Duffy Mark F Form 3 June 14, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION FORM 3 Washington, D.C. 20549

OMB APPROVAL

OMB Number:

3235-0104

Expires:

January 31, 2005

0.5

Estimated average burden hours per response...

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF **SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting

Person *

A Duffy Mark F

(Last)

(First)

(Middle)

Statement

(Month/Day/Year)

06/14/2010

2. Date of Event Requiring 3. Issuer Name and Ticker or Trading Symbol

CBOE Holdings, Inc. [CBOE]

4. Relationship of Reporting Person(s) to Issuer

5. If Amendment, Date Original

Filed(Month/Day/Year)

C/O CBOE HOLDINGS. INC., 400 SOUTH LASALLE

STREET

(Street)

10% Owner _X_ Director Officer Other

(give title below) (specify below)

(Check all applicable)

6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting

Person

Form filed by More than One

Reporting Person

CHICAGO, ILÂ 60605

(City) (State) (Zip)

1. Title of Security (Instr. 4)

2. Amount of Securities Beneficially Owned

(Instr. 4)

3. Ownership Form:

Table I - Non-Derivative Securities Beneficially Owned

4. Nature of Indirect Beneficial

Ownership (Instr. 5)

Direct (D) or Indirect (I) (Instr. 5)

Reminder: Report on a separate line for each class of securities beneficially

owned directly or indirectly.

SEC 1473 (7-02)

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

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

1. Title of Derivative Security

(Instr. 4)

2. Date Exercisable and **Expiration Date** (Month/Day/Year)

3. Title and Amount of Securities Underlying **Derivative Security**

5. 4 Conversion Ownership or Exercise Form of Derivative Price of

6. Nature of Indirect Beneficial Ownership (Instr. 5)

(Instr. 4)

Date **Expiration Title** Exercisable Date

Amount or Number of Derivative Security: Security Direct (D)

Shares

or Indirect (I) (Instr. 5)

Reporting Owners

Reporting Owner Name / Address Relationships

Director 10% Owner Officer Other

Duffy Mark F

C/O CBOE HOLDINGS, INC. 400 SOUTH LASALLE STREET

 \hat{A} X \hat{A} \hat{A} \hat{A}

CHICAGO, ILÂ 60605

Signatures

/s/ Patrick Sexton, attorney-in-fact

06/14/2010

**Signature of Reporting Person

Date

Explanation of Responses:

No securities are beneficially owned

* If the form is filed by more than one reporting person, see Instruction 5(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).

Â

Remarks:

Exhibit List: Exhibit 24 - Power of Attorney

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.

Reporting Owners 2