

Nuveen Core Equity Alpha Fund  
 Form 3  
 March 27, 2007

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

OMB APPROVAL

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**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 * |         | 2. Date of Event Requiring Statement | 3. Issuer Name <b>and</b> Ticker or Trading Symbol                         |  |
| Â MARTIN LARRY W                          |         | (Month/Day/Year)                     | Nuveen Core Equity Alpha Fund [JCE]  |  |
| (Last)                                    | (First) | (Middle)                             | 03/27/2007   |  |
| 333 WEST WACKER                           |         |                                      | 4. Relationship of Reporting Person(s) to Issuer                           | 5. If Amendment, Date Original Filed(Month/Day/Year)                   |
| (Street)                                  |         |                                      | (Check all applicable)   |  |
| CHICAGO,Â ILÂ 60606                       |         |                                      | <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner       | 6. Individual or Joint/Group Filing(Check Applicable Line)             |
| (City)                                    | (State) | (Zip)                                | <input checked="" type="checkbox"/> Officer <input type="checkbox"/> Other | <input checked="" type="checkbox"/> Form filed by One Reporting Person |
|   |         |                                      | (give title below) (specify below)   | <input type="checkbox"/> Form filed by More than One Reporting Person  |
|   |         |                                      | VP and Asst Secretary  |  |

**Table I - Non-Derivative Securities Beneficially Owned**

|                                 |   |  |   |
|---------------------------------|---|--|---|
| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |
|---------------------------------|---|--|---|

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

SEC 1473 (7-02)

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**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 (Instr. 4) | 4. Conversion or Exercise Price of Derivative Security | 5. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 5) | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
|  | Date Exercisable   | Expiration Date   | Title  | Amount or Number of Shares  |   |

## Reporting Owners

| Reporting Owner Name / Address                         | Relationships |           |                         |       |
|--|---------------|-----------|-------------------------|-------|
|  | Director      | 10% Owner | Officer                 | Other |
| MARTIN LARRY W<br>333 WEST WACKER<br>CHICAGO, IL 60606 | Â             | Â         | Â VP and Asst Secretary | Â     |

## Signatures

By: Jessica R. Droeger/ Signed  
Under POA

03/27/2007

\_\_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).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.

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