

Nuveen Core Equity Alpha Fund
Form N-Q
November 29, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM N-Q
QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT
INVESTMENT COMPANY

Investment Company Act file number 811-22003

Nuveen Core Equity Alpha Fund

(Exact name of registrant as specified in charter)

333 West Wacker Drive, Chicago, Illinois 60606

(Address of principal executive offices) (Zip code)

Kevin J. McCarthy Vice President and Secretary

333 West Wacker Drive, Chicago, Illinois 60606

(Name and address of agent for service)

Registrant's telephone number, including area code: 312-917-7700

Date of fiscal year end: 12/31

Date of reporting period: 9/30/2010

Form N-Q is to be used by management investment companies, other than small business investment companies registered on Form N-5 (§§ 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than 60 days after the close of the first and third fiscal quarters, pursuant to rule 30b1-5 under the Investment Company Act of 1940 (17 CFR 270.30b1-5). The Commission may use the information provided on Form N-Q in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-Q, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-Q unless the Form displays a currently valid Office of Management and Budget (OMB) control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. § 3507.

Item 1. Schedule of Investments**Portfolio of Investments (Unaudited)****Nuveen Core Equity Alpha Fund (JCE)**

September 30, 2010

Shares	Description (1)	Value
Common Stocks 98.8%		
Aerospace & Defense 4.1%		
36,400	Boeing Company	\$ 2,422,056
5,600	General Dynamics Corporation	351,736
600	Goodrich Corporation	44,238
13,300	L-3 Communications Holdings, Inc.	961,191
27,100	Northrop Grumman Corporation	1,643,073
12,900	Precision Castparts Corporation	1,642,815
2,300	Raytheon Company	105,133
16,100	Rockwell Collins, Inc.	937,825
8,200	United Technologies Corporation	584,086
	Total Aerospace & Defense	8,692,153
Air Freight & Logistics 0.6%		
700	Expeditors International of Washington, Inc.	32,361
15,300	FedEx Corporation	1,308,150
	Total Air Freight & Logistics	1,340,511
Airlines 0.9%		
147,900	Southwest Airlines Co.	1,933,053
Automobiles 0.2%		
39,400	Ford Motor Company, (2)	482,256
Beverages 1.3%		
3,000	Brown-Forman Corporation	184,920
1,400	Coca-Cola Company	81,928
21,300	Coca-Cola Enterprises Inc.	660,300
51,000	Dr. Pepper Snapple Group	1,811,520

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

800	Molson Coors Brewing Company, Class B	37,776
	Total Beverages	2,776,444
	Biotechnology 0.2%	
1,600	Amgen Inc., (2)	88,176
1,500	Biogen Idec Inc., (2)	84,180
800	Celgene Corporation, (2)	46,088
500	Cephalon, Inc., (2)	31,220
1,500	Genzyme Corporation, (2)	106,185
	Total Biotechnology	355,849
	Capital Markets 1.5%	
14,100	Ameriprise Financial, Inc.	667,353
5,500	Bank of New York Company, Inc.	143,715
21,700	Franklin Resources, Inc.	2,319,730
1,300	Invesco LTD	27,599
	Total Capital Markets	3,158,397
	Chemicals 1.3%	
8,000	Airgas, Inc.	543,600
3,700	E.I. Du Pont de Nemours and Company	165,094
3,000	Eastman Chemical Company	222,000
800	Ecolab Inc.	40,592
21,100	International Flavors & Fragrances Inc.	1,023,772
10,700	Sherwin-Williams Company	803,998
	Total Chemicals	2,799,056
	Commercial Banks 2.2%	
22,500	BB&T Corporation	541,800
21,400	Comerica Incorporated	795,010
15,700	Fifth Third Bancorp.	188,871
2,100	First Horizon National Corporation, (2)	23,961
33,100	Huntington BancShares Inc.	187,677
2,800	KeyCorp.	22,288
13,000	M&T Bank Corporation	1,063,530
4,700	PNC Financial Services Group, Inc.	243,977
61,100	Regions Financial Corporation	444,197
3,700	SunTrust Banks, Inc.	95,571
11,500	U.S. Bancorp	248,630

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

8,950	Wells Fargo & Company	224,914
28,700	Zions Bancorporation	613,032
	Total Commercial Banks	4,693,458

Commercial Services & Supplies 0.2%

4,800	Republic Services, Inc.	146,352
4,700	Stericycle Inc., (2)	326,556
	Total Commercial Services & Supplies	472,908

Communications Equipment 1.8%

38,300	Harris Corporation	1,696,307
20,800	JDS Uniphase Corporation, (2)	257,712
800	Juniper Networks Inc., (2)	24,280
123,400	Motorola, Inc., (2)	1,052,602
500	QUALCOMM, Inc.	22,560
88,100	Tellabs Inc.	656,345
	Total Communications Equipment	3,709,806

Computers & Peripherals 7.8%

39,800	Apple, Inc., (2)	11,293,250
25,900	Lexmark International, Inc., Class A, (2)	1,155,658
77,000	Network Appliance Inc., (2)	3,833,830
3,900	Western Digital Corporation, (2)	110,721
	Total Computers & Peripherals	16,393,459

Construction & Engineering 0.0%

1,300	Fluor Corporation	64,389
-------	-------------------	--------

Consumer Finance 0.0%

2,500	Capital One Financial Corporation	98,875
-------	-----------------------------------	--------

Containers & Packaging 0.1%

5,500	Pactiv Corporation, (2)	181,390
-------	-------------------------	---------

Diversified Consumer Services 0.7%

20,800	Devry, Inc.	1,023,568
36,200	H & R Block Inc.	468,790
	Total Diversified Consumer Services	1,492,358

Diversified Financial Services 0.3%

15,700	Bank of America Corporation	205,827
50,500	Citigroup Inc., (2)	196,950
5,105	JPMorgan Chase & Co.	194,347
5,500	Moody's Corporation	137,390
	Total Diversified Financial Services	734,514

Diversified Telecommunication Services 0.9%

3,200	AT&T Inc.	91,520
7,600	Frontier Communications Corporation	62,092
174,200	Qwest Communications International Inc.	1,092,234
1,400	Verizon Communications Inc.	45,626
42,300	Windstream Corporation	519,867
	Total Diversified Telecommunication Services	1,811,339

Electric Utilities 0.7%

4,200	American Electric Power Company, Inc.	152,166
1,500	Duke Energy Corporation	26,565
1,100	NextEra Energy Inc.	59,829
41,600	Pepco Holdings, Inc.	773,760
7,000	Pinnacle West Capital Corporation	288,890
1,900	Progress Energy, Inc.	84,398
2,600	Southern Company	96,824
	Total Electric Utilities	1,482,432

Electrical Equipment 1.8%

31,900	Emerson Electric Company	1,679,854
34,500	Rockwell Automation, Inc.	2,129,685
700	Roper Industries Inc.	45,626
	Total Electrical Equipment	3,855,165

Electronic Equipment & Instruments 1.3%

65,400	Agilent Technologies, Inc., (2)	2,182,398
1,300	Corning Incorporated	23,764
23,300	FLIR Systems Inc., (2)	598,810
	Total Electronic Equipment & Instruments	2,804,972

Energy Equipment & Services 1.0%

1,127	Baker Hughes Incorporated	48,010
22,000	Halliburton Company	727,540
22,642	Schlumberger Limited	1,394,974
	Total Energy Equipment & Services	2,170,524

Food & Staples Retailing 0.2%

2,200	Kroger Co.	47,652
2,400	Sysco Corporation	68,448
8,200	Walgreen Co.	274,700
700	Wal-Mart Stores, Inc.	37,464
1,100	Whole Foods Market, Inc., (2)	40,821
	Total Food & Staples Retailing	469,085

Food Products 6.3%

95,800	General Mills, Inc.	3,500,532
19,100	Hershey Foods Corporation	908,969
31,200	JM Smucker Company	1,888,536
30,300	Kellogg Company	1,530,453
3,100	Kraft Foods Inc.	95,666
4,300	McCormick & Company, Incorporated	180,772
24,500	Mead Johnson Nutrition Company, Class A Shares	1,394,295
168,900	Sara Lee Corporation	2,268,327
100,200	Tyson Foods, Inc., Class A	1,605,204
	Total Food Products	13,372,754

Gas Utilities 0.4%

17,800	ONEOK, Inc.	801,712
--------	-------------	---------

Health Care Equipment & Supplies 6.1%

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

39,500	CareFusion Corporation, (2)	981,180
33,700	Hospira Inc., (2)	1,921,237
14,600	Intuitive Surgical, Inc., (2)	4,142,604
3,700	Medtronic, Inc.	124,246
60,500	Stryker Corporation	3,028,025
21,900	Varian Medical Systems, Inc., (2)	1,324,950
26,400	Zimmer Holdings, Inc., (2)	1,381,512

Total Health Care Equipment & Supplies 12,903,754

Health Care Providers & Services 6.0%

116,900	AmerisourceBergen Corporation	3,584,154
132,200	Cardinal Health, Inc.	4,367,888
6,900	Express Scripts, Inc., (2)	336,030
23,200	Humana Inc., (2)	1,165,568
46,600	McKesson HBOC Inc.	2,878,948
3,100	Medco Health Solutions, Inc., (2)	161,386
1,900	UnitedHealth Group Incorporated	66,709
1,600	Wellpoint Inc., (2)	90,624

Total Health Care Providers & Services 12,651,307

Hotels, Restaurants & Leisure 3.4%

35,300	Darden Restaurants, Inc.	1,510,134
8,700	Marriott International, Inc., Class A	311,721
5,500	McDonald's Corporation	409,805
135,400	Starbucks Corporation	3,463,532
4,700	Starwood Hotels & Resorts Worldwide, Inc.	246,985
6,500	Wyndham Worldwide Corporation	178,555
600	Wynn Resorts Ltd.	52,062
21,500	YUM! Brands, Inc.	990,290

Total Hotels, Restaurants & Leisure 7,163,084

Household Durables 2.3%

6,300	Fortune Brands Inc.	310,149
6,100	Harman International Industries Inc., (2)	203,801
10,300	Lennar Corporation, Class A	158,414
53,987	Stanley Black & Decker Inc.	3,308,323
11,500	Whirlpool Corporation	931,040

Total Household Durables 4,911,727

Household Products 0.4%

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

5,300	Clorox Company	353,828
2,300	Colgate-Palmolive Company	176,778
3,700	Kimberly-Clark Corporation	240,685
	Total Household Products	771,291

Industrial Conglomerates 0.5%

2,500	3M Co.	216,775
22,400	General Electric Company	364,000
1,300	Textron Inc.	26,728
10,400	Tyco International Ltd.	381,992
	Total Industrial Conglomerates	989,495

Insurance 1.4%

5,600	Ace Limited	326,200
2,500	AFLAC Incorporated	129,275
1,800	American International Group, (2)	70,380
5,300	Assurant Inc.	215,710
3,331	Berkshire Hathaway Inc., Class B, (2)	275,407
31,700	Progressive Corporation	661,579
7,800	Torchmark Corporation	414,492
15,000	Travelers Companies, Inc.	781,500
	Total Insurance	2,874,543

Internet & Catalog Retail 4.1%

32,600	Amazon.com, Inc., (2)	5,120,156
10,200	Priceline.com Incorporated, (2)	3,553,068
	Total Internet & Catalog Retail	8,673,224

Internet Software & Services 4.8%

23,200	Akamai Technologies, Inc., (2)	1,164,176
95,200	eBay Inc., (2)	2,322,880
12,600	Google Inc., Class A, (2)	6,624,954
	Total Internet Software & Services	10,112,010

IT Services 3.9%

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

84,700	Cognizant Technology Solutions Corporation, Class A, (2)	5,460,609
6,500	Fidelity National Information Services	176,345
12,100	International Business Machines Corporation (IBM)	1,623,094
2,200	MasterCard, Inc.	492,800
5,400	Visa Inc.	401,004
	Total IT Services	8,153,852

Leisure Equipment & Products 1.1%

50,300	Hasbro, Inc.	2,238,853
--------	--------------	-----------

Life Sciences Tools & Services 0.2%

300	Life Technologies Corporation, (2)	14,007
4,400	Perkinelmer Inc.	101,816
3,000	Waters Corporation, (2)	212,340
	Total Life Sciences Tools & Services	328,163

Machinery 2.1%

13,200	Caterpillar Inc.	1,038,576
5,100	Cummins Inc.	461,958
2,800	Deere & Company	195,384
1,800	Dover Corporation	93,978
25,300	Eaton Corporation	2,086,997
1,600	PACCAR Inc.	77,040
4,800	Parker Hannifin Corporation	336,288
2,200	Snap-on Incorporated	102,322
	Total Machinery	4,392,543

Media 3.4%

3,600	Comcast Corporation, Class A	65,088
120,900	DIRECTV Group, Inc., (2)	5,033,067
8,300	Discovery Communications Inc., Class A Shares, (2)	361,465
4,400	McGraw-Hill Companies, Inc.	145,464
19,000	Scripps Networks Interactive, Class A Shares	904,020
4,900	Time Warner Cable, Class A	264,551
7,400	Viacom Inc., Class B	267,806
6,800	Walt Disney Company	225,148
	Total Media	7,266,609

Metals & Mining 0.2%

1,500	Allegheny Technologies, Inc.	69,675
900	Cliffs Natural Resources Inc.	57,528
2,000	Nucor Corporation	76,400
6,500	Titanium Metals Corporation, (2)	129,740
	Total Metals & Mining	333,343

Multiline Retail 1.2%

24,400	Big Lots, Inc., (2)	811,300
19,400	Family Dollar Stores, Inc.	856,704
11,700	Sears Holding Corporation, (2)	844,038
	Total Multiline Retail	2,512,042

Multi-Utilities 3.0%

41,600	CenterPoint Energy, Inc.	653,952
16,400	CMS Energy Corporation	295,528
5,400	Dominion Resources, Inc.	235,764
54,300	DTE Energy Company	2,493,999
28,800	Integrays Energy Group, Inc.	1,499,328
30,700	NiSource Inc.	534,180
2,400	Public Service Enterprise Group Incorporated	79,392
900	Sempra Energy	48,420
18,700	TECO Energy, Inc.	323,884
3,600	Wisconsin Energy Corporation	208,080
	Total Multi-Utilities	6,372,527

Oil, Gas & Consumable Fuels 1.0%

400	Chevron Corporation	32,420
2,500	Denbury Resources Inc., (2)	39,725
700	Hess Corporation	41,384
28,700	Pioneer Natural Resources Company	1,866,361
2,000	QEP Resources Inc., (2)	60,280
500	Sunoco, Inc.	18,250
	Total Oil, Gas & Consumable Fuels	2,058,420

Personal Products 1.5%

6,300	Avon Products, Inc.	202,293
-------	---------------------	---------

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

48,400	Estee Lauder Companies Inc., Class A	3,060,332
	Total Personal Products	3,262,625
Pharmaceuticals 3.1%		
30,800	Abbott Laboratories	1,608,992
4,700	Bristol-Myers Squibb Company	127,417
2,400	Eli Lilly and Company	87,672
1,300	Johnson & Johnson	80,548
94,232	Merck & Company Inc.	3,468,680
62,600	Mylan Laboratories Inc., (2)	1,177,506
	Total Pharmaceuticals	6,550,815
Professional Services 0.2%		
16,600	Equifax Inc.	517,920
Real Estate 0.9%		
6,600	Apartment Investment & Management Company, Class A	141,108
3,600	AvalonBay Communities, Inc.	374,148
500	Boston Properties, Inc.	41,560
13,300	Equity Residential	632,681
900	Health Care REIT, Inc.	32,382
3,600	Host Hotels & Resorts Inc.	52,128
4,700	Public Storage, Inc.	456,088
1,300	Ventas Inc.	67,041
600	Vornado Realty Trust	51,318
	Total Real Estate	1,848,454
Road & Rail 0.0%		
400	Ryder System, Inc.	17,108
500	Union Pacific Corporation	40,900
	Total Road & Rail	58,008
Semiconductors & Equipment 1.1%		
35,200	Advanced Micro Devices, Inc., (2)	250,272
2,500	Altera Corporation	75,400
2,100	Linear Technology Corporation	64,533

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

3,800	Microchip Technology Incorporated	119,510
800	Novellus Systems, Inc., (2)	21,264
69,800	Texas Instruments Incorporated	1,894,372
	Total Semiconductors & Equipment	2,425,351

Software 2.1%

1,400	Autodesk, Inc., (2)	44,758
13,400	Intuit, Inc., (2)	587,054
60,200	Microsoft Corporation	1,474,298
105,700	Novell Inc., (2)	631,029
14,300	Salesforce.com, Inc., (2)	1,598,740
	Total Software	4,335,879

Specialty Retail 4.6%

900	Abercrombie & Fitch Co., Class A	35,388
800	AutoNation Inc., (2)	18,600
2,200	AutoZone, Inc., (2)	503,602
6,300	GameStop Corporation, (2)	124,173
38,000	Home Depot, Inc.	1,203,840
87,300	Limited Brands, Inc.	2,337,894
9,200	O Reilly Automotive Inc., (2)	489,440
2,400	RadioShack Corporation	51,192
5,200	Ross Stores, Inc.	284,024
14,000	Tiffany & Co.	657,860
87,900	TJX Companies, Inc.	3,922,977
	Total Specialty Retail	9,628,990

Textiles, Apparel & Luxury Goods 0.1%

2,900	Nike, Inc., Class B	232,406
-------	---------------------	---------

Thriffs & Mortgage Finance 0.1%

10,700	Hudson City Bancorp, Inc.	131,182
--------	---------------------------	---------

Tobacco 1.1%

6,900	Altria Group, Inc.	165,738
300	Lorillard Inc.	24,093
900	Philip Morris International	50,418
36,000	Reynolds American Inc.	2,138,040

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

Total Tobacco 2,378,289

Trading Companies & Distributors 1.2%

46,300 Fastenal Company 2,462,697

Wireless Telecommunication Services 1.9%

74,300 American Tower Corporation, (2) 3,808,618

45,400 Sprint Nextel Corporation, (2) 210,202

Total Wireless Telecommunication Services 4,018,820

Total Common Stocks (cost \$185,086,331) 208,705,082

Principal Amount (000)	Description (1)	Coupon	Maturity	Rating (3)	Value
------------------------------	-----------------	--------	----------	------------	-------

Short-Term Investments 4.0%

**U.S. Government and Agency Obligations
1.9%**

\$ 2,000	U.S. Treasury Bills, (4)	0.000%	1/27/11	AAA	\$ 1,999,214
----------	--------------------------	--------	---------	-----	--------------

2,000	U.S. Treasury Bills	0.000%	2/03/11	AAA	1,999,118
-------	---------------------	--------	---------	-----	-----------

4,000	Total U.S. Government and Agency Obligations				3,998,332
-------	--	--	--	--	-----------

Repurchase Agreements 2.1%

4,465	Repurchase Agreement with State Street Bank, dated 9/30/10, repurchase price \$4,464,799, collateralized by \$4,255,000 U.S. Treasury Notes, 2.500%, due 4/30/15, value \$4,555,829	0.080%	10/01/10	N/A	4,464,789
-------	---	--------	----------	-----	-----------

\$ 8,465	Total Short-Term Investments (cost \$8,462,469)				8,463,121
-----------------	--	--	--	--	------------------

Total Investments (cost \$193,548,800) 102.8%					217,168,203
--	--	--	--	--	-------------

Other Assets Less Liabilities (2.8%)					(5,817,522)
--------------------------------------	--	--	--	--	-------------

Net Assets 100%

\$ 211,350,681

Investments in Derivatives**Call Options Written outstanding at September 30, 2010:**

Number of Contracts	Type	Notional Amount (\$)	Expiration Date	Strike Price	Value
(455,052)	Custom Basket NASDAQ	\$ (45,505,214)	10/21/10	\$ 103.0	\$ (817,319)
(463,508)	Custom Basket NASDAQ	(46,350,790)	11/04/10	103.0	(486,683)
(918,560)	Total Call Options Written (premiums received \$996,342)	\$ (91,856,004)			\$ (1,304,002)

Futures Contracts outstanding at September 30, 2010:

Type	Contract Position	Number of Contracts	Contract Expiration	Value at September 30, 2010	Unrealized Appreciation (Depreciation)
S&P 500 Index	Long	125	12/10	\$7,104,375	\$130,250

Fair Value Measurements

In determining the fair value of the Fund's investments, various inputs are used. These inputs are summarized in the three broad levels listed below:

Level 1 Quoted prices in active markets for identical securities.

Level 2 Other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3 Significant unobservable inputs (including management's assumptions in determining the fair value of investments).

The inputs or methodologies used for valuing securities are not an indication of the risk associated with investing in those securities. The following is a summary of the Fund's fair value measurements as of September 30, 2010:

	Level 1	Level 2	Level 3	Total
Investments:				
Common Stocks	\$ 208,705,082	\$	\$	\$ 208,705,082
Short-Term Investments	8,463,121			8,463,121
Derivatives:				
Call Options Written		(1,304,002)		(1,304,002)
Futures Contracts *	130,250			130,250
Total	\$ 217,298,453	\$ (1,304,002)	\$	\$ 215,994,451

*Represents net unrealized appreciation (depreciation).

Derivative Instruments and Hedging Activities

Edgar Filing: Nuveen Core Equity Alpha Fund - Form N-Q

The Fund records derivative instruments at fair value, with changes in fair value recognized on the Statement of Operations, when applicable. Even though the Fund's investments in derivatives may represent economic hedges, they are not considered to be hedge transactions for financial reporting purposes.

The following table presents the fair value of all derivative instruments held by the Fund as of September 30, 2010, the location of these instruments on the Statement of Assets and Liabilities, and the primary underlying risk exposure.

Underlying Risk Exposure	Derivative Instrument	Location on the Statement of Assets and Liabilities			
		Asset Derivatives		Liability Derivatives	
		Location	Value	Location	Value
Equity Price	Futures Contracts	Receivable for variation margin on futures contracts*	\$ 130,250	Payable for variation margin on futures contracts*	\$
Equity Price	Options			Call options written, at value	1,304,002
Total			\$ 130,250		\$ 1,304,002

* Value represents cumulative unrealized appreciation (depreciation) of futures contracts as reported in the Portfolio of Investments and not the deposits with brokers, if any, or the receivable or payable for variation margin presented on the Statement of Assets and Liabilities.

Income Tax Information

The following information is presented on an income tax basis. Differences between amounts for financial statement and federal income tax purposes are primarily due to timing differences in recognizing certain gains and losses on investment transactions and the recognition of unrealized gain or loss for tax (mark-to-market) on futures contracts. To the extent that differences arise that are permanent in nature, such amounts are reclassified within the capital accounts on the Statement of Assets and Liabilities presented in the annual report, based on their federal tax basis treatment; temporary differences do not require reclassification. Temporary and permanent differences do not impact the net asset value of the Fund.

At September 30, 2010, the cost of investments (excluding investments in derivatives) was \$195,113,910.

Gross unrealized appreciation and gross unrealized depreciation of investments (excluding investments in derivatives) at September 30, 2010, were as follows:

Gross unrealized:	
Appreciation	\$ 25,022,506
Depreciation	(2,968,213)
Net unrealized appreciation (depreciation) of investments	\$ 22,054,293

For Fund portfolio compliance purposes, the Fund's industry classifications refer to any one or more of the industry sub-classifications used by one or more widely recognized market indexes or ratings group indexes, and/or as defined by Fund management. This definition may not apply for purposes of this report, which may combine industry sub-classifications into sectors for reporting ease.

(1) All percentages shown in the Portfolio of Investments are based on net assets.

- (2) Non-income producing; issuer has not declared a dividend within the past twelve months.
- (3) Ratings: Using the highest of Standard & Poor's Group (Standard & Poor's), Moody's Investor Service, Inc. (Moody's) or Fitch, Inc. (Fitch) rating. Ratings below BBB by Standard & Poor's, Baa by Moody's or BBB by Fitch are considered to be below investment grade. Holdings designated N/R are not rated by any of these national rating agencies.
- (4) Investment, or portion of investment, has been pledged to collateralize the net payment obligations for investments in derivatives.
- (5) For disclosure purposes, Notional Amount is calculated by multiplying the Number of Contracts by \$100.

N/A Not applicable.

Item 2. Controls and Procedures.

- a. The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the 1940 Act) (17 CFR 270.30a-3(c))) are effective, as of a date within 90 days of the filing date of this report that includes the disclosure required by this paragraph, based on their evaluation of the controls and procedures required by Rule 30a-3(b) under the 1940 Act (17 CFR 270.30a-3(b)) and Rule 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934 (17 CFR 240.13a-15(b) or 240.15d-15(b)).
- b. There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act (17 CFR 270.30a-3(d))) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3. Exhibits.

File as exhibits as part of this Form a separate certification for each principal executive officer and principal financial officer of the registrant as required by Rule 30a-2(a) under the 1940 Act (17 CFR 270.30a-2(a)), exactly as set forth below: EX-99 CERT Attached hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.
(Registrant) Nuveen Core Equity Alpha Fund

By (Signature and Title) /s/ Kevin J. McCarthy
Kevin J. McCarthy
Vice President and Secretary

Date November 29, 2010

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By (Signature and Title) /s/ Gifford R. Zimmerman
Gifford R. Zimmerman
Chief Administrative Officer (principal executive officer)

Date November 29, 2010

By (Signature and Title) /s/ Stephen D. Foy
Stephen D. Foy
Vice President and Controller (principal financial officer)

Date November 29, 2010