

Piell Hilda Harris
 Form 4
 September 17, 2010

FORM 4

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

OMB APPROVAL

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STATEMENT OF CHANGES IN 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 *
 Piell Hilda Harris

(Last) (First) (Middle)
 20 S. WACKER DRIVE
 (Street)

CHICAGO, IL 60606

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
 CME GROUP INC. [CME]

3. Date of Earliest Transaction
 (Month/Day/Year)
 09/15/2010

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___ 10% Owner
 ___X___ Officer (give title below) ___ Other (specify below)
 MD & Chief HR Officer

6. Individual or Joint/Group Filing(Check Applicable Line)
 ___X___ Form filed by One Reporting Person
 ___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|---|
| | | | | (A) or (D) | Price | | | |
| | | | | Code | V | Amount | | |
| Common Stock Class A | 09/15/2010 | | A | 744 | A | \$ 0 | 1,583 | D |
| Common Stock Class A | 09/15/2010 | | F | 44 ⁽¹⁾ | D | \$ 271.49 | 1,539 | D |

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

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SEC 1474 (9-02)

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

| 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. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Security (Instr. 3 and 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|
| Non-Qualified Stock Option (right to buy) | \$ 271.49 | 09/15/2010 | | A | 1,668 | 09/15/2011 ⁽²⁾ 09/15/2020 | Common Stock Class A |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|-----------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Piell Hilda Harris 20 S. WACKER DRIVE CHICAGO, IL 60606 | | | MD & Chief HR Officer | |

Signatures

By: Margaret C. Austin For: Hilda L. Piell 09/17/2010

__Signature of Reporting Person Date

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) Ms. Piell surrendered shares to the Company in order to fulfill tax withholding obligations upon the vesting of restricted stock on September 15, 2010.
- (2) These options were granted on September 15, 2010. They vest over a four-year period, with 25% vesting one year after the grant date and 25% vesting on that same date in each of the following three years, subject to acceleration or termination in certain circumstances.

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.