

CME® E-MINI™ STOCK INDEX  
FUTURES AND OPTIONS

*Product Overview*

**cme**   
Chicago Mercantile Exchange



## Table of Contents

5	THE BASICS
12	ABOUT FUTURES CONTRACTS
18	GETTING STARTED TRADING
21	CONTRACT SPECIFICATIONS
26	TRADING EXAMPLES
32	COMPARING STOCK INDEX FUTURES AND EXCHANGE TRADED FUNDS (ETFs)
34	ABOUT CME
36	QUICK REFERENCE



**I**nnovative CME® E-mini™ futures track the most popular broad-based stock index benchmarks in the financial world. The CME E-mini futures complex consists of the following five key products:

- **E-mini S&P 500® futures**

Created to track the Standard & Poor's 500 Index, the key benchmark for large-capitalization U.S. stocks

- **E-mini NASDAQ-100® futures**

Created to track the NASDAQ-100 Index, a key benchmark of technology, telecom and biotechnology issues

- **E-mini Russell 2000® futures**

Created to track the Russell 2000 Index, one of the major benchmarks for small-capitalization U.S. stocks

- **E-mini S&P MidCap 400™ futures**

Created to track the Standard & Poor's MidCap 400 Index, the key benchmark for mid-size U.S. companies

- **E-mini Russell 1000® futures**

Created to track the 1000 largest cap companies in the U.S. based on total market capitalization.

Pioneered by CME and sequentially launched between 1997 and 2003, all CME E-mini futures are traded completely electronically via electronic order management software on a PC or through a registered commodity futures broker over the telephone. In addition to offering unique opportunities for risk management and market exposure, CME E-mini stock index futures are appealing because of their excellent liquidity and around-the-clock availability. At one-fifth the size of their standard counterparts, these contracts have found an audience among professional and individual investors alike.

The products in the CME E-mini complex are among the fastest growing products CME has ever launched. The success of the CME E-mini complex overall has established CME as the “Index Exchange,” with more than a 92% market share of all domestically traded stock index futures and options on futures. The CME Equity Index quadrant as a whole is also known as one of the world’s most liquid trading environments for stock index products, when measured in terms of volume and open interest.

The strategies/opportunities available to the trader make CME E-mini stock index futures well worth considering. Please note, however, that futures trading is not suitable for all investors, and involves the risk of loss, including the possibility of loss greater than your original investment.

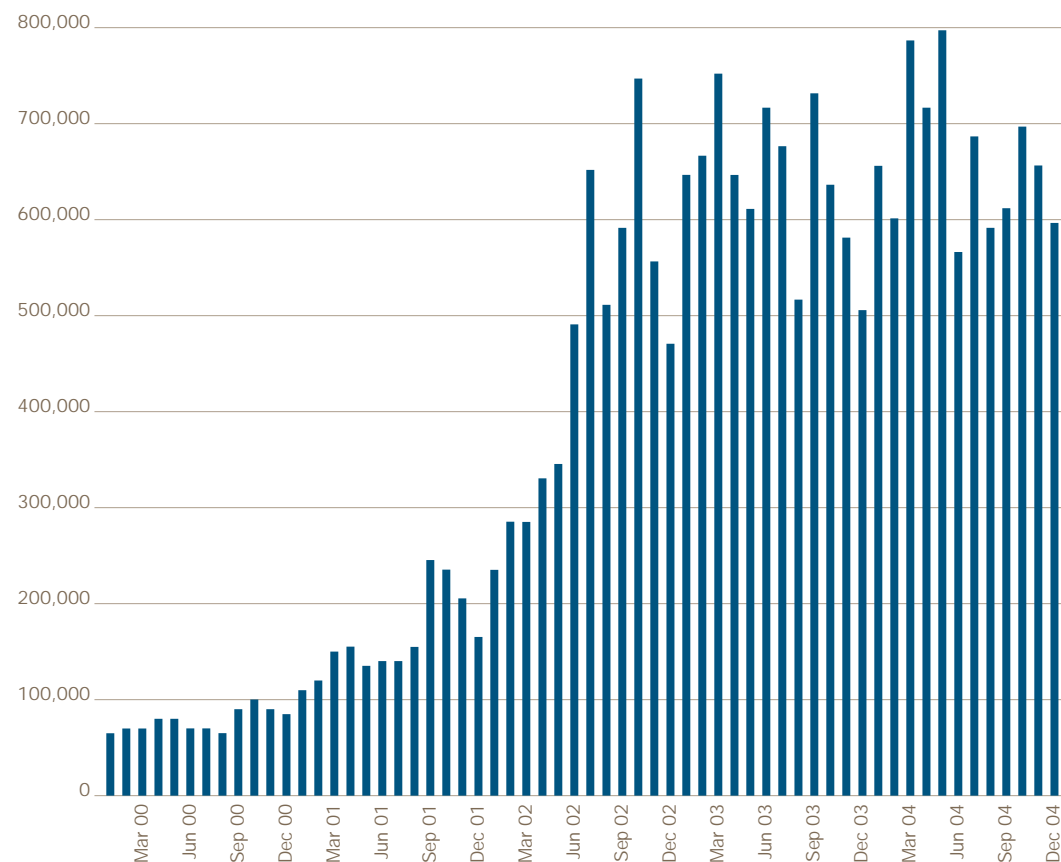
#### What Are Stock Index Futures?

Stock index futures are contracts to buy or sell the value of a specific stock index at a specific price on a specific date in the future. Businesses and individual traders trade stock index futures for different reasons, but primarily to try to profit from or protect themselves from changes in the price of the underlying indexes. Financial professionals, such as pension and mutual fund managers, typically use CME index futures for managing risk and hedging portfolios against adverse price moves. Others, such as day traders or position traders, trade these products to speculate on the price fluctuations of the stock market.

Stock index futures closely follow the price movement of their respective indexes, typically referred to as the “underlying” or “cash” indexes. Intraday, monthly and yearly correlations between cash indexes and futures are very close. On some occasions, the futures may diverge from the cash index for short periods of time, but market forces (such as arbitrage) usually work to bring these brief variances back into line.

If in trading futures you purchase an index futures contract, you hope to gain from future price increases when you offset your trade by selling the contract. Correspondingly, if you initially sell (i.e., selling short) an index futures contract, you hope to gain if the price of the contract declines. Remember though, if your forecast proves wrong, you risk loss. The rapid price changes associated with stock indexes and stock index futures create continuous trading opportunities. It can be more efficient, however, to trade stock index futures instead of equity securities. This is because a stock index futures trade involves just one transaction to get into the market and one to get out, while selling a basket of equity securities is likely to involve numerous transactions.

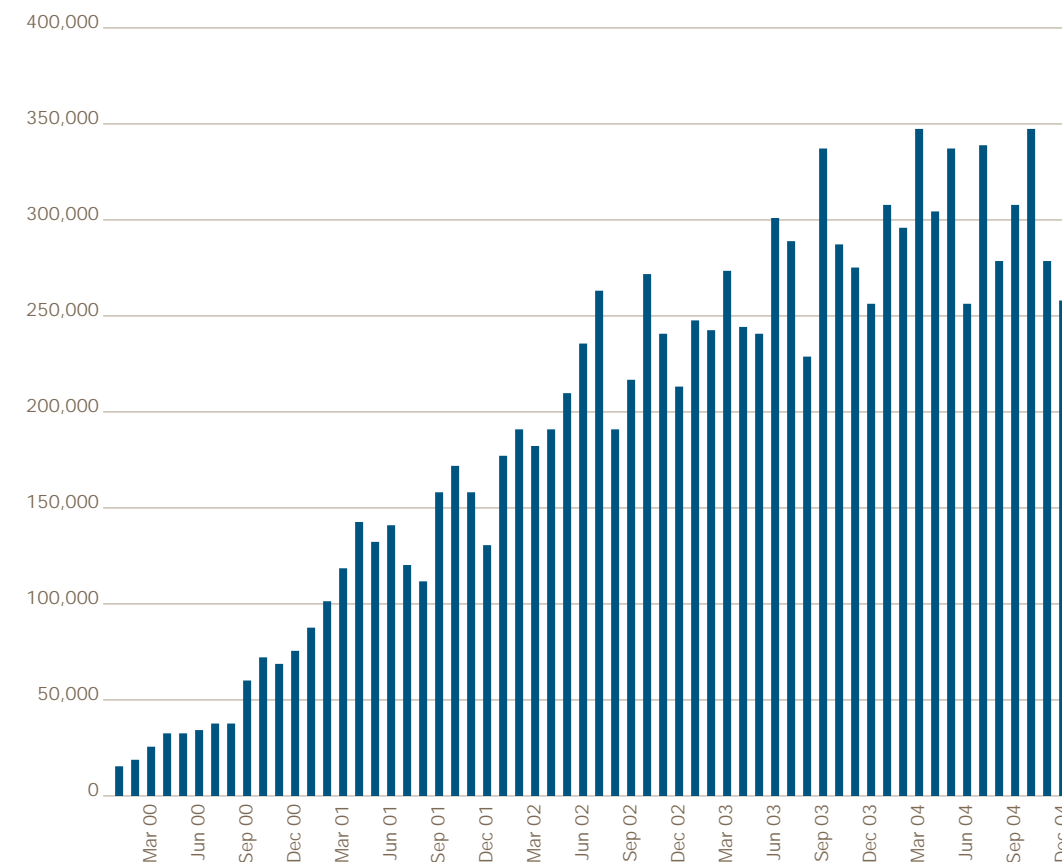
E-mini S&P 500 Futures Average Daily Volume as of December 31, 2004



**No Small Success Story—Growth of E-mini S&P 500 futures**

At launch in 1997, E-mini S&P 500 futures traded around 7,500 contracts per day. Optimistic projections had the contract trading 50,000 contracts per day five years out. The numerous advantages of the E-mini S&P 500 have continued, however, to attract a far greater audience than projected, as volume now averages approximately 700,000 contracts per day.

E-mini NASDAQ-100 Futures Average Daily Volume as of December 31, 2004



**No Small Success Story—Growth of E-mini NASDAQ-100 Futures**

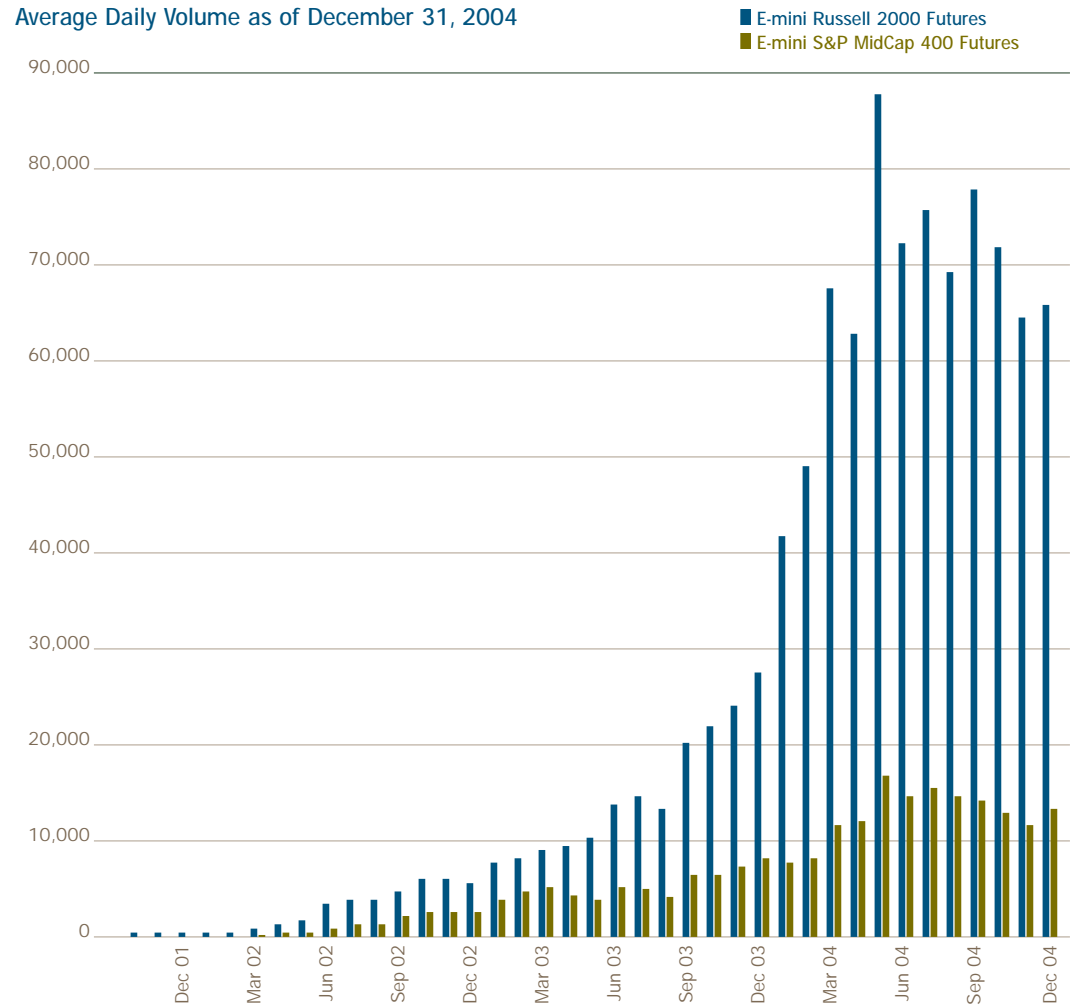
E-mini NASDAQ-100 futures have also been tremendously successful. Since their launch in 1999, compounded annual growth of the E-mini NASDAQ-100 futures is even greater than the E-mini S&P 500 futures. Amazingly, this occurred against a backdrop of the greatest bear market in a major market index. Despite the NASDAQ-100 index dropping 70% from its 2000 highs, E-mini NASDAQ-100 futures volume now averages over 300,000 contracts per day.

### Why Trade Stock Index Futures?

E-mini stock index futures are among the Exchange's fastest growing products for a number of compelling reasons. These products offer:

- A fast, cost-effective way to actively trade products that track the stock indexes
- The equivalent of broad market exposure to a variety of major stock indexes
- Substantial liquidity in terms of large open interest, volume and tight bid/offer spreads
- Online access available around the globe and virtually around-the-clock throughout the trading week
- The ability to employ a variety of trading strategies, such as hedging strategies (to attempt to protect a portfolio against a declining market) and spreading strategies (to attempt to take advantage of the relative out-performance of one sector of the market versus another)
- Potentially lower trading costs compared to trading a basket of equities

Average Daily Volume as of December 31, 2004



### Growth of E-mini Russell 2000 Futures and E-mini S&P MidCap 400 Futures

The growth in activity of the E-mini Russell 2000 is nearly parabolic. With small stocks rising almost 50 percent (compared with 27 percent for the large cap S&P 500) in 2003 and solidly outperforming the S&P 500 for most of the last five years, it is no surprise that E-mini Russell 2000 futures have demonstrated astounding growth. The growth of the E-mini S&P MidCap 400 futures has also been impressive. Traders who wish to spread the equivalent of large-cap against small-cap (or even mid-cap) stocks can now do so with efficient, low cost index futures at CME.

## Differences Between Trading Stock Index Futures and Stock Indexes

If you are new to trading stock index futures, you will find it helpful to understand the difference between trading stock indexes and trading futures on stock indexes.

	STOCK INDEX FUTURES	STOCKS
Type of Broker	Series 3 licensed commodity futures broker	Series 7 licensed stock broker
Underlying	Cash index	Ownership of shares in a company
Settlement	Mark to market daily	T+3*
Margining	Performance bond met via cash or T-bills. Can range from 5-20% of contract value	Reg. T margin: Put up 50%, borrow 50%. Interest charged on borrowed funds
Risk	Leverage can magnify gains as well as losses by several fold	Leverage can magnify gains as well as losses by two-fold, assuming Reg. T margins
Short Selling	No uptick rule No borrowing of shares No dividends on futures	Uptick rule** Short seller borrows shares and must pay dividends to owner of shares (long)
Online Availability	Yes	Yes
Regulation	Commodity Futures Trading Commission (CFTC)	Securities and Exchange Commission (SEC)
Financial Safeguards	CME Clearing House	Securities Investor's Protection Corporation (SIPC)

\* Date of transaction plus three days.

\*\* The "uptick" rule states that before a short sale can be initiated, a stock must trade on an "uptick" (e.g., a transaction whereby a stock trades up, for example from 40.00 to 40.01.)

## Buying and Selling Stock Index Futures

### Buy Low/Sell High, or Vice Versa

Those willing to incur the risk can profit from trading stock index futures the same way as with any other investment—by buying low and selling high. One difference with futures, however, is that it's just as common to sell short—to sell first—and then buy back later as it is to buy first, or go long. With futures trading, if you think prices are going up, you simply establish a "long" (buy) position, and if you think prices are going down, you initiate a "short" (sell) position.

### Getting In and Getting Out

Futures in general lend themselves to a variety of different trading timeframes: short-, medium- or long-term. Electronically traded stock index futures, however, can be particularly attractive to shorter-term or day-traders, because the fluctuations in the index markets make it possible to take advantage of short-term price movements.

Once you have established your futures position, you have three alternatives:

- **Offset your position by taking an equal but opposite position.**

You can exit from any futures position before the contract expires by taking an equal but opposite futures position (selling if you have bought; buying if you have sold). Most futures are offset in this way. You don't have to wait until the expiration date to complete your trade—in fact, few investors do.

- **Wait until your contract expires, and then make or take cash settlement.**

Cash settlement is made according to a "Special Opening Quotation" (SOQ), a price calculated for each domestic stock index product. This means your account will be debited or credited, in cash, the difference between your purchase/sale price and the final settlement as determined by the SOQ. For a detailed explanation of this process, see the CME Web site at [www.cme.com](http://www.cme.com). Of course if you offset your position, this process doesn't apply.

- **"Roll" the position over from one contract expiration into the next.**

If you hold a long position in an expiration month, you can simultaneously sell that expiration month and buy the next expiration month (known as a "calendar spread") for an agreed-upon price differential. By transferring or "rolling" a position forward this way you are able to hold it for a longer period of time. For example, if you are holding a March CME E-mini futures contract, you can sell the March futures before expiration and buy a June futures, thereby expanding the timeframe of the trade.

### What Is a Contract Worth?

To determine the value of a stock index futures contract, you need to know its multiplier (a specific dollar amount that varies with each contract) and the current index futures level.

#### E-mini S&P 500 Futures

**Index value x \$50 = One E-mini S&P 500 futures contract value**

The E-mini S&P 500 multiplier is \$50.

If the S&P 500 futures index level is 1200, multiply that by \$50.

**1200 x \$50 = \$60,000**

If you buy one E-mini S&P 500 futures contract at 1200, you are trading an instrument valued at \$60,000.

Remember: It is not required to put up the full contract value. Your performance bond enables you to control a considerable amount of product for a fraction of its value.

#### E-mini NASDAQ-100 Futures

**Index value x \$20 = One E-mini NASDAQ-100 futures contract value**

The E-mini NASDAQ-100 multiplier is \$20.

For example, if the NASDAQ-100 index level is 1500, multiply that by \$20.

**1500 x \$20 = \$30,000**

If you buy one E-mini NASDAQ-100 futures contract at 1500, you are trading an instrument valued at \$30,000.

#### E-mini Russell 2000 Futures

**Index value x \$100 = One E-mini Russell 2000 futures contract value**

The E-mini Russell 2000 multiplier is \$100.

For example, if the Russell 2000 index level is 560, multiply that by \$100.

**560 x \$100 = \$56,000**

If you buy one E-mini Russell 2000 futures contract at 560, you are trading an instrument valued at \$56,000.

#### E-mini S&P MidCap 400 Futures

**Index value x \$100 = One E-mini S&P MidCap 400 futures contract value**

The E-mini S&P MidCap 400 multiplier is \$100.

For example, if the S&P MidCap 400 index level is 580, multiply that by \$100.

**580 x \$100 = \$58,000**

If you buy one E-mini S&P MidCap 400 futures contract at 580, you are trading an instrument valued at \$58,000.

#### E-mini Russell 1000

**Index value x \$100 = One E-mini Russell 1000 futures contract value**

The E-mini Russell 1000 multiplier is \$100.

For example, if the Russell 1000 index level is 640, multiply that by \$100.

**640 x \$100 = \$64,000**

If you buy one E-mini Russell 1000 futures contract at 640, you are trading an instrument valued at \$64,000.

### What Is a "Tick" and What Is It Worth?

Unlike stocks, which move in penny increments, futures contracts move in minimal increments called "ticks." The value of the tick is different for each product.

#### E-mini S&P 500 Futures

The E-mini S&P 500 futures tick value is 0.25 index point, or \$12.50 per contract. Thus:

- A move of one tick, from 1200.00 to 1200.25, equals \$12.50.
- With this move, a long (buying) position would be credited \$12.50, and a short (selling) position, debited \$12.50.
- A move of one entire E-mini S&P 500 futures index point—the equivalent of four ticks—would equal \$50, and so on.

#### E-mini NASDAQ-100 Futures

The E-mini NASDAQ-100 futures tick value is 0.50 index point, or \$10 per contract. Thus:

- A move of one tick, from 1500.00 to 1500.50, equals \$10.
- With this move, a long (buying) position would be credited \$10, and a short (selling) position debited \$10.
- A move of one entire E-mini NASDAQ-100 futures index point—the equivalent of two ticks—would equal \$20, and so on.

#### E-mini Russell 2000 Futures

The E-mini Russell 2000 futures tick value is 0.10 index point, or \$10 per contract. Thus:

- A move of one tick, from 560.00 to 560.10, equals \$10.
- With this move, a long (buying) position would be credited \$10, and a short (selling) position debited \$10.
- A move of one entire E-mini Russell 2000 futures index point—the equivalent of ten ticks—would equal \$100, and so on.

#### E-mini S&P MidCap 400 Futures

The E-mini S&P MidCap 400 futures tick value is 0.10 index point, or \$10 per contract. Thus:

- A move of one tick, from 580.00 to 580.10, equals \$10.
- With this move, a long (buying) position would be credited \$10, and a short (selling) position, debited \$10.
- A move of one entire E-mini S&P MidCap 400 futures index point—the equivalent of ten ticks—would equal \$100, and so on.

#### E-mini Russell 1000® futures

The E-mini Russell 1000 tick value is .10 index point or \$10 per contract. Thus:

- A move of one tick, from 640.00 to 640.10 = \$10
- With this move, a long (buying) position would be credited with \$10 and a short position would be debited \$10.
- A move of one entire E-mini Russell 1000 futures index point—the equivalent of ten ticks—would equal \$100, and so on.



## Expirations and Contract Symbols

CME E-mini stock index contracts trade in quarterly time frames, with March, June, September and December expirations. CME uses the following ticker symbols to distinguish each contract and each month. However, quote vendors may display these products differently. Before you trade, talk to your vendor or broker to learn how they display quotes.

Contract	CME Ticker Symbol	MONTH SYMBOLS FOR CME CONTRACTS			
		Expiration Months	March	June	September
E-mini S&P 500	ES	H	M	U	Z
E-mini NASDAQ-100	NQ	H	M	U	Z
E-mini Russell 2000	ER2	H	M	U	Z
E-mini S&P MidCap 400	EMD	H	M	U	Z
E-mini Russell 1000	RS1	H	M	U	Z

## Getting Price Information

It's essential for traders to know the current price of their futures positions. Real-time, online price information is now available directly from CME on a subscription basis. To find out more about this highly cost-efficient and customizable service, please go to [www.cme.com](http://www.cme.com) and click on CME E-quotestm on the site's home page. Prices are also available through a number of different quote vendors. You may also ask your broker about the choices available.

### How to Read Index Prices

In addition to streaming and real-time quotes, you will also want to know how to interpret futures prices reported in newspapers and other print sources. Although the amount of information published by a source often differs, the information will look something like the table below.

### FUTURES

#### E-MINI NASDAQ-100 INDEX (CME)

#### \$20 TIMES INDEX

	Open	High	Low	Settle	Change	Lifetime High	Lifetime Low	Open Interest
September	1501.50	1503.50	1497.50	1500.00	-10.80	1504.00	1071.50	304,000
December	1506.50	1512.50	1504.00	1504.00	-9.50	1520.00	1092.00	2,000

Est vol 484,922; open int 306,000 + 2150

The tables in the daily newspaper listings reflect the previous day's prices. Open interest figures are published on a two-day lag.

## Futures Prices: Terms to Know

The following terms will help you understand futures price quotes in both online and print formats.

### *Basis (or Premium/Discount)*

Futures contracts sometimes trade at discounts or premiums to their underlying cash instruments depending on cost-of-carry factors.

### *Call*

When trading options on futures, a call is the right, but not the obligation, to buy a futures contract at the option's strike price on or before the expiration date.

### *High*

Top bid or top price at which a contract was traded during a trading period.

### *Life-of-contract highs and lows*

The highest price or bid and the lowest price or offer reached in the lifetime of a futures contract or a specific delivery month.

### *Low*

Lowest offer or the lowest price at which a contract was traded during a trading period.

### *Net change*

The amount of increase or decrease from the previous trading period's settlement price.

### *Open*

The price at which the first transaction was completed.

### *Open interest*

The accumulated total of all currently outstanding contracts. Refers to unliquidated purchases and sales.

### *Put*

When trading options on futures, a put is the right, but not the obligation, to sell a futures contract at the option's strike price on or before the expiration date.

### *Settle (Settlement price)*

The official daily closing price, typically set at the midpoint of the closing range.

### *Spread*

Simultaneous purchase and sale of two similar futures contracts to profit from a price disparity.

*E.g.*, A trader could go long E-mini S&P 500 Futures and at the same time short the E-mini Russell 2000 futures if the trader thought large cap issues were going to outperform small cap issues.

### *Strike price*

The price at which the buyer of a call (put) option may choose to exercise the right to purchase (sell) the underlying futures contract. Also known as exercise price.

### *Volume*

The number of contracts traded for each delivery month during a specified trading period.

## Trading on the CME® Globex® Electronic Trading Platform

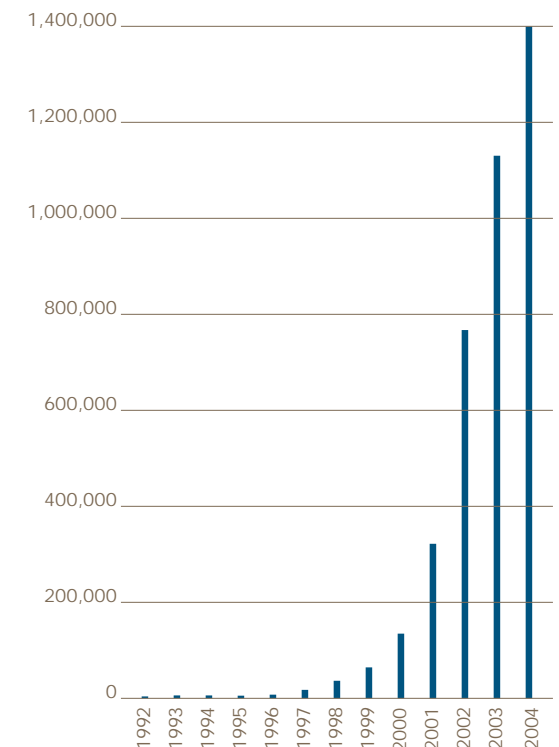
### 100 Percent Electronic

With no trading "pits" or paper order slips, E-mini stock index trades are executed efficiently and fast on the CME Globex electronic trading platform. And because the E-mini contracts trade in an all-electronic open auction, there's no worrying about routing your order across multiple markets for that elusive "best price"—the best price rules the day. Plus with virtually around-the-clock access, trading takes place on your time.

### How Do You Connect to the CME Globex Platform?

You can connect in different ways. Some brokerage firms provide their own software for you to use on your PC, or you might use trading software provided by one of the many software vendors whose products support these contracts. Customers can now also connect via the Internet using the CME Globex Trader® Internet option. For connectivity options visit [www.cme.com](http://www.cme.com)

Growth of Electronic Trading on the CME Globex Platform, Average Daily Volume



**Are Futures Right for You?****Do You Have a Strategy?**

Are you a technical analyst? A momentum trader? Do you focus on market fundamentals? Whatever your approach, you can adapt your existing trading style to futures.

**Do You Have a Plan to Manage Your Money?**

As with any type of trading, a money management plan—and the discipline to follow it—are essential to the successful trading of these products.

**Finding and Working with a Futures Broker****Look for a Good Match**

Futures and options on futures contracts are bought and sold through futures brokerage firms, while stocks are bought and sold through stock brokerage firms. If your existing broker doesn't offer trading in futures, you will need to open an account with a Series 3 licensed commodities brokerage representative.

You may find a good futures broker on the reference of a friend or co-worker currently using the futures markets; or, a broker might call you directly and introduce him/herself. But if you don't have someone who can help, you can start your search by going to the "Find a Broker" section of the CME Web site at [www.cme.com](http://www.cme.com). You can also check the National Futures Association's Web site ([www.nfa.futures.org](http://www.nfa.futures.org)).

**Know Your Trading Objectives**

As you talk with prospective futures brokers, let them know what your objectives are for getting into the market. Is it strictly to try to take advantage of price fluctuations? Do you want to hedge an exposure you are carrying elsewhere in your portfolio? Will all your trading be on your PC, or will you want to phone

in trades when you're away from the screen? A clear understanding of your trading needs and approach up front will help your broker serve you most effectively.

Your broker represents YOU—he or she will enter your order as you instruct and report the execution price back to you promptly. In addition, you may want your broker to give you advice and help on various aspects of the market and to simply "be there" when you have questions.

**Get the Training You Need**

Be sure to take advantage of any training or other assistance your brokerage firm provides—especially if you will be using an electronic trading system provided by your broker. Before making live trades with these products, it's a good idea to practice first with virtual trades on a simulated trading program.

**Trading Without Broker Assistance**

If you reach a point where you feel comfortable with your own trading decisions, there are a growing number of Internet-based order routing systems available through futures brokerage firms. You will need to speak with a broker or other qualified person before opening an online account and you will need a certain degree of knowledge of futures or experience trading futures.

All brokers in the U.S. must pass qualifying examinations and receive a license before they are permitted to handle customer orders. You can check on the registration status of your broker, or "Associated Person," by calling the National Futures Association at 312-781-1410.

**Sign Account Papers**

Once you've chosen a broker, you would then open a trading account. You will need to meet the financial requirements set by your particular broker, and will need to sign a risk disclosure statement indicating that you understand the risks involved in futures and options trading. You may also need to sign a performance bond agreement (a statement that binds you to pay for any losses incurred in the course of trading) and a futures account agreement outlining how the account is to be handled by the broker.

**Deposit Performance Bond**

Before you open an account to trade CME index futures or options, you must deposit cash or certain securities with your broker. CME establishes minimum initial and maintenance performance bond levels for all products traded at the Exchange; your broker's requirements may be higher. (Buyers of options pay the full price of the option and are not subject to performance bond requirements.)

**CME and Its Role**

CME provides and regulates a marketplace for trading futures and options on futures, similar to the roles the New York Stock Exchange and the National Association of Securities Dealers (NASD) play for stocks. CME clears, settles and guarantees all matched transactions in CME contracts occurring electronically or through its floor facilities. CME is registered with the Securities Exchange Commission (SEC) as a for-profit shareholder corporation, and its markets are primarily regulated by the Commodity Futures Trading Commission (CFTC) along with other U.S. governmental bodies.

On December 6, 2002, CME became the first publicly traded financial exchange in the United States.

**Financial Safeguards**

The CME financial safeguard system provides a unique blend of risk management and financial surveillance techniques designed for the protection of its customers. The keystone of this system is the ability to detect unsound financial practices, backed by the financial depth of its clearing members and its special Trust Fund. This combination provides unparalleled safeguards for the protection and benefit of all users of CME markets.

In the 100-year plus history of CME and its predecessor organizations, there has never been a failure by a clearing member to pay settlement variation to the Clearing House; there has never been a failure by a clearing member to meet a performance bond call; there has never been a failure by a clearing member to meet its delivery obligations; and, most importantly, there has never been a failure of a clearing member resulting in a loss of customer funds.

This financial safeguard system has been remarkably successful in periods of tremendous volatility in the financial markets, and CME continuously works to improve and strengthen it.

## 4 CONTRACT SPECIFICATIONS

### E-mini S&P 500 Index Futures and Options Contract Highlights\*

E-mini S&P 500 futures are based on the S&P 500 Stock Index, a capitalization-weighted index of 500 large, actively traded U.S. stocks. These stocks are traded on the New York Stock Exchange, the American Stock Exchange and The Nasdaq Stock Market. The primary calculator for the S&P 500 Index is Reuters.

	FUTURES	OPTIONS ON FUTURES
Opening Date	September 9, 1997	
Ticker Symbols	ES	Calls: ES Puts: ES AON: EG
Contract Size	\$50 x S&P 500 Index futures price	
Strike Prices	N/A	5-point intervals for two nearest contracts, 10-point intervals for deferred months
Minimum Price Fluctuation (Tick)	.25 index points = \$12.50 per contract (Futures calendar spreads: .05 index points = \$2.50 per contract)	
Trading Hours (Chicago Time)	Virtually 24-hour trading, Sunday afternoon through Friday afternoon	
Contract Months	Mar, Jun, Sep, Dec	All 12 calendar months
Last Day of Trading	Trading can occur up to 8:30 a.m. (Chicago time) on the third Friday of the contract month	Mar, Jun, Sep, Dec same as underlying futures contract. Other eight months: the third Friday of the contract month
Position Limits	Position limits work in conjunction with existing S&P 500 position limits	

**Quarterly Futures and Options Settlement Procedures:** Cash settlement. All open positions at the close of the final trading day are settled in cash to the Special Opening Quotation\*\* on Friday morning of the S&P 500 Index.

**Option Exercise:** American Style. An option can be exercised until 7:00 p.m. (Chicago time) on any business day the option is traded. An option that is in-the-money, and has not been exercised prior to the termination of trading, shall be automatically exercised unless contrary instructions have been delivered to the Clearing House by 7:00 p.m. on the day of determination of the Final Settlement Price.

\* Please refer to CME Rules for official specifications.

\*\* Go to [www.cme.com](http://www.cme.com) for more details on determining the Special Opening Quotation.

### E-mini NASDAQ-100 Index Futures and Options Contract Highlights\*

E-mini NASDAQ-100 futures are based on the NASDAQ-100 Stock Index, a modified capitalization-weighted index of 100 of the largest and most active non-financial, domestic stocks traded on The Nasdaq Stock Market. The index is computed and distributed by The Nasdaq Stock Market.

	FUTURES	OPTIONS
Opening Date	June 21, 1999	Nov 21, 2004
Ticker Symbol	NQ	Calls: NQ Puts: NQ
Contract Size	\$20 x NASDAQ-100 Index futures price	One E-mini NASDAQ-100 futures contract
Minimum Price Fluctuation (Tick)	.50 index points = \$10 per contract (Futures calendar spreads: .05 index points = \$1 per contract)	0.5 index points = \$1.00 Half tick .025 index points = \$.50
Trading Hours (Chicago Time)	Virtually 24-hour trading, Sunday afternoon through Friday afternoon	
Contract Months	March, June, September, December	Two quarterly expiration months, two serial expiration months
Last Day of Trading	Trading can occur up to 8:30 a.m. (Chicago time) on the third Friday of the contract month	Mar, Jun, Sep, Dec same as underlying futures contract. Other eight months: the third Friday of the contract month
Position Limits	Position limits work in conjunction with existing NASDAQ-100 position limits	

**Quarterly Futures and Options Settlement Procedures:** Cash settlement. All open positions at the close of the final trading day are settled in cash to the Special Opening Quotation\*\* on Friday morning of the NASDAQ-100 Index, computed from a five-minute volume-weighted average of each component stock's opening prices.

\* Please refer to CME Rules for official specifications.

\*\* Go to [www.cme.com](http://www.cme.com) for more details on determining the Special Opening Quotation.

### E-mini S&P MidCap 400 Index Futures Contract Highlights\*

E-mini S&P MidCap 400 futures are based on the S&P MidCap 400 Index, a capitalization-weighted index of 400 medium-cap, actively traded U.S. stocks. These stocks are traded on the New York Stock Exchange, the American Stock Exchange and The Nasdaq Stock Market. The primary calculator for the S&P MidCap 400 Index is Reuters.

	FUTURES
Opening Date	January 28, 2002
Ticker Symbol	EMD
Contract Size	\$100 x S&P MidCap 400 Index futures price
Minimum Price Fluctuation (Tick)	.10 index points = \$10 (Futures calendar spreads: .05 index points = \$5 per contract)
Trading Hours (Chicago Time)	Virtually 24-hour trading, Sunday afternoon through Friday afternoon
Contract Months	March, June, September, December
Last Day of Trading	Trading can occur up to 8:30 a.m. (Chicago time) on the third Friday of the contract month
Position Limits	Position limits work in conjunction with S&P MidCap 400 position limits

**Quarterly Futures and Options Settlement Procedures:** Cash settlement. All open positions at the close of the final trading day are settled in cash to the Special Opening Quotation\*\* on Friday morning of the S&P MidCap 400 Index.

\* Please refer to CME Rules for official specifications.

\*\* Go to [www.cme.com](http://www.cme.com) for more details on determining the Special Opening Quotation.

### E-mini Russell 2000 Index Futures and Options Contract Highlights\*

E-mini Russell 2000 futures are based on the Russell 2000 Index, a capitalization-weighted index of approximately 2,000 actively traded, small-capitalization U.S. stocks. These stocks are traded on the New York Stock Exchange, the American Stock Exchange and The Nasdaq Stock Market. The index is computed and distributed by the Frank Russell Company.

	FUTURES	OPTIONS
Opening Date	October 24, 2001	February 13, 2005
Ticker Symbol	ER2	
Contract Size	\$100 x Russell 2000 Index futures price	One E-mini Russell 2000 futures contract
Minimum Price Fluctuation (Tick)	.10 index points = \$10 per contract (Futures calendar spreads: .05 index points = \$5 per contract)	.10 index points = \$10.00 Cabinet = .05 index points or \$5.00
Trading Hours (Chicago Time)	Virtually 24-hour trading, Sunday afternoon through Friday afternoon	
Contract Months	March, June, September, December	Two quarterly expiration months, two serial expiration months
Last Day of Trading	Trading can occur up to 8:30 a.m. (Chicago time) on the third Friday of the contract month	Mar, Jun, Sep, Dec same as underlying futures contract. Other eight months: the third Friday of the contract month
Position Limits	Position limits work in conjunction with existing Russell 2000 position limits	

**Quarterly Futures and Options Settlement Procedures:** Cash settlement. All open positions at the close of the final trading day are settled in cash to the Special Opening Quotation\*\* on Friday morning of the Russell 2000 Index.

\* Please refer to CME Rules for official specifications.

\*\* Go to [www.cme.com](http://www.cme.com) for more details on determining the Special Opening Quotation.

### E-mini Russell 1000 Index Futures Contract Highlights\*

E-mini Russell 1000 futures are based on the Russell 1000 Index, a capitalization-weighted index of approximately 1,000 actively traded, large-capitalization U.S. stocks. These stocks are traded on the New York Stock Exchange, the American Stock Exchange and The Nasdaq Stock Market. The index is computed and distributed by the Frank Russell Company.

	FUTURES
Opening Date	April 28, 2003
Ticker Symbol	RS1
Contract Size	\$100 x Russell 1000 Index futures price
Minimum Price Fluctuation (Tick)	.10 index points = \$10 per contract (Futures calendar spreads: .05 index points = \$5 per contract)
Trading Hours (Chicago Time)	Virtually 24-hour trading, Sunday afternoon through Friday afternoon
Contract Months	March, June, September, December
Last Day of Trading	Trading can occur up to 8:30 a.m. (Chicago time) on the third Friday of the contract month
Position Limits	25,000 net long or short in all contract months combined

**Quarterly Futures Settlement Procedures:** Cash settlement. All open positions at the close of the final trading day are settled in cash to the Special Opening Quotation\*\* on Friday morning of the Russell 1000 Index.

\* Please refer to CME Rules for official specifications.

\*\* Go to [www.cme.com](http://www.cme.com) for more details on determining the Special Opening Quotation.

# 5 TRADING EXAMPLES

## Trading Example 1

### Position Trading Using E-mini S&P 500 Futures

Suppose that on June 13, a bullish trader decides to go long one September E-mini S&P 500 futures (ESU) at 1050.00.

Performance bond: Approximately \$4,000

At end of June 13, ESU is trading at 1050.00

Gain in position: 0.00

Value of margin account: \$4,000

At close next day, June 14, ESU is trading at 1040.00

Loss in position 10 pts. x \$50/pt. = \$500

Variation margin (change in account): \$500 debit

Value of margin account: \$3,500

At close two days later, June 15, ESU is trading at 1046.00

Gain in position from previous day = 6 pts. x \$50/pt. = \$300

Variation margin (change in account): \$300 credit

Value of margin account = \$3,800

At close on June 16, trader sells ESU at 1060.00

Gain in position from previous day = 14 pts. x \$50/pt. = \$700

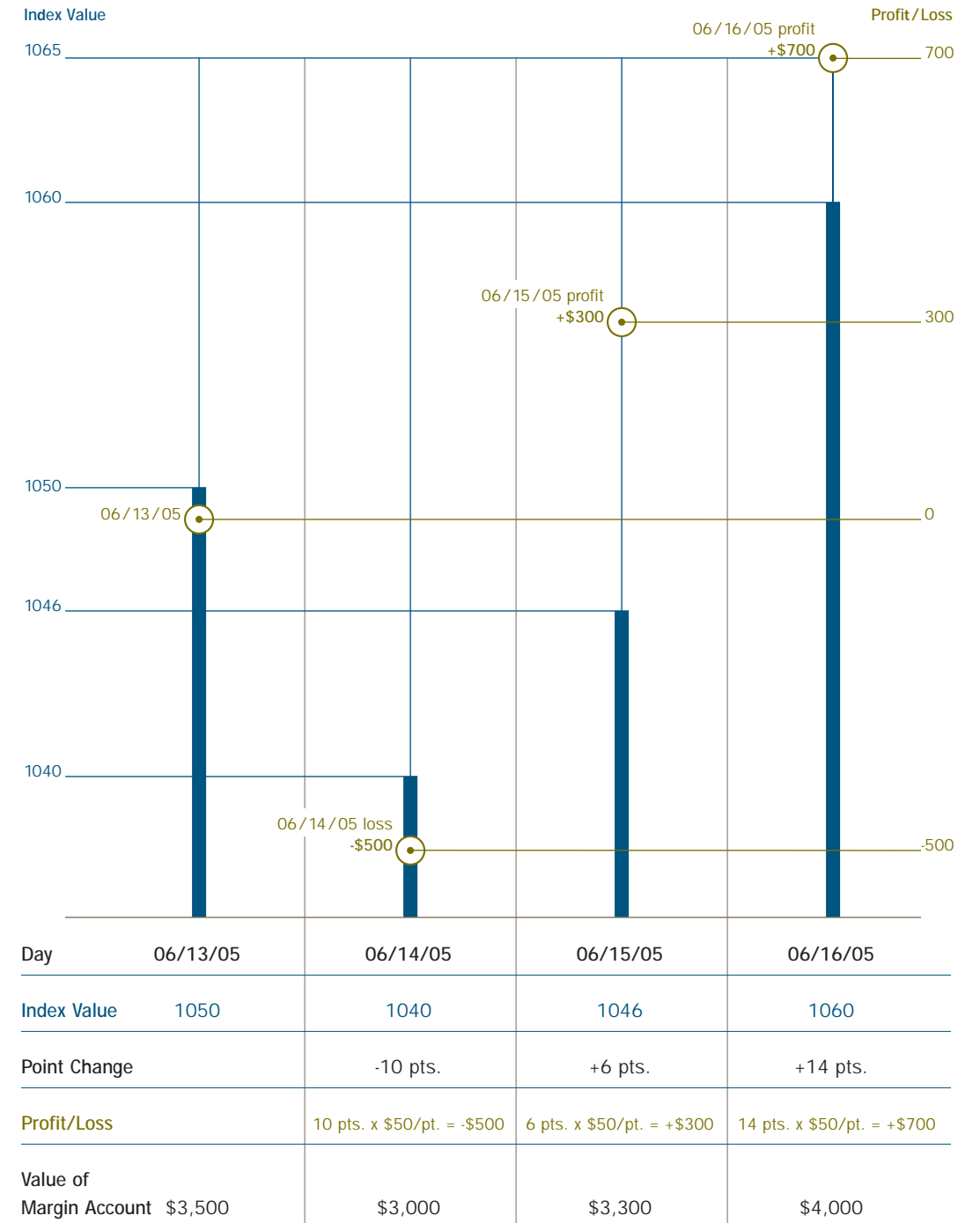
Variation margin (change in account): \$700 credit

Value of margin account = \$4,500

Position is now closed out.

**Gain or loss on entire trade is sum of variation margins = -\$500 + \$300 + \$700 = + \$500**

While the position was closed out at a profit, if the trader liquidated after day one or day two, he/she would have had a loss.



## Trading Example 2

### Hedging a Portfolio with E-mini S&P 500 Stock Index Futures

Suppose an investor owns a mutual fund or portfolio of stocks that is highly correlated with the S&P 500 Index. The current value of the portfolio is \$100,000.

Investor's Outlook	Short term bearish... looking for a decline of at least 10% in the S&P 500 Index.
Investor's Strategy– A "Short Hedge"	Sell short two* E-mini S&P 500 futures contracts to hedge the portfolio.
Current S&P 500 Index (cash)	1100.00 pts.
Current E-mini S&P 500 (futures)	1100.00 pts.

Note: Futures contracts can and do trade at a premium or discount to the cash index due to cost-of-carry factors. As expiration of the futures contract nears, this premium/discount will converge toward zero.

Outcome	Suppose that two weeks later the S&P 500 Stock Index has declined 10.2% to 987.80. Correspondingly, the investor's portfolio has declined 10.2%. December S&P 500 futures have similarly declined 10.0% to 990.00.
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Profit/Loss Picture	Initial value of portfolio	\$100,000
	Value of portfolio after 10.2% decline	\$89,800
	Profit/loss on portfolio	\$-10,200
	Initial value of E-mini S&P 500 futures contract:	\$55,000 (1100 x \$50 = \$55,000)
	Value of E-mini S&P 500 futures after 10% decline:	\$49,500 (990 x \$50 = \$49,500)
	Gain on short hedge	+5,500 (55,000 - 49,500)
Total Gain from Futures	Multiply \$5,500 by 2 (\$100k portfolio required two futures contracts) =	\$11,000

\* Each E-mini S&P 500 futures is worth \$55,000 when the futures index is at 1100 points (1100 x \$50 per pt. = \$55,000). Hence, two contracts would be required to adequately hedge a \$100,000 portfolio. See end of this brochure for contract specs.

Hedged Portfolio	Loss on portfolio	- \$10,200
	Gain from futures hedge	+\$11,000
	Overall profit/loss	+ \$800
Unhedged Portfolio	Loss on portfolio	- \$10,200
	Gain from futures hedge	N/A
	Overall profit/loss	- \$10,200

In this example, the hedge using stock index futures helped to protect the portfolio from a decline in the market. The decline in the investor's portfolio was offset by gains from the purchase of two E-mini S&P 500 futures contracts at a lower price than the investor sold them for—the short hedge. As a result, this investor's combined holdings showed a slight gain despite a significant decline in the market of 10%.

On the other hand, if the market had advanced, the portfolio's gains would have been offset by losses on the hedge of the two E-mini S&P 500 futures contracts. If this were to occur, the investor would have had to consider removing his hedge (or managing his hedge) by buying back the short futures contracts, after realizing his market opinion was wrong. By not offsetting his futures hedge as soon as possible, the investor risks not participating in the upside of the stock market. That's because in an advancing market, a short hedge using stock index futures might prevent the investor from participating on the upside.

In summary, before using CME E-mini futures as a hedging vehicle, the investor must consider:

- The size of the portfolio being hedged. The value of the stock index futures contract or contracts being used for the hedge must be similar to the size of the investor's equity portfolio.
- The correlation of one's portfolio to the stock index product used for hedging. The stock index futures product must track the stocks the investor has in his or her portfolio. For example, you would use E-mini S&P 500 futures to hedge a portfolio of large-cap stocks.
- Performance bond requirements for the stock index futures contract.



### Trading Example 3

#### Using E-mini NASDAQ-100 Index Futures to Gain Market Exposure

An investor is expecting a large cash infusion due to sale of his business. He wishes to invest the cash proceeds of the sale (about \$60,000) in high-tech stocks when the deal closes in four-to-five months.

<b>Problem</b>	Investor is very bullish near-term, especially on technology stocks. Lacks immediate cash to construct an equity portfolio to take advantage of his view.
<b>Investor's Strategy– A “long hedge”</b>	Buy two E-mini NASDAQ-100 futures contracts (each contract worth approximately \$30,000) as a way to attempt to take advantage of anticipated technology stock growth.
<b>Advantages</b>	<p>Strategy is easy to execute.</p> <p>Offers trader a way to act on market opinion while waiting for cash to buy stocks.</p> <p>Initial cash outlay (performance bond) much less than \$60,000. (Likely to be about 10% of that amount, depending on current performance bond requirements).</p> <p>Less costly and more efficient than buying a basket of stocks</p>

If the market rises before the investor receives the \$60,000, the futures would typically also rise, allowing the investor to participate in the advance. Four to five months later, the investor could purchase the stocks. The higher price that he would pay for the stocks would be offset by the profits in the futures contracts.

If the prices of the stocks (and the NASDAQ-100 Index) decline, however, the futures contracts would typically also have declined in value. If the trader still wished to invest in a tech stock portfolio, however, the cost of doing so would now also be lower.

The investor, in effect, “locks in” a stock price with his “anticipatory long hedge” in stock index futures, and is able to participate in the market changes with less cost and more efficiency than if he had purchased a basket of tech stocks.

### The Use of Leverage

Dollar profits and losses are similar, but the percentage of profit or loss is higher when trading CME E-mini stock index futures than trading Exchange Traded Funds (also called index tracking stocks).

Take a look at the comparisons below.

**If**

The NASDAQ-100 futures index is trading at 1500,

**Then:**

E-mini NASDAQ-100 futures  
Contract value = \$30,000  
(\$20 x 1500 = \$30,000)

NASDAQ-100 Index Tracking Stock (QQQs)  
800 shares of QQQ = \$30,000  
(\$37.50/share\* x 800 = \$30,000)

Performance bond \$3,750\*\*

Margin \$15,000

**And if the NASDAQ-100 futures index moves up 50 index points to 1550, your dollar profit\*\*\* is the same**

profit is \$1,000  
(\$20 x 50 = \$1,000)

the same  
profit is \$1,000  
1550 - 1500/40 = 1.25 x 800 = \$1,000

**...but your percentage profit is higher**

\$1,000 profit on \$3,750 = 26%

**lower**

\$1,000 profit on \$15,000 = 6.6%

**However, if NASDAQ-100 moves down 50 index points to 1450, your loss is the same**

loss is \$1,000  
(\$20 x -50 = \$1,000)

the same  
loss is \$1,000  
1500 - 1500/40  
(\$1.25 loss/share x 800 = \$1,000)

**...but your percentage loss is higher**

\$1,000 loss on \$3,750 = 26%

**lower**

\$1,000 loss on \$15,000 = 6.6%

\* QQQs are priced to approximate 1/40 the value of the NASDAQ-100 Index.

\*\* Brokerage firms may require a larger initial performance bond. CME initial performance and maintenance bonds may also vary over time.

\*\*\* Profits and losses do not include commissions and fees.

## 6 COMPARING STOCK INDEX FUTURES AND EXCHANGE TRADED FUNDS (ETFs)

### E-mini S&P 500 Futures vs. Standard & Poor's Depository Receipts (SPDRs®)

Type of Investment	E-mini S&P 500 Stock Index Futures	S&P 500 Depository Receipts (SPDRs)
Underlying Index	S&P 500	S&P 500
Trading Method	Electronic	Floor/ECN
24 Hour Trading	Yes	No
Short Selling	Yes	Yes
2002 Average Daily \$ Volume	\$37 billion	\$4.5 billion
Average Bid/Offer Spread*	2 basis points	2.5–5 basis points**
Ticker Symbol	ES	SPY
Where Traded	CME	Amex®/NYSE®/ECNs

E-mini capital requirement is significantly lower

*For example, if the S&P 500 futures Index is at 1100, then:*

One E-mini S&P 500 Futures contract is valued at \$55,000  
(\$50 / point x 1100 = \$55,000)

500 shares of SPDRs are valued at \$55,000  
(\$110 / share\*\*\* x 500 = \$55,000)

*but:*

Capital requirement for trading one E-mini S&P 500 contract is \$4000 (initial performance bond\*\*\*\*)

Capital requirement for trading 500 SPDRs shares is \$27,500 in margin (half the total value of shares)

\* These can widen considerably during highly volatile markets. Source: *Exchange Traded Funds and E-mini Stock Index Futures* by David Lerman

\*\* Plus a 10-basis-point annual management fee.

\*\*\* SPDRs are designed to trade at roughly 1/10 the level of the S&P 500 Index.

\*\*\*\* Initial and maintenance performance bonds may vary over time, and brokers may require higher margins.

### E-mini NASDAQ-100 Futures vs. NASDAQ-100 Index Tracking Stock (QQQs)

Type of Investment	E-mini NASDAQ-100 Stock Index Futures	NASDAQ-100 Index Tracking Stock (QQQ)
Underlying Index	NASDAQ-100	NASDAQ-100
Trading Method	Electronic	Floor/ECN
24 Hour Trading	Yes	No
Short Selling	Yes	Yes
2002 Average Daily \$ Volume	\$8-9 billion	\$3.5 billion
Average Bid/Ask Spread*	3 basis points	3–5 basis points**
Ticker Symbol	NQ	QQQ
Where Traded	CME	Amex/NYSE/ECNs

E-mini capital requirement is significantly lower

*For example, if the NASDAQ-100 futures Index is at 1500, then:*

One E-mini NASDAQ-100 futures contract is valued at \$30,000  
(\$20 / point x 1500 = \$30,000)

800 shares of QQQ are valued at \$30,000  
(\$37.50 / share\*\*\* x 800 = \$30,000)

*but:*

Capital requirement for trading one E-mini NASDAQ-100 is \$3,750 (initial performance bond\*\*\*\*)

Capital requirement for trading 800 QQQ shares is \$15,000 in margin (half the total value of shares)

\* These can widen considerably during highly volatile markets. Source: *Exchange Traded Funds and E-mini Stock Index Futures* by David Lerman

\*\* Plus a 10-basis-point annual management fee.

\*\*\* SPDRs are designed to trade at roughly 1/10 the level of the S&P 500 Index.

\*\*\*\* Initial and maintenance performance bonds may vary over time, and brokers may require higher margins.

### CME History of Innovation

#### 1898

Founding of the Chicago Butter and Egg Board, which in 1919 became the Chicago Mercantile Exchange, now CME. Trading focused on a variety of agricultural markets.

#### 1972

CME introduces the world's first financial futures contracts based on foreign currencies. This innovation transforms global finance, by offering the financial community the same opportunities for risk management that agribusiness had used for decades.

#### 1982

CME lists the first successful stock index futures contract based on the Standard & Poor's 500, the benchmark of the U.S. equity market.

#### 1992

CME launches the first global after-hours electronic trading system—the CME Globex electronic platform.

#### 1997

CME introduces the first “electronic mini” contract—E-mini S&P 500 futures. In less than three years, it becomes CME's third highest volume contract.

#### 1998

CME launches the second generation of the CME Globex electronic trading platform. The new system is a state-of-the-art, open and flexible system that enables further rapid expansion and brings electronic futures trading to a whole new level.

#### 1999

CME launches the E-mini NASDAQ-100 contract. It becomes one of CME's two fastest growing products ever, along with the E-mini S&P 500 futures.

#### 2000

CME is the first major U.S. financial exchange to become a for-profit, shareholder corporation.

#### 2001

E-mini S&P 500 futures volume doubles over previous year. E-mini NASDAQ-100 futures volume quadruples over previous year.

Launch of E-mini Russell 2000 futures in October.

#### 2002

Launch of E-mini S&P MidCap 400 futures in January.

CME E-mini futures trading volume exceeds one million contracts for the first time in history.

On December 6, 2002, CME became the first publicly traded financial exchange in the United States.

#### 2003

On March 17, E-mini S&P 500 futures traded over one million contracts for the first time in a single day.

#### 2004

On March 11, volume in the CME E-mini futures complex exceeded two million contracts.

- E-mini S&P 500 exceeded 1,342,977 contracts
- E-mini NASDAQ-100 traded 544,831 contracts
- E-mini Russell 2000 traded 100,501 contracts
- E-mini S&P MidCap 400 traded 22,818 contracts

On November 21, options on E-mini NASDAQ-100 futures begin trading.

On December 9,

- E-mini Russell 2000 futures trade 159,450 contracts
- E-mini NASDAQ-100 futures trade 619,825 contracts

#### 2005

CME introduces options on E-mini Russell 2000 futures.

On January 11, open interest in E-mini S&P 500 options reaches 100,000 contracts.

### Where Can You Learn More?

#### *Options Volatility & Pricing*

Sheldon Natenberg, 1994

#### *Exchange Traded Funds and E-mini Stock Index Futures*

David Lerman, 2001

Wiley and Sons

#### *CME*

A resource for complete futures products and trading information including publications, online courses, simulated trading, contract and price information.

[www.cme.com](http://www.cme.com)

[www.cme.com/indexoptions](http://www.cme.com/indexoptions)

[www.emini-vs-etf.com](http://www.emini-vs-etf.com)

## E-mini Stock Index Futures Complex: Contract Specifications

	E-mini S&P 500	E-mini NASDAQ-100	E-mini Russell 2000	E-mini S&P MidCap 400	E-mini Russell 1000
Ticker Symbol	ES	NQ	ER2	EMD	RS1
Contract Size*	\$50 x E-mini S&P 500 \$55,000	\$20 x E-mini NASDAQ-100 \$30,000	\$100 x E-mini Russell 2000 \$56,000	\$100 x E-mini MidCap 400 \$58,000	\$100 x E-mini Russell 1000 \$64,000
Minimum Price Fluctuation (Tick)	.25 futures index points = \$12.50	.50 futures index points = \$10.00	.10 futures index points or \$10.00	.10 futures index points or \$10.00	.10 futures index points or \$10.00
Trading Hours	Nearly 24 hours, Sunday afternoon through Friday afternoon				
Contract Months**	H, M, U, Z				
Last Day of Trading	8:30 a.m. third Friday of contract month				
Performance					
Bond Margin***	\$4,000	\$3,750	\$3,500	\$3,500	\$3,625

\* Contract value fluctuates daily with market

\*\* H = March, M = June, U = September, Z = December

\*\*\* ALL PERFORMANCE BONDS SUBJECT TO CHANGE, AND BROKERS MAY REQUIRE HIGHER MARGINS

Expiration Dates	March 18, 2005
	June 17, 2005
	September 16, 2005
	December 16, 2005

Trading may occur up to 8:30 a.m. Chicago time on these dates.

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