Joyce Edward J Form 4 June 17, 2010

FORM 4

OMB APPROVAL

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

OMB 3235-0287 Number:

Check this box if no longer subject to Section 16. Form 4 or

January 31, Expires: 2005

Estimated average burden hours per response... 0.5

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction

1(b).

Stock

(Print or Type Responses)

| 1. Name and Address of Reporting Person * Joyce Edward J | 2. Issuer Name and Ticker or Trading Symbol | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner X Officer (give title Other (specifibelow) | | | |
|---|---|---|--|--|--|
| (Last) (First) (Middle) | CBOE Holdings, Inc. [CBOE] 3. Date of Earliest Transaction | | | | |
| C/O CBOE HOLDINGS, INC., 400 SOUTH LASALLE STREET | (Month/Day/Year) 06/15/2010 | | | | |
| (Street) | 4. If Amendment, Date Original Filed(Month/Day/Year) | 6. Individual or Joint/Group Filing(Check Applicable Line) | | | |
| CHICAGO, IL 60605 | | _X_ Form filed by One Reporting PersonForm filed by More than One Reporting Person | | | |

| (City) | (State) (ZI | Table I | - Non-De | rivative Secu | ırities Ac | quired, Disposed of | or Beneficial | ly Owned |
|--------------|---------------------|--------------------|------------|---------------|-------------|-----------------------|---------------|--------------|
| 1.Title of | 2. Transaction Date | 2A. Deemed | 3. | 4. Securitie | es Acquire | ed 5. Amount of | 6. | 7. Nature of |
| Security | (Month/Day/Year) | Execution Date, if | Transacti | or(A) or Disp | osed of (| D) Securities | Ownership | Indirect |
| (Instr. 3) | | any | Code | (Instr. 3, 4 | and 5) | Beneficially | Form: | Beneficial |
| | | (Month/Day/Year) | (Instr. 8) | | | Owned | Direct (D) | Ownership |
| | | | | | | Following | or Indirect | (Instr. 4) |
| | | | | | (4) | Reported | (I) | |
| | | | | | (A) | Transaction(s) | (Instr. 4) | |
| | | | Code V | Amount | or (D) P | rice (Instr. 3 and 4) | | |
| Unrestricted | | | Couc v | 2 Killount | (D) I | | | |
| Common | 06/15/2010 | | A | 174,853 | A \$ | 0 174,853 | D | |

(1)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transactic Code (Instr. 8) | 5. onNumber of Derivative Securities Acquired (A) or Disposed of (D) | Expiration D (Month/Day/ e | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | nd of ng s and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr |
|---|---|--------------------------------------|---|--|---|----------------------------------|--|----------------------|-------------------------------|---|---|
| | | | | Code V | (Instr. 3, 4, and 5) (A) (D) | Date Exercisable | Expiration Date | or Title Nu of | umber | | |

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Joyce Edward J C/O CBOE HOLDINGS, INC. 400 SOUTH LASALLE STREET CHICAGO, IL 60605

President and COO

Signatures

/s/ Patrick Sexton, attorney-in-fact

06/17/2010

Date

**Signature of Reporting Person

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Represents a restricted stock award granted under the Company's Long-Term Incentive Plan, which meets the requirements of Rule 16b-3.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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