July 2001 contract, for example, could be traded as early as August 1999.

The primary cotton classing components are color, length, micronaire and strength. Micronaire is a reading of the coarseness of the fiber measured by its resistance to air passage. Strength is quoted in “Gram per Tex.” Regarding color, the contract permits delivery of only “white” grades of “good middling to low middling” and light spotted grades of “good middling to middling.” The basic fiber length is  $1\frac{2}{32}$  inch with a minimum of  $1\frac{1}{32}$  inch at commercial discount and a maximum of  $1\frac{3}{32}$  at a premium. Any longer staple does not carry a higher premium.

Industry standards and practices have led to specification changes periodically. The minimum grade of cotton deliverable against the contract was raised to Low Middling from Good Ordinary in 1920. A contract permitting southern delivery was introduced in 1929. In 1939 the basis of the cotton contract was changed from  $\frac{7}{8}$  inch to  $\frac{15}{16}$  inch and raised again in 1953 to 1 inch. Trading in the Cotton No. 2 contract with a  $1\frac{1}{16}$  inch basis was introduced in 1967. In 1974, the basis grade was changed from middling  $1\frac{1}{16}$  inch to Strict Low Middling  $1\frac{1}{16}$  inch.

Most recently the Exchange adjusted the contract specifications to reflect industry practices, beginning with the May 2003 Cotton No. 2 contract: increased the minimum strength requirement to 25 grams per tex (from the previous minimum of 22); allowing for price differentials should the United States Department of Agriculture (USDA) commence quoting price differentials for cotton with a micronaire level of 4.8 or 4.9 (currently, micronaire readings of 3.5 to 4.9 are allowed with no premiums or discounts); established a new “age of cotton” discount applied to cotton delivered on and after 1 January of the second calendar year following the cotton’s year of growth.

The stability and continuity of the futures market function is based on the standardization of the contracts to reflect cash market conditions and practices. The NYBOT continuously monitors the performance of its markets and the changing cash market conditions. Adjustments have been and will continue to be made to the contract as cash market conditions, crop characteristics and industry practices demand. The Exchange’s Cotton Contract Committee is charged with maintaining the integrity of the contract. Proposals for new contracts are also considered and evaluated for potential introduction to the market.

The evolution of the Cotton Certificate System illustrates how the exchange can change its procedures and practices while maintaining the essential concepts of its primary functions. Today the certificate system still serves its original purpose, but the development of the Electronic Warehouse Receipt (EWR) system has allowed the assignment of ownership of a bale of cotton to move from a cumbersome manual exchange of paper to a completely electronic transfer and record of the transaction. With ever-increasing globalization, the ability to transfer ownership instantaneously via electronic means ranks with the development of the steam ship and the transatlantic cable in terms of the movement of critical market information.

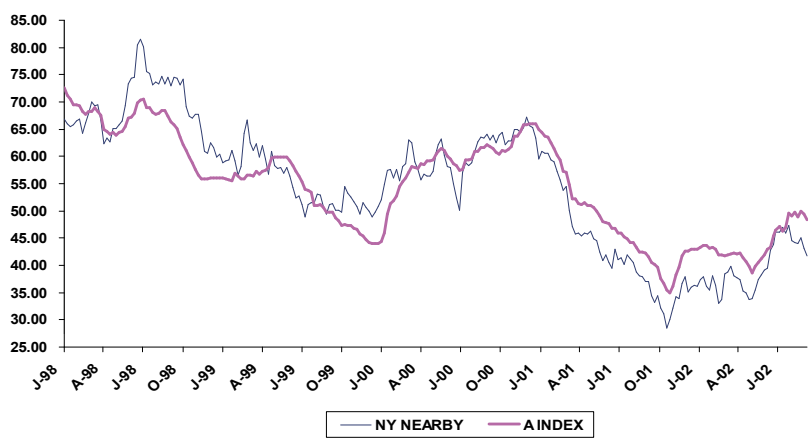
The cotton industry uses the Cotton No. 2 futures contract as its primary tool to hedge the purchase or sale price of cotton. Hedging is possible because the cotton futures and the cash market have a strong relationship and generally move in tandem over time. The difference between the local cash price and the Cotton No. 2 futures price may widen or narrow over time. A firm understanding of this difference (the basis) is critical to any hedging plan. In cotton, the basis has particular importance because of the many pricing variables that affect the global marketplace. A comparison of the Cotton No. 2 Nearby Contract price with the Cotton “A” price demonstrates the price relationship.

To establish a successful hedge, the industry user in cotton (as in other agricultural commodities) must calculate and examine the historical basis for the product trading in the local cash market. This basis risk cannot be transferred to the futures market.

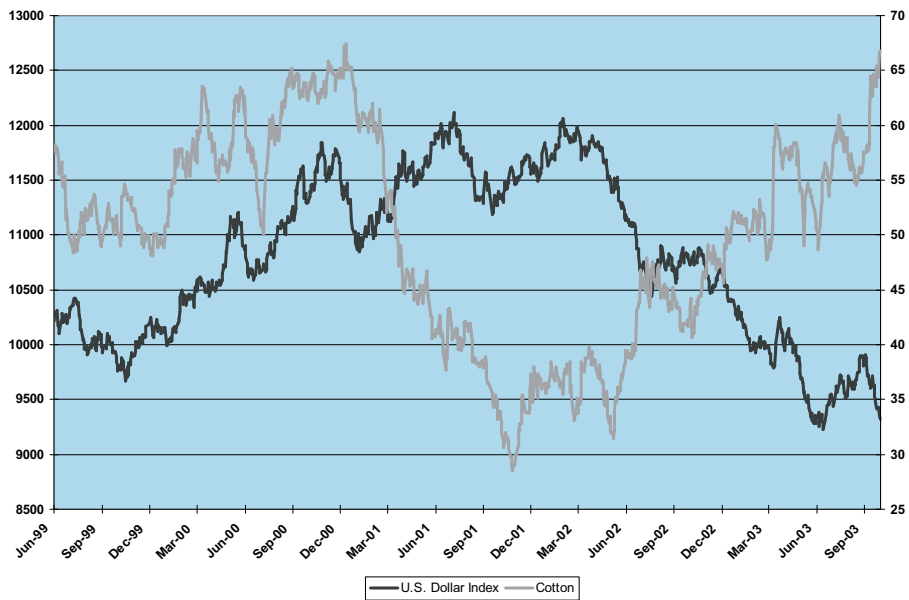
In addition, since the abolition of the gold standard in 1973, all cotton futures contracts, with the exception of India, have been traded in \$US. Hedging or speculation in cotton futures in any other currency, therefore, involves unpredictable exchange rates and adds one more element of pricing uncertainty. Currency risk therefore becomes a factor in calculating basis risk. Comparing the movement of the U.S. Dollar Index® (USDIX®) futures and options are traded in the NYBOT financial markets) and the Cotton No. 2 nearby futures contract illustrates how the rise and fall of the U.S. Dollar affects the price of cotton. As the Dollar falls, cotton historically has often risen in price.

For cotton in the U.S., knowledge of basis must also be coupled with an understanding of the changeable logistics of government support programs. A look at the history of cotton futures trading in New York reveals the impact of government programs. Between 1950 and the early 1970s, NYCE exhibited an extraordinary low trading volume, a

NEW YORK FUTURES VS. COTLOOK “A” INDEX



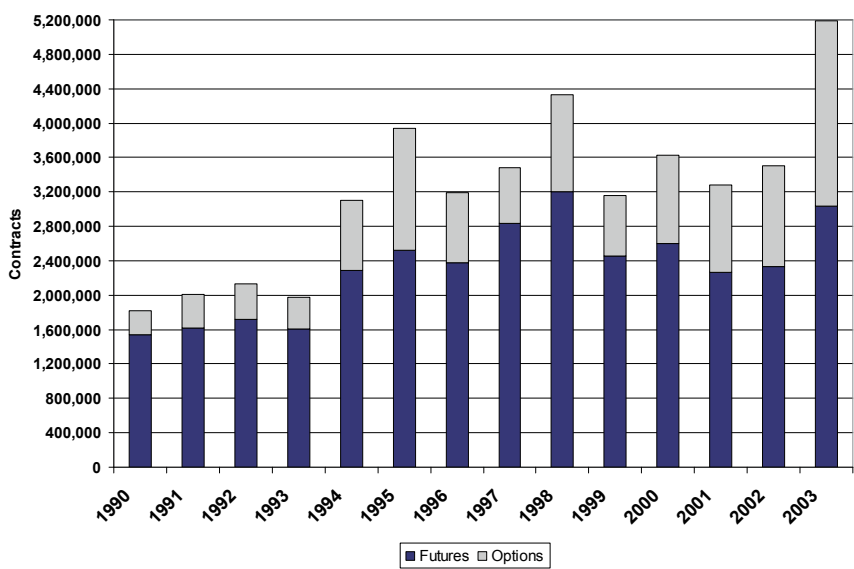
NYBOT U.S. DOLLAR INDEX AND COTTON NEARBY PRICES



direct result of the US government’s policy of maintaining large cotton stocks – the Commodity Credit Corporation (CCC) bought and sold most of the US cotton thus eliminating the need for cotton hedging by merchants. For example, in 1966, the CCC accounted for 73% of cotton carryover. The government’s interference in the cotton market was so severe that it almost led to the demise of the Exchange. In 1966, NYCE traded only 730 contracts – a daily average of three contracts.

The Farm Security and Rural Investment Act of 2002 presents cotton hedgers with new challenges and opportunities. Cotton hedgers today rely heavily on the flexibility of cotton options to reduce risk and capture the benefits of favorable price moves.

ANNUAL NYBOT COTTON VOLUME



Regular options are available on the March, May, July, October and December Cotton No. 2 Futures contracts. The nearest ten delivery months will be listed for trading. Example: In August 2002, options on the October 2002, December 2002, March 2003, May 2003, July 2003, October 2003, December 2003, March 2004, May 2004 and July 2004 contracts will be available for trading.



The successful cotton hedger can utilize a variable mix of futures, options on futures and forward contracts. The cotton futures and options markets provide a number of possible hedging and investment strategies and opportunities. In order to successfully plan and implement a hedging strategy, the risk manager must compile a marketing plan that includes a reliable history of all input costs, risk tolerance, cash flow, seasonal factors, price/profit goals and historical basis. Once the hedging position has been put in place, it should be monitored and adjusted as market conditions warrant.

## TRADING STRATEGIES

### EXAMPLE 1

A futures hedge allows an industry participant to lock in a price. This kind of precision can be an advantage when it comes to longer term business planning. No matter how adverse the cash market move, the hedger has protected a specific price. The Cotton No. 2 contract is priced with cents and hundredth of a cent per pound with each price tick valued at 50 cents.

**Scenario:** In April 2001, a cotton grower has planted his acreage and is considering how to best manage his cotton price risk through harvest. The December futures contract is trading around 50 cents a pound, but the grower is unwilling to assume that the price will not decline by harvest. The grower has planted 1,600 acres to cotton, with an expected yield of 750 lbs. per acre, generating expected production of 2,400 bales (each bale contains 500 lbs. of cotton; each futures contract covers approximately 100 bales). The grower looks to hedge half his expected harvest using the December futures contract (December contract best approximates the time of expected cotton harvest).

**Strategy:** To manage this price risk, the manufacturer sells 12 December 2001 contracts (1,200 bales / 100 bales per contract = 12 contracts)

**4/2/01 – sell 12 Dec 2001 futures at 49.30 cts./lb. (4930)**

**Result:** In early November, cotton prices have (as the grower feared) declined, and the grower chooses to sell his cash cotton at a fixed price. Simultaneously, he unwinds his futures hedge by buying the position back from the market:

**11/1/01 – buy 12 Dec 2001 futures at 30.03 cts./lbs. (3003)**

The grower's futures hedge strategy has generated a futures profit of \$115,620, calculated as follows:

$$\begin{aligned} & \mathbf{12 \text{ contracts} \times [(selling \text{ price less purchase price}) \times \$5],} \\ & \mathbf{or \ 12 \times [(4930 - 3003) \times \$5] = \$115,620} \end{aligned}$$

The grower's futures hedge has generated a profit of \$115,620, and the grower can use this trading profit to offset the lower selling price he obtained by selling his cash cotton in November, since the cash price has declined as the futures price fell. While the movement of the two prices is not likely to have been exactly equal, the hedging profit will offset some or all of the lower cash selling price, thus achieving the grower's goal of managing his price risk on this portion of his cotton production.

**Alternate Strategy:** The grower could have managed his price risk by purchasing Cotton Put Options, as follows:

$$\begin{aligned} & \mathbf{4/2/01 - purchase \ 12 \ Dec \ 2001} \\ & \mathbf{48 \ cent \ puts \ at \ 315 \ premium, \ total \ cost \ of \ \$18,900} \\ & \mathbf{(315 \times \$5 \times 12)} \end{aligned}$$

Alternate Result (price declines): By expiration in early November, the Dec 2001 futures contract price has fallen to 32.78, and the value of the 48 cent puts has increased. The grower could sell his cash cotton at a fixed price and simultaneously close out his options hedge position as follows:

$$\begin{aligned} & \mathbf{11/9/01 - sell \ 12 \ Dec \ 2001 \ 48 \ puts} \\ & \mathbf{at \ 1523 \ premium, \ receiving \ total \ of \ \$91,380.} \end{aligned}$$

The grower's option hedge would have returned a profit (before trading costs) of \$72,480 (premium received minus premium paid), which would partially offset the lower selling price received for his cotton. Let's further assume that the grower's cash selling price is equal to the futures price; this means his total return for the portion of his crop hedged with options was his cash selling price of \$196,680 (1200 bales, or 600,000 lbs, times 32.78 cents per pound) plus his option hedge profit of \$72,480, or \$269,160.

**Alternative Result (price rises):** If prices had risen – to 70 cents a pound, the options purchased by the grower would have expired worthless, leaving the grower to forfeit the \$18,900 premium he paid to purchase them. At the same time, the grower would be able to sell his cash cotton at the current higher price. In this example, if the grower's cash selling price equals the futures price, the grower's total return for the portion of his crop hedged with options would have been his cash selling price of \$420,000 (1200 bales, or 600,000 lbs., times 70 cents per pound) less the forfeited premium of \$18,900, or \$404,100.

## EXAMPLE 2

**Scenario:** In early May, an investor has reached the conclusion that cotton prices have bottomed out and are due to increase over the next several months.

**Strategy:** The investor establishes a long position in the December futures contract:

**5/2/02 – buy 3 Dec 2002 futures at 38.82 cts/lb. (3882)**

**Result:** By mid-June, the investor is proven correct as cotton futures prices have increased, and the investor decides to liquidate his position by selling out the 3 lots purchased in early May:

**6/17/02 – sell 3 Dec 2002 futures at 43.99 cts./lb. (4399)**

Since each cotton futures contract represents 50,000 lbs. of cotton, and since the future contract price is quoted in terms of U.S. cents per pound, each point has a value of \$5.00; the investor's return from this trading strategy is a profit (before trading fees) of \$7,755, calculated as follows:

$$\begin{aligned} & \mathbf{3 \text{ contracts} \times [(sale \text{ price less purchase price}) \times \$5]} \text{ or} \\ & \mathbf{3 \times (4399-3882) \times \$5 = \$7,755.} \end{aligned}$$

In choosing to take a long market position in the futures contract the investor accepted an unknown amount of risk from the possibility that the December futures price could decline rather than rise.

**Alternate Strategy:** The investor purchases call options instead of futures contracts on the same trading dates as in the futures example.

**5/2/02 – buy 3 Dec 2002 40 cent calls  
at \$190 premium, total cost of \$2,850 ( $190 \times 5 \times 3$ )**

**6/17/02 – sell 3 Dec 2002 40 cent calls  
at \$562 premium, receiving \$8,430 ( $562 \times 5 \times 3$ )**

**Alternative Result:** This option strategy would have generated a return (before trading fees) of \$5,580, while taking advantage of the fact that the investor's risk was limited to the amount paid to purchase the options, or \$2,850.



**The NYBOT Cotton Futures and Options markets** provide risk managers with a variety of strategic choices in developing an effective hedging strategy. The successful risk manager will carefully assess business goals, market conditions and available hedging tools. Each contract and capability offers different advantages to the risk manager.

**Futures hedging provides the security of locking in a price.** While it does require posting margin to maintain an open futures position, it does allow hedgers to set specific price goals. Margin represents only a small percentage of the full value of a contract and stands as a “good faith” deposit to guarantee that the hedger will be able to meet obligations on a daily basis if the market moves unfavorably. Hedgers may be required to add more margin to keep the account at a minimum level in the case of adverse price moves. The hedger also has access on a daily basis to any gains realized in a favorable market.

**Options on futures hedging allows the establishment of a price ceiling or floor while still allowing hedgers to take advantage of favorable cash market moves.** Buyers of options must pay the full premium upon purchase of the option. Loss is limited to the full amount of the premium.

Futures therefore offer greater certainty, options provide more flexibility. The Exchange supports other hedging capabilities as well.

## OTHER HEDGING TRANSACTIONS

### The EFP/AA

Some hedgers will choose to enter into an Exchange of Futures for Physicals (EFP) arrangement – also referred to in NYBOT rules as an “Against Actual” (AA) to help limit basis risk. An EFP is a transaction in which a futures contract is exchanged for a cash commodity. The quantity of the cash (physical) commodity being exchanged must be approximately equivalent to the quantity covered by the futures contract. The parties to an EFP/AA must be under separate control, and the buyer (seller) of the futures transaction must be the seller (buyer) of the cash commodity. The EFP provides a standardized way for a buyer and seller of cotton to combine the cash market transaction with the futures hedge; the agreement allows the two parties to base the cash price on the futures price plus or minus a differential. The net cash price is set in the futures market through the use of futures contracts. The EFP allows the buyer and seller to set the price independently of each other.

### The EFS

The Exchange for Swaps (EFS) consists of two related transactions – a swap transaction and a futures transaction in which a futures contract is exchanged for the swap. The swap component underlying the EFS must comply with the requirements of Title III of the Commodity Futures Modernization Act of 2000. The quantity covered by the swap has to be approximately equivalent to the quantity covered by the futures contract. The parties to an EFS have to be under separate control, and the buyer (seller) of the futures contract has to be the seller (buyer) of the swap. A swap is a contractual agreement in which two parties agree to make periodic payments to each other. Swap contracts are customized for the parties involved in an over-the-counter

(OTC) environment. In a commodity swap, one party pays a floating price for a commodity and the other pays a fixed price for that commodity. The physical commodity is not actually exchanged. Payment flows are limited to the difference between the floating price and the fixed price. Basically one party is paying an agreed upon rate for the second party to assume a certain level of price risk.

### Options on Spreads

Options on Futures Spreads Contracts are a relatively new type of option contract. Since different futures contracts trade at different prices (the outer months often reflecting “carrying charges”), market participants may wish to hold “spread” positions, namely buy/sell contracts in two different contract months. Where a regular option contract gives the buyer the right, but not the obligation, to establish a futures position at a pre-determined price level, an OFS gives the buyer the right, but not the obligation, to establish a spread position at a pre-determined spread price between the two futures contract months.

An OFS call option contract would give the buyer the right to establish a spread position of long the first futures contract/short the second futures contract. The strike price of the call option is the difference between the prices of the two futures contracts.

Similarly, an OFS put option would give the buyer the right to establish a spread position of short the first futures contract/long the second futures contract. Just as with the call option, the strike price of the put option is the difference between the prices of the two futures contracts.

For more information on the many strategic capabilities provided by the NYBOT marketplace, please visit [NYBOT.com](http://NYBOT.com) or contact the Exchange directly.



*The NYBOT markets offer important capabilities and advantages.*

**Enhanced Open Outcry:** the proven, traditional pricing strengths of open outcry trading are supported by all the convenience and technical sophistication of NYBOT's new state-of-the-art trading facility at the World Financial Center in Lower Manhattan.

**Market Integrity:** Every transaction in the NYBOT markets is subject to the traditional regulatory scrutiny that characterizes the U.S. futures and options exchanges, ensuring a fair and transparent marketplace. The historical integrity of the NYBOT markets strengthens the quality and reliability of the price discovery process.

**Clearinghouse Security:** Each of the contracts traded at NYBOT is guaranteed by the New York Clearing Corporation (NYCC), the designated clearinghouse for all NYBOT markets, which represents over a century of continuous financial integrity. Every market participant trades in the secure knowledge that they face no counterparty credit risk and no transaction uncertainty.

**Personalized Broker Service:** experienced floor brokers offer personal service and competitive pricing for specialized futures and options trading. Brokers in NYBOT's Cotton options markets can design and execute simple and complex options strategies and write options to implement those strategies at very competitive prices.

**Order Processing:** Electronic Order Routing (EOR) – market users who have internet access to EOR can send orders electronically to the trading floor, where they are filled in open outcry, and then matched, cleared and confirmed electronically in real time. All EOR users can enter, change or cancel all types of orders (including complex combination strategies). Users have real time trade reconciliation in the pit and/or in the booth.

**Market Information Access:** The New York Board of Trade now offers real time streaming data directly from the NYBOT trading floor and delivered over the Internet through NYBOTLive.com. Market users should visit [www.nybotlive.com](http://www.nybotlive.com) and sample the many features of NYBOT's direct data service. Market users also have access to a wide range of educational materials, market analysis and commentary through the NYBOT web site at [www.nybot.com](http://www.nybot.com).

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*The New York Board of Trade (NYBOT), New York's original futures exchange, provides a global marketplace for a wide variety of traditional and innovative agricultural and financial products including futures and options for cocoa, coffee, cotton, ethanol, orange juice, sugar and currencies as well as equity, currency and commodity indexes.*

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New York Board of Trade  
World Financial Center  
One North End Ave.  
New York, NY 10282

Tel: (212) 748-4094 or 1-800-HEDGE IT  
or visit our web site at [www.nybot.com](http://www.nybot.com)

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