

## Chapter 452A

### Options on Three-Month Eurodollar Futures

#### 452A00. SCOPE OF CHAPTER

This chapter is limited in application to options on Three-Month Eurodollar futures. In addition to this chapter, options on Three-Month Eurodollar futures shall be subject to the general rules and regulations of the Exchange insofar as applicable.

For purposes of this chapter, unless otherwise specified, times referred herein shall refer to and indicate Chicago time.

#### 452A01. OPTIONS CHARACTERISTICS

##### 452A01.A. Contract Months and Trading Hours

Options shall be listed for such contract months and scheduled for trading during such hours as may be determined by the Exchange.

##### 452A01.B. Trading Unit

The trading unit shall be an option to buy, in the case of the call, or to sell, in the case of the put, one Three-Month Eurodollar futures contract as specified in Chapter 452.

##### 452A01.C. Minimum Fluctuations

The price of an option shall be quoted in IMM Index points corresponding to such option's Underlying Futures Contract (Rule 452A01.D.). Pursuant to Rules 45202.C., each 0.01 IMM Index point signifies one (1) basis point per annum of interest rate exposure in such Underlying Futures Contract's Trading Unit (Rule 45202.B.), and is equal to \$25 per option contract. For example, an option contract price of 0.35 IMM Index points represents \$875 (equal to 35 basis points x \$25 per basis point per option contract).

Minimum price fluctuations shall be as follows --

##### 1. Quarterly Options (Rule 452A01.D.1.) Expiring in the Nearest March Quarterly Month

Where such options are for the next nearest monthly option expiration date, the minimum price fluctuation shall be 0.0025 IMM Index points (equal to \$6.25 per option contract).

Where such options are not for the next nearest monthly option expiration date, then:

Where any such option trades outright at a premium not greater than 0.05 IMM Index points the minimum price fluctuation shall be 0.0025 IMM Index points (equal to \$6.25 per option contract).

Where any such option trades outright at a premium greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.005 IMM Index points (equal to \$12.50 per option contract).

##### 2. Quarterly Options (Rule 452A01.D.1.) Expiring in the Second-Nearest March Quarterly Month and All Serial Options (Rule 452A01.D.2.)

Where any such option trades outright at a premium not greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.0025 IMM Index points (equal to \$6.25 per option contract).

Where any such option trades outright at a premium greater than 0.05 IMM Index points, the minimum price fluctuation shall be 0.005 IMM Index points (equal to \$12.50 per option contract).

##### 3. All Other Quarterly Options (Rule 452A01.D.1.) and All Mid-Curve Options (Rule 452A01.D.3.)

For all Quarterly options other than those that expire in the nearest March Quarterly month or the second-nearest March Quarterly month, and for all Mid-Curve options, the minimum price fluctuation shall be 0.005 IMM Index points (equal to \$12.50 per option contract), provided that trade may occur at a price level of 0.0025 IMM Index point (equal to \$6.25 per option contract), whether or not such trade results in liquidation of positions for both parties to such trade.

Any option spread or combination that comprises one or more such Other Quarterly Options or Mid-Curve Options shall trade in minimum price increments of 0.005 IMM Index points.

##### 4. Option Spreads and Combinations

All option spreads and combinations shall trade in minimum price increments of 0.005 IMM Index points, subject to the following exceptions:

- (a) An option spread or combination may trade in minimum price increments of 0.0025 IMM Index points if (i) such option spread or combination comprises only Quarterly Options Expiring in the Nearest March Quarterly Month (Rule 452A01.C.1.), and (ii) all such options are for the nearest monthly option expiration date.
- (b) An option spread or combination may trade in minimum price increments of 0.0025 IMM Index points if such option spread or combination (i) trades at a net premium not greater than 0.05 IMM Index points and not less than -0.05 IMM Index points and (ii) comprises only Quarterly Options Expiring in the Nearest March Quarterly Month (Rule 452A01.C.1.) and/or Quarterly Options Expiring in the Second-Nearest March Quarterly Month (Rule 452A01.C.2.) and/or Serial Options (Rule 452A01.C.2.).

For the purpose of Rule 813 for Settlement Prices, the minimum price fluctuation for all options shall be 0.0025 IMM Index point (equal to \$6.25 per option contract).

Where the price of an option is quoted in volatility terms, the minimum fluctuation shall be 0.05 percent.

#### **452A01.D. Underlying Futures Contracts**

##### **1. Options in the March Quarterly Cycle (“Quarterly Options”)**

For options that expire in the March quarterly cycle (i.e., March, June, September, and December), except for those Mid-Curve options specified in Paragraphs 3, 4, 5, 6, or 7 of this Rule, the underlying futures contract is the futures contract for the month in which the option expires. For example, the underlying futures contract for an option that expires in March is the March futures contract.

##### **2. Options Not in the March Quarterly Cycle (“Serial Options”)**

For options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), except for those Mid-Curve options specified in Paragraphs 3, 4, 5, 6, or 7 of this Rule, the underlying futures contract is the next futures contract in the March quarterly cycle that is nearest the expiration of the option. For example, the underlying futures contract for such options that expire in January or February is the March futures contract.

##### **3. One-Year Mid-Curve Options**

###### One-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly One-Year Mid-Curve Options”)

For One-Year Mid-Curve options that expire in the March quarterly cycle, (i.e. March, June, September, and December), the underlying futures contract is the futures contract that expires 12 calendar months after the month in which the option expires.

###### One-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial One-Year Mid-Curve Options”)

For Serial One-Year Mid-Curve Options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), the underlying futures contract is the futures contract that expires 12 calendar months from the next March quarterly month that is nearest to the expiration of the option. For example, the underlying futures contract for the One-Year Mid-Curve options that expire in January or February is the March futures contract in the next calendar year.

###### Weekly One-Year Mid-Curve Options

For Weekly One-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 12 calendar months from the next March quarterly month that is nearest to the expiration of the option.

##### **4. Two-Year Mid-Curve Options**

###### Two-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly Two-Year Mid-Curve Options”)

For Two-Year Mid-Curve options that expire in the March quarterly cycle, (i.e. March, June, September, and December), the underlying futures contract is the futures contract that expires 24 calendar months after the month in which the option expires.

###### Two-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Two-Year Mid-Curve Options”)

For Serial Two-Year Mid-Curve Options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), the underlying futures contract is the futures contract that expires 24 calendar months from the next March quarterly month that is nearest to the expiration of the option. For example, the underlying futures contract for the Two-Year Mid-Curve options that expire in January or February is the March futures contract that expires in two calendar years.

#### Weekly Two-Year Mid-Curve Options

For Weekly Two-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 24 calendar months from the next March quarterly month that is nearest to the expiration of the option.

### **5. Three-Year Mid-Curve Options**

#### Three-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly Three-Year Mid-Curve Options”)

For Three-Year Mid-Curve options that expire in the March quarterly cycle, (i.e. March, June, September, and December), the underlying futures contract is the futures contract that expires 36 calendar months after the month in which the option expires.

#### Three-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Three-Year Mid-Curve Options”)

For Serial Three-Year Mid-Curve Options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), the underlying futures contract is the futures contract that expires 36 calendar months from the next March quarterly month that is nearest to the expiration of the option. For example, the underlying futures contract for the Three-Year Mid-Curve options that expire in January or February is the March futures contract that expires in three calendar years.

#### Weekly Three-Year Mid-Curve Options

For Weekly Three-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 36 calendar months from the next March quarterly month that is nearest to the expiration of the option.

### **6. Four-Year Mid-Curve Options**

#### Four-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly Four-Year Mid-Curve Options”)

For Four-Year Mid-Curve options that expire in the March quarterly cycle, (i.e. March, June, September, and December), the underlying futures contract is the futures contract that expires 48 calendar months after the month in which the option expires.

#### Four-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Four-Year Mid-Curve Options”)

For Serial Four-Year Mid-Curve Options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), the underlying futures contract is the futures contract that expires 48 calendar months from the next March quarterly month that is nearest to the expiration of the option. For example, the underlying futures contract for the Four-Year Mid-Curve options that expire in January or February is the March futures contract that expires in four calendar years.

#### Weekly Four-Year Mid-Curve Options

For Weekly Four-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 48 calendar months from the next March quarterly month that is nearest to the expiration of the option.

### **7. Five-Year Mid-Curve Options**

#### Five-Year Mid-Curve Options in the March Quarterly Cycle (“Quarterly Five-Year Mid-Curve Options”)

For Five-Year Mid-Curve options that expire in the March quarterly cycle, (i.e. March, June, September, and December), the underlying futures contract is the futures contract that expires 60 calendar months after the month in which the option expires.

#### Five-Year Mid-Curve Options Not in the March Quarterly Cycle (“Serial Five-Year Mid-Curve Options”)

For Serial Five-Year Mid-Curve Options that expire in months other than those in the March quarterly cycle, (i.e. January, February, April, May, July, August, October, and November), the underlying futures contract is the futures contract that expires 60 calendar months from the next March quarterly month that is nearest to the expiration of the option. For example, the underlying futures contract for the Five-Year Mid-Curve options that expire in January or February is the March futures contract that expires in five calendar years.

#### Weekly Five-Year Mid-Curve Options

For Weekly Five-Year Mid-Curve Options, the underlying futures contract is the futures contract that expires 60 calendar months from the next March quarterly month that is nearest to the expiration of the option.

### **452A01.E. Exercise Prices**

#### **1. Twenty-Five Point Exercise Prices**

Exercise prices shall be stated in terms of the IMM Index for the Eurodollar futures contract that is deliverable upon exercise of the option and shall be stated in intervals whose last two digits are 00, 25, 50, and 75 (“twenty-five point exercise prices”) for all IMM Index levels, e.g., 88.00, 88.25, 88.50, 88.75, etc.

For Options in the March Quarterly Cycle, Options Not in the March Quarterly Cycle, and all Mid-Curve Options, at the commencement of trading in a contract expiration, the Exchange shall list put and call options at the exercise price that is nearest the previous day’s settlement price of the respective underlying futures contract. All eligible exercise prices in a range of 5.50 IMM Index points above and below the exercise price that is nearest the futures price shall be listed for trading. Thereafter, the Exchange shall add for trading all eligible exercise prices in a range of 5.50 IMM Index points above and 5.50 IMM Index points below the exercise price nearest the previous day’s settlement price. New options may be listed for trading up to and including the termination of trading.

#### **2. Special Listings of 12.5 Point Exercise Prices**

Additional exercise prices shall be stated in intervals whose last three digits are 12.5, 37.5, 62.5, and 87.5 (“twelve and a half point exercise prices”) for all IMM Index levels, e.g., 93.125, 93.375, 93.625, 93.875, etc.

For Options in the March Quarterly Cycle, Options Not in the March Quarterly Cycle, and all Mid-Curve Options, the Exchange shall list put and call options with a 12.5 point exercise price in a range of 1.50 IMM Index points above and 1.50 IMM Index points below the exercise price [nearest the previous day’s settlement price of the underlying futures contract month.

#### **3. Dynamically-Listed Exercise Prices**

Upon demand and at the discretion of the Exchange, a new option contract with an out-of-current-range exercise price may be added, on an as-soon-as-possible basis, *provided that* the last two digits of the exercise price of such newly added option contract must be 00, 25, 50, or 75 (e.g., 88.00, 88.25, 88.50, 88.75).

The Exchange may modify the provisions governing the establishment of exercise prices as it deems appropriate.

### **452A01.F. Position Limits, Exemptions, Position Accountability and Reportable Levels**

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion. Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

#### **452A01.G. Special Price Fluctuation Limits**

At the commencement of each trading day, the contract shall be subject to special price fluctuation limits as set forth in Rule 589 and in the Special Price Fluctuation Limits Table in the Interpretations & Special Notices Section of Chapter 5.

**452A01.H.-I. [Reserved]****452A01.J. Termination of Trading****1. Options in the March Quarterly Cycle (“Quarterly Options”)**

For options in the March quarterly cycle, except for those Mid-Curve options specified in Paragraph 3 of this Rule, trading shall terminate at the same date and time as the underlying futures contract for such Quarterly options.

**2. Options Not in the March Quarterly Cycle (“Serial Options”)**

For options not in the March quarterly cycle, except for those Mid-Curve options specified in Paragraph 3 of this Rule, trading shall terminate at the close of trading on the Friday preceding the third Wednesday of the contract month. If the foregoing date for termination is a scheduled Exchange holiday, options trading shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for such Serial option does not open on the scheduled Serial option expiration day, the option expiration shall be extended to the next day on which the underlying futures market is open for trading.

**3. Mid-Curve Options**

Trading in any Quarterly Mid-Curve Option or any Serial Mid-Curve option shall terminate at the close of trading on the Friday preceding the third Wednesday of the calendar month containing the Mid-Curve option expiration. If the foregoing date for termination is a scheduled Exchange holiday, option trading shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for such Mid-Curve option does not open on the scheduled Mid-Curve option expiration day, the option expiration shall be extended to the next day on which the underlying futures market is open for trading.

Trading in Weekly Mid-Curve options shall terminate at the close of trading on those Fridays that are not also the termination of trading of Quarterly or Serial Mid-Curve options. If the foregoing date for termination is a scheduled Exchange holiday, trading in Weekly Mid-Curve options shall terminate on the immediately preceding Business Day. In the event that the underlying futures market for any such Weekly Mid-Curve option does not open on the scheduled Mid-Curve option expiration day, the option expiration shall be extended to the next day on which the underlying futures market is open for trading.

**452A01.K. [Reserved]****452A02. EXERCISE AND ASSIGNMENT**

In addition to the applicable procedures and requirements of Chapter 7, the following shall apply to the exercise of Eurodollar options.

**452A02.A. Exercise of Option by Buyer**

An option may be exercised by the buyer on any Business Day that the option is traded. To exercise an option, the clearing member representing the buyer shall present an exercise notice to the Clearing House by 7:00 p.m. on the day of exercise.

An option that is in the money and has not been liquidated or exercised prior to the termination of trading shall, in the absence of contrary instructions delivered to the Clearing House by 7:00 p.m. on the day of expiration by the clearing member representing the option buyer, be exercised automatically. An option is in the money if the settlement price of the underlying futures contract at the termination of trading lies above the exercise price in the case of a call, or lies below the exercise price in the case of a put.

Corrections to option exercises may be accepted by the Clearing House after the 7:00 p.m. deadline and up to the beginning of final option expiration processing provided that such corrections are necessary due to; (1) a bona fide clerical error, (2) an unreconciled Exchange option transaction(s), or (3) an extraordinary circumstance where the clearing firm and customer are unable to communicate final option exercise instructions prior to the deadline. The decision whether a correction is acceptable will be made by the President of the Clearing House, or the President's designee, and such decision will be final.

**452A02.B. Assignment**

Exercise notices accepted by the Clearing House shall be assigned through a process of random selection to clearing members with open short positions in the same series. A clearing member to which an exercise notice is assigned shall be notified thereof as soon as practicable after such notice is assigned by the Clearing House, but not later than 45 minutes before the opening of

Regular Trading Hours in the underlying futures contract on the following Business Day.

The clearing member assigned an exercise notice shall be assigned a short position in the underlying futures contract if a call is exercised or a long position if a put is exercised. The clearing member representing the option buyer shall be assigned a long position in the underlying futures contract if a call is exercised and a short position if a put is exercised.

All such futures positions shall be assigned at a price equal to the exercise price of the option and shall be marked to market in accordance with Rule 814 on the Trading Day of acceptance by the Clearing House of the exercise notice.

**452A03. [RESERVED]**  
(End Chapter 452A)

## INTERPRETATIONS & SPECIAL NOTICES RELATING TO CHAPTER 452A

### RULE 452A01.D. INTERPRETATION

(Special Executive Report S-2075, January 30, 1989. Revised in S.E.R. S-2735, December 6, 1993)

452A01.D. can be interpreted as follows:

At the commencement of trading in a contract expiration, the Exchange will list put and call options at the eligible exercise price that is nearest the previous day's settlement price of the underlying futures contract. An exercise price is "eligible" if it is in increments of .25 IMM Index points from even number IMM Index levels, such as 91.00 and falls within the appropriate range of IMM Index points of the eligible exercise price nearest the previous day's settlement as determined by time to expiration for the option contract expiration. An eligible exercise price is "nearest" when it is 12 basis points or closer to the adjacent eligible exercise price.

The listing procedure of exercise prices above and below the exercise price nearest to the previous day's settlement price of the underlying futures contract month is affected by the time to expiration of the individual option contract expiration. If the Exchange listing cycle specifies that eight March quarterly contract months (except Mid-Curve options) will be listed normally and that the newly listed deferred quarterly contract month will be listed on the Business Day following the expiration of the nearby quarterly contract month, then normally, new quarterly contract month listings will be added that have more than 15 complete calendar months to termination. Therefore, on Day 1, according to Rule 452A01.D., exercise prices will be added in a range of 2.25 IMM Index points above and below the exercise price nearest to the previous day's settlement price of the underlying futures contract expiration. (See Example 1(a).) Thereafter, the addition of exercise prices will be affected by the movement of the underlying futures settlement price and the relative time to expiration of the option contract expiration. (See Example 1(b).) The following examples illustrate the listing procedure for the September '91 Eurodollar (ED) options contract month that expires on September 16, 1991.

Example 1 - September '91 ED futures settles at 92.13 on Monday, September 18, 1989. On Tuesday, September 19, 1989, with time to expiration of the option contract expiration falling in the range of more than 15 complete calendar months away, exercise prices in a range of 2.25 IMM Index points above and below the exercise price nearest the previous day's settlement price of the underlying futures contract are added.

(a) Exercise Prices Listed on Day 1:

94.50	92.75	91.25
94.25	92.50	91.00
94.00	92.25	90.75
93.75	92.00	90.50
93.50	91.75	90.25
93.25	91.50	90.00
93.00		

(b) Thereafter, the addition of exercise prices is affected by the time to expiration of the option, the underlying futures settlement price, and the option contract expiration exercise prices already listed.

(1) Time to expiration is more than 15 complete calendar months away--For example, from



September 19, 1989 through May 31, 1990, for the September '91 quarterly contract month expiring on September 16, 1991, all eligible exercise prices in a range of 2.25 IMM Index points above and below the exercise price nearest the previous day's settlement price are added.

- (i) If highest listed exercise price is 94.50, then the next new higher exercise price of 94.75 would be added when the underlying futures settled at or above 92.38.
  - (ii) If lowest listed exercise price is 90.00, then the next new lower exercise price of 89.75 would be added when the underlying futures settled at or below 92.12.
- (2) Time to expiration is more than 12 up to and including 15 complete calendar months away--For example, from June 1, 1990 through August 31, 1990, for the September '91 quarterly contract month expiring on September 16, 1991, all eligible exercise prices in a range of 1.75 IMM Index points above and below the exercise price nearest the previous day's settlement price are added.
- (i) If highest listed exercise price is 94.50, then the next new higher exercise price of 94.75 would be added when the underlying futures settled at or above 92.88.
  - (ii) If lowest listed exercise price is 90.00, then the next new lower exercise price of 89.75 would be added when the underlying futures settled at or below 91.62.
- (3) Time to expiration is up to and including 12 complete calendar months away--For example, from September 1, 1990 through September 6, 1991, for the September '91 quarterly contract month expiring on September 16, 1991, all eligible exercise prices in a range of 1.50 IMM Index points above and below the exercise price nearest the previous day's settlement price are added.
- (i) If highest listed exercise price is 94.50, then the next new higher exercise price of 94.75 would be added when the underlying futures settled at or above 93.13.
  - (ii) If lowest listed exercise price is 90.00, then the next new lower exercise price of 89.75 would be added when the underlying futures settled at or below 91.37.

Example 2 - September '91 ED futures settles at 92.25 on Monday, September 18, 1989. On Tuesday, September 19, 1989, with time to expiration of the quarterly option contract month falling in the range of more than 15 complete calendar months away, exercise prices in a range of 2.25 IMM Index points above and below the exercise price nearest the settlement price of the underlying futures contract on the previous day are added.

(a) Exercise prices listed on Day 1:

94.50	92.75	91.25
94.25	92.50	91.00
94.00	92.25	90.75
93.75	92.00	90.50
93.50	91.75	90.25
93.25	91.50	90.00
93.00		

(b) Thereafter, the same procedures would apply as for Example 1(b) (1-3).

The corresponding strike listing procedures also apply to Mid-Curve options. In each case, the Mid-Curve option strike listings depend on the given Mid-Curve option's underlying futures contract, the option's time to expiration, and the strikes already listed for that Mid-Curve option contract.