

Sugar

FUTURES & OPTIONS



NEW YORK
BOARD OF TRADE®

Mar 06 5425 5475 May 06 5475 5540



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 cane 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.

NYBOT Agricultural Market History

- 1870 The New York Cotton Exchange (NYCE®) trades first cotton contracts
- 1882 Coffee Exchange of the City of New York trades first coffee 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 commodity 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 sugar futures and options markets are strongly 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. Price information can be found at www.nybotlive.com.

THE VALUE OF SUGAR – A HISTORY

The story of sugar is a story of price– a commodity that began as a highly valued luxury and evolved into a moderately priced necessity. The history of sugar’s evolution reveals directly why the **pricing of sugar** assumed such critical importance to so many in the marketing chain. It also provides a context in which the **sugar futures exchange** arose in response to the growing need to bring **fair, orderly and efficient pricing** to the marketplace.

Sugar cane, the source of most modern sugar production, may have originated in New Guinea as much as 9,000 years ago. The first known reference to sugar cane comes from the time of Alexander the Great in 327 B.C.E. The Greeks and Romans recorded sugar making at the beginning of the Christian era. In China and India, sugar evolved over the next thousand years from medicinal use to food condiment. The Persians and later the Arabs acquired sugar cane and sugar making skills and eventually spread its production and usage throughout the Mediterranean and into Europe.

The colonial period (from the fifteenth to the nineteenth century) precipitated an enormous expansion of sugar cane production and sugar manufacture to the New World and beyond. As sugar continued to evolve from luxury condiment to common staple consumed by all levels of society, it assumed a commercial role in the building of colonial empires. The first sugar factory in the new colonies was established in 1523 in Puerto Rico. Later in the century, sugar production began in Cuba, the first substantial center of sugar production and manufacture in the colonies. The Portuguese followed the Spanish by establishing the sugar industry in Brazil. The English came later to the sugar trade in the seventeenth century, but soon became a major factor in the West Indies (Barbados and Jamaica). The Dutch established their center of sugar commerce in Java and Java in turn assumed a major role in the industry during the late nineteenth and early twentieth centuries.

The British entrance into the sugar trade also had another serious ramification – the linking of sugar and slavery. The so-called “triangular trade” became notorious – textiles from England to West Africa in return for slaves, slaves to the West Indies in return for sugar, and sugar (molasses) back to England.

BEET SUGAR

In the early nineteenth century, another variable appeared in the sugar trade- the development of beet sugar, a new source of production. The use of the sugar beet was first developed in Germany and quickly spread to other European countries. Although more costly to produce, beet sugar made it possible for countries without easy access to sugar cane production to meet the ever-increasing demand for sugar. By the end of the nineteenth century, the sugar beet had surpassed sugar cane as the primary source of sugar. Government incentives heavily favored beet sugar exports. These sugar “bounties” were finally ended by international agreement in 1901. This major shift in market pricing had a profound effect on the overall pricing of sugar. In Great Britain, for example, the price of sugar declined 66% in 1903 – a clear demonstration of the impact of market forces on the price of a staple commodity.

TECHNOLOGICAL ADVANCES

The nineteenth century also saw major technical innovations in the extraction and production of sugar. By the middle of the century factories and mills had developed many of the techniques for crushing cane and diffusing beets that are still prevalent today. The most important innovations, however, came with the invention of the vacuum pan and the centrifuge. The vacuum pan revolutionized the sugar crystallization process. The development of the centrifuge followed and replaced drainage as the method of separating crystals from the mother liquor.

THE UNIVERSAL COMMODITY

For centuries, sugar has been a highly valued and widely traded commodity. Prior to 1800, the price of sugar reflected its status as an expensive condiment. **With the transformation of sugar to a food staple, the price declined as its usage expanded.** Because of its primary use in foods prepared in many cultures, its trade value was based upon its universal use, **not only as a flavor enhancer but also as a food preservative.** Sugar’s market significance was further increased because of its fermenting properties and its byproducts (e.g., molasses), which had equal or greater economic value than the granular sugar and less perishability when shipped.

As the sugar market greatly expanded its global growth during the twentieth century, it became more vulnerable to supply and demand shifts in various parts of the world. The period of growth from 1900-1914 came to an abrupt halt with the onset of World War I, which seriously disrupted the supply of beet sugar in Europe.

The closing of the European markets for sugar during World War I led to the trading of sugar futures in the United States in 1914 at the Coffee Exchange of the City of New York. Once again, a period of great economic uncertainty and wildly fluctuating prices contributed to the creation of a pricing marketplace. Sugar joined other global commodities like cotton and coffee in assigning the price discovery process to a separate, open and governable marketplace that bought and sold “price” and not the commodity itself. The futures contract thus became the recognized medium of exchange in this process. This unique market remains to this day a critical management tool in the global economy.

The growth of the sugar industry in the twentieth century as marked by major price shocks and a variety of international attempts to negotiate controlled production agreements and stabilize prices. Major world events such as the Great Depression of the 1930s, the Second World War, the Cuban Revolution and the breakup of the Soviet Union greatly affected the price of sugar. Because of the enormous political importance of the sugar trade, the first International Sugar Agreement in 1937 became the template for a number of such global arrangements that tried to promote (with greater or lesser degrees of success) an orderly relationship between supply and demand. Those efforts ended for a time in 1973 when the first oil price shock created a general commodity price boom. The price of sugar reached 64 cents/lb. in October of 1974 (as compared to prices below 2 cents/lb. in the late 1960s. The last ISA with export controls (1977) expired in 1984.

The power of the worldwide sugar industry may seem disproportionate to its market price of perhaps 5-10 cents/lb. Sugar continues to strengthen its position as one of the most political commodities in the world marketplace, however, by expanding its presence not only in a widening variety of foods but in a broad range of economic areas from foods to fuels.

THE FUNDAMENTALS OF SUPPLY AND DEMAND

The sugar cash market can be described as a “residual” market -a market in which freely traded sugar is only a fraction of worldwide production. Since the free market may be less than half of world production, a small change in production or consumption can translate into a much larger change in the free market supply. Even in an era of world trade agreements and declining government subsidies, sugar remains a market heavily managed and manipulated by government programs. In the last twenty years, however, the total share of free trade sugar as a percentage of world production has increased from 18% to close to 30%. Just as one country’s loosening of sugar import quotas can fuel demand for free market sugar, another nation’s high price support levels can encourage domestic over-supply and create a free-market surplus. Such fundamental changes in the cash market are reflected in the futures markets continuously.

Sugar has regularly been one of the world’s ten largest agricultural futures and options markets in terms of its total trading volume. The total volume figure is a record of the total number of contracts traded.

Two main crops produce most of the world’s sugar: sugar cane and sugar beets. Both produce the identical refined sugar product. Sugar cane, which accounts for about 70% of world production, is a bamboo-like grass grown in semi-tropical regions. Sugar beets grow in temperate climates and account for the balance of world production. Extreme weather conditions, disease, insects, soil quality and cultivation affect both cane and beet production, as do trade agreements, refinery activity and price support programs. India and Brazil are major cane producers. The European Union and Ukraine produce large quantities of sugar beets. The relative overall costs (field and factory) of production of sugar from cane vs. beets grants an advantage to cane sugar that continues to increase. More efficient factories in such producing areas as the U.S. and the EU, however, have lowered costs for beet sugar.

The growth in free market sugar has changed sugar from a bulk commodity produced by many countries into a commodity with production concentrated in a few countries. Brazil, Australia, Thailand, the European Union and Cuba account for more than 72% of the total world free market exports. These producers accounted for only 65% in

1985. Brazil now exports more than one-third of the total international sugar trade. Since 1994, Brazilian sugars have accounted for nearly 80% of the total tonnage delivered against the NYBOT's Sugar futures contract. The amount of sugar exported by Brazil each year obviously becomes a critical supply side factor.

On the demand side, as sugar exports have become more concentrated, import demand has greatly dispersed. Close to 80% of world import demand now comes from developing countries. In fact, it is necessary to total at least one hundred countries import demand to equal the supply capabilities of the five major exporters.

While deregulation has affected supply, a number of countries have adopted a two-tier policy designed to help the countries most affected by deregulation to remain more competitive in the global marketplace.

Also on the demand side, competition from alternative sweeteners has an impact on the consumption of sugar. High Fructose Corn Syrup (HFCS) is the most important of these sweeteners.

In addition, the use of sugar in the development and production of alternative fuels (ethanol), particularly in Brazil, is a major component of the supply and demand equation. A decision by Brazil to expand ethanol production, for example, following the projection of a large sugar crop can shift a supply/demand balance. The fact that Brazil is both the largest exporter of sugar and the largest producer and user of ethanol creates an important market dynamic. The importance of the ethanol, as a value-added use of sugar, is reflected in the creation of a world ethanol futures and options market at NYBOT in May 2004.

MILLING AND REFINING

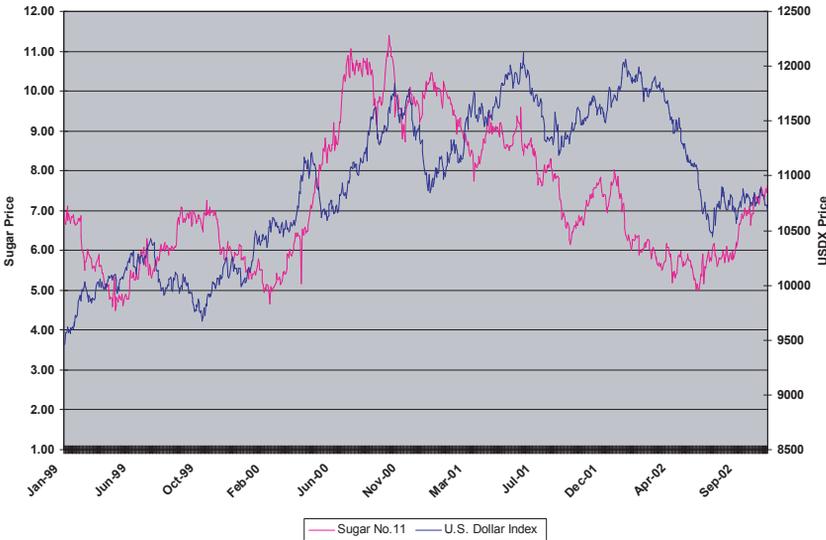
The quality of raw or white sugar is primarily determined in the milling and refining process. Unlike coffee or cotton where the quality standard is measured against the original bean or fiber, **the standards for sugar are built around milling (for raw sugar) and refinement (for white sugar)**. The quality of the raw sugar is critical to the quality level of the white refined sugar. Unwanted components like color and ash are reduced and the sucrose level (polarization) is increased.

Sucrose yields from beet and cane sugar are the best indicator of sugar “performance.” High yields mean lower production costs. Costs on the factory end are determined by the efficiency of the factory (size and utilization of capacity). Cane sugar has always held an advantage over beet sugar because of lower production costs.

THE RISKS OF PRIVATIZATION

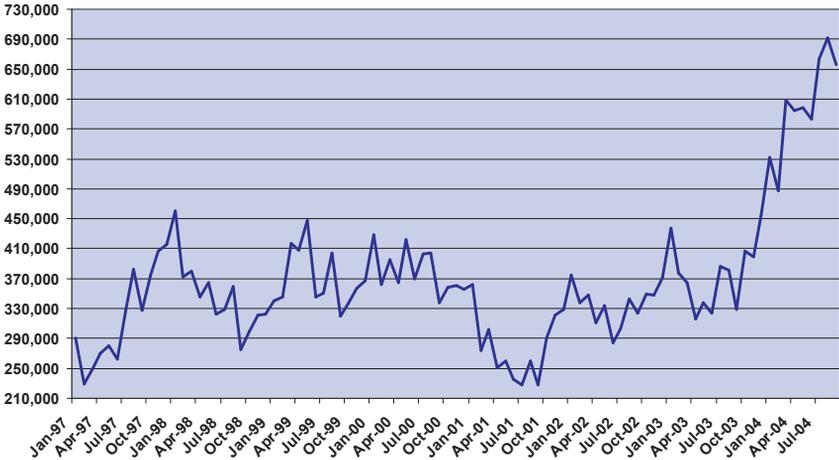
Deregulation has brought increased risk – price risk and counter-party credit risk. The increased privatization of the sugar market has meant the presence of new private sector participants that have added to the counter party performance uncertainty. Currency fluctuations, such as sudden devaluation in emerging markets, have also become a major factor. Some of the price movement in this dollar-denominated commodity can be related to the movement of currencies relative to the U.S. Dollar. **There is a higher correlation between sugar price and the value of the U.S. Dollar than in many other commodities.** The NYBOT provides exclusive markets for U.S. Dollar Index® (USD[®]) futures and option.

NYBOT SUGAR NO. 11 AND U.S. DOLLAR INDEX® NEARBY PRICE



The NYBOT provides exclusive markets for U.S. Dollar Index® (USD^X®) futures and options.

MONTHLY NYBOT SUGAR NO. 11 OPEN INTEREST



Note: Open Interest is Futures and Options Combined

The increase in risk – price risk, currency risk and counter party risk – in the global economy brings more weight to the value of sugar futures and options markets. The efficiency of pricing and the effectiveness of price risk transfer associated with the NYBOT sugar market is matched by the unsurpassed security that comes with the financial safeguards and trading guarantees provided by the NYBOT exchanges and the New York Clearing Corporation (NYCC). The NYBOT exchanges and clearing corporation remove counter party uncertainty from all exchange transactions, thereby ensuring the integrity of the contract and its performance.

The financial safeguards and guarantees that go with exchange traded contracts represent one of the historical advantages of futures and options markets.

TRADING SUGAR FUTURES AND OPTIONS

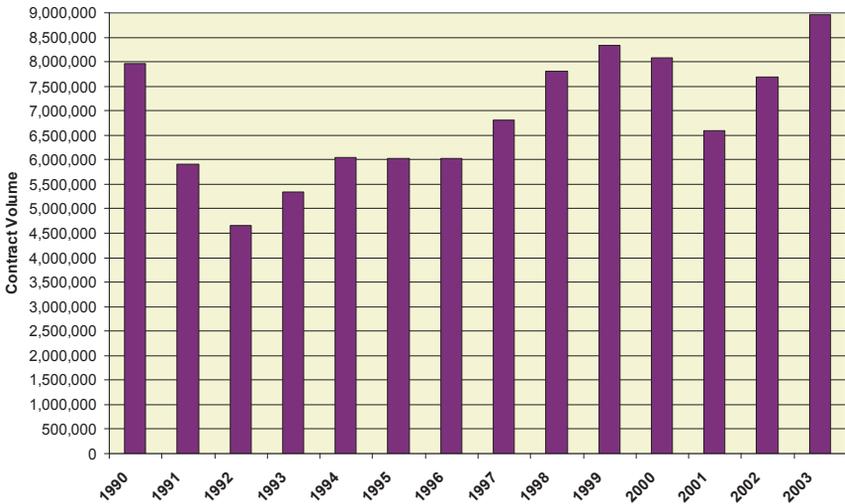
The futures exchange is an organized marketplace that provides and operates the facilities for trading; establishes, monitors and enforces rules for trading; and keeps and disseminates trading data. All of the functions of the exchange revolve around price. The exchange, however, does not set the price. That is a function of the marketplace. The exchange establishes a visible, free market setting for the trading of futures and options which helps the underlying industry find a market price (**price discovery**) for the product and allows the **transfer of risk** associated with cash price volatility. As price discovery takes place the exchange provides **price dissemination** worldwide. Continuous availability of pricing information contributes to wider market participation and the **quality of price** (More buyers and sellers in the marketplace means better pricing opportunities.) To ensure the accuracy and efficiency of the trading process, the exchange also resolves trading disputes through **arbitration**.

As part of the Exchange's price dissemination function, the NYBOT now offers direct access via the internet to real time market data via its NYBOTLIVE.COM. Through NYBOT's direct access web site, market users can subscribe directly to a customized package of pricing information as well as gain access to useful trading tools to help in the analysis of the data. For more information, visit www.nybotlive.com

The price of world sugar contains two elements: the price of the related futures contract and the **premium or discount (differential or basis)** of the sugar to the futures price. The basis and the futures separate tend to move in opposite directions. When futures are high, the differential tends to be low and vice versa. For importers or exporter, freight costs become a third element in the price. Freight costs also move in their own way, depending on other prices such as oil, coal and steel. Freight can account for 10 to 20% of the total sugar price.

The global importance of the New York Board of Trade's world sugar futures and options markets can be seen in the record volumes and significant product innovations associated with NYBOT's largest market.

ANNUAL NYBOT SUGAR NO. 11 COMBINED FUTURES AND OPTIONS VOLUME



Sugar futures and options markets have traditionally provided hedging tools for producers, exporters, candy manufacturers, trade houses, bakers, and refiners and dealers. Trade houses tend to be the dominant force on the hedge side of the sugar futures market.

On the speculative side, managed commodity funds have a major impact. In addition, arbitrage activity between the London (LIFFE) and the NYBOT sugar markets provides other speculative activity. This speculative activity is critical to the pricing efficiency of the futures market. More buyers and sellers mean better prices and greater liquidity. In comparing the London and New York Sugar markets, it is important to understand that the primary contract traded in New York is for raw sugar and in London the main contract covers white sugar.

The NYBOT sugar markets offer two sugar futures contracts: world Sugar No. 11sm and domestic Sugar No. 14.sm. The major trading volume takes place in the Sugar No. 11 market. Just looking at the price difference between the New York world sugar and domestic sugar contracts on a given day illustrates the difference between the two sugars. On November 15, 2002 for example, the nearby Sugar No. 11 contract (world sugar) was trading at around 7.24 cents/lb. while the Sugar No. 14 contract (domestic) traded at 22.14 cents/lb.

NYBOT SUGAR NO. 11 FUTURES NEARBY PRICE



The delivery terms of the current world Sugar No. 11 contract (launched in 1970) specify that 112,000 lbs. (50 long tons) of raw centrifugal cane sugar, stowed in bulk, must be FOB (Free on Board); that is the seller who delivers the sugar at the agreed price pays cost of loading sugar on board the vessel.

It is the buyer's responsibility to arrange for the transportation from that point and the insurance. In a futures contract, the seller chooses the point of delivery from the list of ports designated by the contract. Sugar suitable for delivery under the world sugar contract, like other agricultural commodities, must adhere to certain grades and standards of sucrose content. Polarization is a common measure of sucrose content.

The size of the Sugar No. 11 contract translates into a relatively small underlying value per contract. At 7 cents/lb., for example, one Sugar No. 11 contract would be worth \$7,840 ($112,00 \times .07$). The size of the contract makes it attractive for speculators and provides easier market access for smaller hedgers. In contrast a cocoa contract (10 metric tons) with cocoa at \$1,600 per tonne would be valued at \$16,000. A Coffee "C"[®] contract (37,500 lbs.) at 70 cents/lb. would be worth \$26,250.

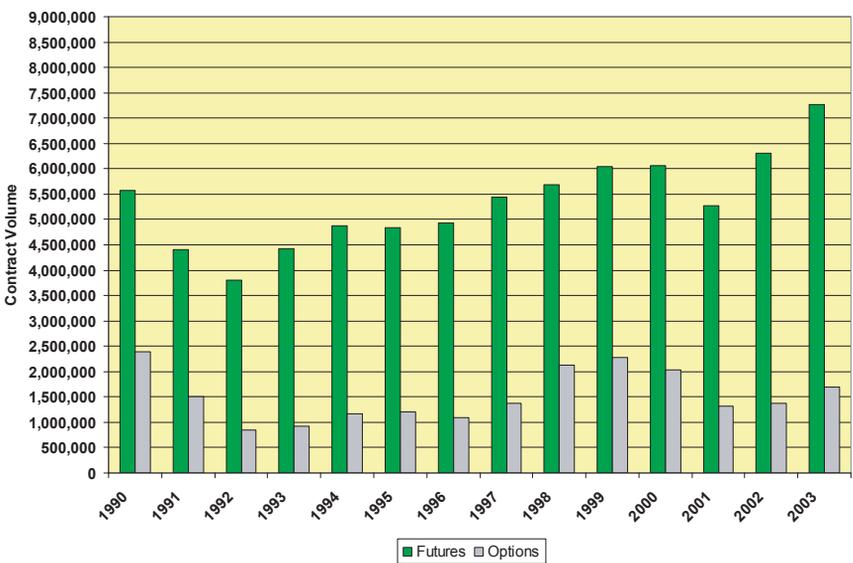
The domestic Sugar No. 14 futures contract (introduced in 1985) requires delivery of 112,000 lbs. of raw centrifugal cane sugar in bulk with CIF duty paid at specified Atlantic and Gulf Ports. CIF (Cost, Insurance, Freight) refers to a sale in which the buyer pays a price that includes FOB value at port of origin plus costs of insurance and transportation.

INNOVATION IN THE NYBOT SUGAR FUTURES MARKET

In 1982, options on the world Sugar No. 11 futures contract became the first U.S. exchange-traded agricultural commodity option since 1936. Regular options are available for March, May, July and October plus a January option on March futures. Serial options (short-life options providing additional option expirations on existing futures contracts) are offered for the remaining months of the year. Since 1998, the NYBOT sugar markets have also offered flexible options on world sugar. These specialized contracts allow market participants to customize certain contract terms including strike price, expiration date and exercise style.

Options added a crucial dimension to risk management and the increase in the volume of options traded each year demonstrates their popularity, flexibility and usefulness.

ANNUAL NYBOT SUGAR VOLUME



Hedging with sugar futures and options allows firms and individuals to lock in or establish minimum/maximum prices for upcoming purchases or sales of sugar or sugar-based products. The complexity and global scale of today's sugar industry and the sensitivity of profit margins to sugar price fluctuation have increased the relevance, value and use of the NYBOT sugar markets.

TRADING EXAMPLES

A futures hedge locks in a specific price. By opening a futures position, the hedger will establish a buy or sell price that will offset potential losses on the cash transaction covered. As long as the position is open the hedger's price will be secure. The hedger must maintain a margin account for as long as the position remains open. During adverse market moves, the hedger may be required to make payments into the margin account for purposes of maintaining the required margin level. It also means that the hedger will have access to gains in the margin account during periods of favorable market moves. Margin accounts are marked to market on a daily basis. A straight futures hedge offers the certainty of price that can be useful in planning business goals.

The posting and maintaining of margin accounts represents one of the key elements of futures trading. Since futures contracts are leveraged instruments, buyers and sellers only post a small percentage of the actual value of the entire contract – (e.g., on 1/29/03 initial margin for a hedger was \$500/contract for a contract with a value of \$9,744). On that same day the price move was worth \$268.80 per contract. That day's price move was therefore more than 50% of the initial margin.* Leverage, therefore, involves both advantages and risks.

**Minimum margin levels are determined by the Exchange and are subject to change. For current margin levels, consult a licensed broker.*

EXAMPLE 1 (FUTURES)

Scenario: In August, a sugar refiner expects sugar prices to increase by late winter. The refiner must take delivery of 224,000 lbs. of raw sugar in February. The cash price will be benchmarked to the March Sugar No. 11 futures price. March futures are trading at 8.00 cents/lb. In order to protect his profit margin, he needs to keep his cash market price from going any higher than 8.00 cents/lb.

March Sugar No. 11 futures @ 8.00 cents/lb. (in August)

Strategy: The refiner buys 2 March Sugar No. 11 Futures contracts at 8.00 cents/lb. Each contract covers 112,000 lbs. of sugar.

Buy 2 March Sugar No. 11 Futures @ 8.00 cents/lb.

Result (rising market): In February, sugar prices have risen as expected. March futures are trading at 9.80 cents/lb. The refiner closes out the futures position (sells 2 March Futures) @ 9.80 cents/lb., leaving the refiner with a futures market gain of 1.80 cents/lb.

**9.80 cents/lb (Feb. price) – 8.00 cents/lb (August price)
= 1.80 cents/lb. futures gain**

The 1.80 cents/lb. futures gain is then used to offset the cash market shortfall when the refiner has to pay 9.80 cents/lb. for the 224,000 lbs. of raw sugar. By offsetting the cash market loss with the futures gain, the refiner has paid a net price of 8.00 cents/lb. for the raw sugar, thereby achieving his/her price goal (8.00 cents/lb.) and protecting the profit margin.

**9.80 cents/lb. (cash price) minus 1.80 cents/lb. (futures gain)
= 8.00 cents/lb. (net buy price)**

Result (falling market): If the price had fallen below 8.00 cents/lb. to 7.25 cents/lb., the refiner's futures market loss of 0.75 cents/lb. would be offset by the more favorable cash price paid (7.25 cents/lb.). The result would still yield the same net buy price of 8.00 cents/lb. It is important to remember the goal in futures hedging: lock in an acceptable price that will achieve business goals and protect profit margins.

$$\begin{aligned} & 7.25 \text{ cents/lb. (cash market price) plus } 0.75 \text{ cents/lb.} \\ & (8.00 - 7.25/ \text{ futures market loss}) \\ & = 8.00 \text{ cents/lb. (net buy price)} \end{aligned}$$

Hedging with futures offers certainty in business planning. Hedgers seeking more flexibility can turn to options.

EXAMPLE 2 (OPTIONS)

An options hedge will not lock in the specific price, but it will establish a price floor or ceiling to limit the losses in an adverse cash market. It can offer greater flexibility in an uncertain market and allow the participant some upside potential with the futures market loss limited only to the size of the premium paid for the option. **The option buyer does not have to maintain a margin account, but the premium must be paid in full at the time of the purchase.** Cash flow and availability of capital are important components of hedging strategy and buying options provides the hedger with a pre-determined level of price insurance without the capital commitment required of futures positions.

Using the same refiner scenario, the use of options produces a different kind of hedging strategy.

Scenario: With March Sugar No. 11 Futures trading at 8.00 cents/lb in August, the refiner decides that in order to protect his/her profit margin, the cash market price must not be allowed to exceed 8.80 cents/lb.

Strategy: The refiner buys 2 March 8.00 calls for 0.75 cents/lb. to hedge his need for 224,000 lbs. of sugar. Each option covers 112,000 lbs. of sugar. The total premium is \$1,680.

$$\begin{aligned} \text{Net Buy Price} &= 8.75 \text{ cents/lb.} \\ &(\text{8.00 August Price} + 0.75 \text{ premium}) \end{aligned}$$

Result (rising market): In February, sugar prices have risen as expected. March futures are trading at 9.80 cents/lb. The refiner exercises the 2 March 8.00 calls. The closing of the resulting futures position at 9.80 cents/lb. leaves the refiner with a net 1.05 cents/lb. gain on the option (1.80 minus the premium of 0.75).

$$\begin{aligned} 9.80 \text{ cents/lb (Feb. price)} - 8.75 \text{ cents/lb (net buy price)} \\ = 1.05 \text{ cents/lb. net gain} \end{aligned}$$

When the 1.05 cents/lb. futures market gain is used to offset the 9.80 cents/lb. paid for the cash sugar, the effective price for sugar is reduced to 8.75 cents/lb. (.05 cents/lb. below the price ceiling established with the March 8.00 call option).

$$\text{Net Buy Price} = 8.75 \text{ cents/lb. (9.80 cash price} - 1.05 \text{ futures gain)}$$

Result (falling market): If the price had fallen below 8.00 cents/lb. to 7.25 cents/lb., the refiner's option losses would be limited to the 0.75 cents/lb. paid for the call option, which would be allowed to expire worthless, while he/she would benefit from a lower sugar cash purchase price.

$$\text{Net Buy Price} = 8.00 \text{ cents/lb. (7.25 cash price} + 0.75 \text{ premium)}$$

The option strategy does not provide the same precision in the rising price market as the futures hedge: the option hedge produced an 8.75 cents/lb. net buy price while the futures hedge resulted in an 8.00 cents/lb. net buy price. In a falling market, however, the option hedge equals its futures counterpart: both the option and futures hedges produce an 8.00 cents/lb. net buy price. The difference of course would become more apparent in the falling market if the price had gone below 7.25 cents/lb. In that situation, the option strategy would allow the hedger to reap a greater benefit from the favorable cash market move while still maintaining an acceptable level of price protection in a rising market

This option strategy is only one basic example of the wide variety of option/option and option/future combination strategies employed by hedgers and speculators in the world sugar market. Successful hedgers weigh the merits of futures, options and forward contracts and combinations of each in designing an overall strategy. Risk tolerance, seasonal issues, cash flow and credit availability are among the factors that will affect risk management planning.



The NYBOT Sugar 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.

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). 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 sugar 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.

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 the Commodity Exchange Act. 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. An example of a swap would be contractual agreement in which two parties agree to make periodic payments to each other. Swap contracts are customized for the parties involved in the over-the-counter (OTC) market. In a commodity swap, one party typically pays a floating price for a commodity and the other pays a fixed price for that commodity. The physical commodity is not actually exchanged.

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.

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 sugar market 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. All market participants trade 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 sugar 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). 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 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.

This brochure serves as an overview of the Sugar futures and options markets of the New York Board of Trade (NYBOT). Examples and descriptions are designed to foster a better understanding of the Sugar futures and options market. The examples and descriptions are not intended to serve as investment advice and cannot be the basis for any claim. While every effort has been made to ensure accuracy of the content, the New York Board of Trade does not guarantee its accuracy, or completeness or that any particular trading result can be achieved. The New York Board of Trade cannot be held liable for errors or omissions in the content of this brochure. Futures and options trading involves risk and is not suitable for everyone. Trading on the NYBOT is governed by specific rules and regulations set forth by the Exchange. These rules are subject to change. For more detailed information and specifications on any of the products traded on the Exchange, contact NYBOT or a licensed broker.

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.

Beginning in 1870 with the founding of the New York Cotton Exchange and the Coffee Exchange of New York City in 1882, the NYBOT exchanges have built and sustained crucial futures and options markets through dangerous and difficult times. The New York Board of Trade and its predecessor exchanges [Coffee, Sugar & Cocoa Exchange, Inc. (CSCE) and the New York Cotton Exchange (NYCE)] have a long history of providing effective risk management tools for major international industries and opportunities for well-informed investors. Risk management is the foundation of our business.

The New York Board of Trade[®], NYBOT[®], NYCE[®], Cotton No 2sm, Sugar No 11sm, Sugar No. 14sm, U.S. Dollar Index[®], and USD[®] are registered trademarks/ service marks of the Board of Trade of the City of New York, Inc.



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

© Copyright 2004, New York Board of Trade
Printed in the USA