

Nuveen Core Equity Alpha Fund
Form N-CSRS
September 08, 2010

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM N-CSR
CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT
COMPANIES
Investment Company Act file number 811-22003
Nuveen Core Equity Alpha Fund**

(Exact name of registrant as specified in charter)

Nuveen Investments
333 West Wacker Drive
Chicago, IL 60606

(Address of principal executive offices) (Zip code)

Kevin J. McCarthy
Nuveen Investments
333 West Wacker Drive
Chicago, IL 60606

(Name and address of agent for service)

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

Date of fiscal year end: December 31

Date of reporting period: June 30, 2010

Form N-CSR is to be used by management investment companies to file reports with the Commission not later than 10 days after the transmission to stockholders of any report that is required to be transmitted to stockholders under Rule 30e-1 under the Investment Company Act of 1940 (17 CFR 270.30e-1). The Commission may use the information provided on Form N-CSR in its regulatory, disclosure review, inspection, and policymaking roles. A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR 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 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. SS. 3507.

ITEM 1. REPORTS TO SHAREHOLDERS

Closed-End Funds

Nuveen Investments

Closed-End Funds

Mathematically-driven investment strategy that seeks to generate excess risk-adjusted returns

Semi-Annual Report

June 30, 2010

Nuveen Core Equity

Alpha Fund

JCE

NUVEEN INVESTMENTS ANNOUNCES STRATEGIC COMBINATION WITH FAF ADVISORS

On July 29, 2010, Nuveen Investments, Inc. announced that U.S. Bancorp will receive a 9.5% stake in Nuveen Investments and cash consideration in exchange for the long-term asset business of U.S. Bancorp's FAF Advisors (FAF). Nuveen Investments is the parent of Nuveen Asset Management (NAM), the investment adviser for the Funds included in this report.

FAF Advisors, which currently manages about \$25 billion of long-term assets and serves as the advisor of the First American Funds, will be combined with NAM, which currently manages about \$75 billion in municipal fixed income assets. Upon completion of the transaction, Nuveen Investments, which currently manages about \$150 billion of assets across several high-quality affiliates, will manage a combined total of about \$175 billion in institutional and retail assets.

This combination will not affect the investment objectives, strategies or policies of this Fund. Over time, Nuveen Investments expects that the combination will provide even more ways to meet the needs of investors who work with financial advisors and consultants by enhancing the multi-boutique model of Nuveen Investments, which also includes highly respected investment teams at NWQ Investment Management, Santa Barbara Asset Management, Symphony Asset Management, Tradewinds Global Investors, Winslow Capital and Nuveen HydePark.

The transaction is expected to close late in 2010, subject to customary conditions.

Chairman's
Letter to Shareholders

Dear Shareholder,

The economic environment in which your Fund operates reflects continuing but uneven economic recovery. The U.S. and other major industrial countries are experiencing steady but comparatively low levels of economic growth, while emerging market countries are seeing a resumption of relatively strong economic expansion. The potential impact of steps being considered by many governments to counteract the extraordinary governmental spending and credit expansion to deal with the recent financial and economic crisis is injecting uncertainty into global financial markets. The implications for future tax rates, government spending, interest rates and the pace of economic recovery in the U.S. and other leading economies are extremely difficult to predict at the present time. The long term health of the global economy depends on restoring some measure of fiscal discipline around the world, but since all of the corrective steps require economic pain, it is not surprising that governments are reluctant to undertake them.

In the near term, governments remain committed to furthering economic recovery and realizing a meaningful reduction in their national unemployment rates. Such an environment should produce continued economic growth and, consequently, attractive investment opportunities. Over the longer term, the larger uncertainty mentioned earlier carries the risk of unexpected potholes in the road to sustained recovery. For this reason, Nuveen's investment management teams are working hard to balance return and risk by building well-diversified portfolios, among other strategies. I encourage you to read the following commentary on the management of your Fund. As always, I also encourage you to contact your financial consultant if you have any questions about your Nuveen Fund investment. Please consult the Nuveen website for the most recent information on your Nuveen Fund at: www.nuveen.com.

On behalf of the other members of your Fund's Board, we look forward to continuing to earn your trust in the months and years ahead.

Sincerely,

Robert P. Bremner
Chairman of the Board
August 17, 2010

Nuveen Investments 3

Portfolio Managers Comments

Nuveen Core Equity Alpha Fund (JCE)

The equity portion of the Nuveen Core Equity Alpha Fund (JCE) is managed by INTECH Investment Management LLC (INTECH), an independently managed subsidiary of Janus Capital Group Inc. INTECH's Co-Chief Investment Officers, Dr. E. Robert Fernholz, PhD, and Dr. Adrian Banner lead a portfolio management team that also includes Joseph Runnels, CFA.

The Fund also employs a call option strategy managed by Nuveen Asset Management. Rob Guttshow, CFA, and John Gambla, CFA, oversee this program.

Here Drs. Fernholz and Banner and Mr. Runnels, along with Rob Guttshow and John Gambla, talk about their management strategies and the performance of the Fund for the six-month period ended June 30, 2010.

Over this period, what key strategies were used to manage the Fund?

Certain statements in this report are forward-looking statements. Discussions of specific investments are for illustration only and are not intended as recommendations of individual investments. The forward-looking statements and other views expressed herein are those of the portfolio managers as of the date of this report. Actual future results or occurrences may differ significantly from those anticipated in any forward-looking statements and the views expressed herein are subject to change at any time, due to numerous market and other factors. The Fund disclaims any obligation to update publicly or revise any forward-looking statements or views expressed herein.

The investment objective of the Fund is to provide an attractive level of total return, primarily through long term capital appreciation and secondarily through income and gains. The Fund invests in a portfolio of common stocks selected from among the stocks comprising the S&P 500 Index, using a proprietary mathematical process designed by INTECH, and also employs innovative risk reduction techniques.

The Fund also employs an option strategy that seeks to enhance the Fund's risk-adjusted performance over time through a meaningful reduction in the volatility of the Fund's returns relative to the returns of the S&P 500 Index. The Fund expects to write custom basket call options with a notional value of up to 50% of the value of the equity portfolio.

The goal of the Fund's equity portfolio is to produce long-term returns in excess of the S&P 500 Stock Index with an equal or lesser amount of risk. The continued market uncertainty during this period reconfirmed the importance of disciplined risk management, which is at the heart of INTECH's investment process. The firm's core risk controls are focused on minimizing the volatility of excess returns relative to the S&P 500 Index, so that any excess return is as consistent as possible and any relative underperformance is limited in magnitude and duration. We believe this helps minimize tracking error vis a vis the S&P 500 Index during periods of short-term market instability.

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

INTECH seeks to generate excess returns by harnessing the natural volatility of stock prices to build a potentially more efficient portfolio than the S&P 500 Index. INTECH's investment process focuses solely on relative volatility and correlation. Specifically the process searches for stocks with high relative volatility and low correlation attempting to combine stocks in a manner in which the opportunity to outperform the benchmark

4 Nuveen Investments

index exists with risk equal to or lower than that of the benchmark index. Within specific risk controls, INTECH continues to structure the portfolio to attempt to overweight stocks with high relative volatility and underweight stocks with low relative volatility, while keeping tracking error low. The actual positioning of the portfolio from a sector and stock specific standpoint is a residual of the process and the rationale for over and underweighted positions is a function of stocks' relative volatility and correlation characteristics in aggregate.

Because INTECH's process does not forecast the direction of stock prices, equity holdings that are overweighted or underweighted relative to the index are expected to beat the benchmark in approximately equal proportions over time.

While INTECH does not employ fundamental analysis in the management of the equity portfolio, fundamentals can have a significant impact on the general direction of the market in which we participate. As stock prices moved naturally throughout the period, we continued to implement our mathematical process in a disciplined and precise manner in an effort to maintain a more efficient portfolio than the S&P 500 Index, without increasing relative risk. While other factors may influence performance over the short term, we believe that the consistent application of our process will help long-term performance.

After the close of this reporting period, the Fund's Board of Trustees approved minor changes to the investment policies of the equity portfolio strategy of the Fund. Specifically, the Board approved a change to the Fund's non-fundamental investment policy to provide that, under normal market circumstances, the equity portfolio will consist of a diversified portfolio of 150 to 450 common stocks included in the S&P 500 Index. The changes are a result of enhancements to INTECH's mathematical portfolio construction process. The turnover in the portfolio (measured in terms of total dollar volume of stock trading) is estimated to range between 70% and 100% (versus the previous 80% and 120%) per year. The expected investment outcomes including excess return and tracking error targets have not changed as a result of this portfolio engineering enhancement but the portfolio is expected to have a lower weighted average market capitalization.

The Fund also employs an option strategy that seeks to enhance its risk-adjusted returns over time through a meaningful reduction in the volatility of the Fund's returns relative to the returns of the S&P 500 Index. Under normal market circumstances, the Fund expects to write (sell) custom basket call options with a notional value of up to 50% of the value of the equity portfolio. During this period, the sale of equity call options was used to generate cash flow that could be used to partially offset equity portfolio losses in certain situations.

How did the Fund perform over this six-month period?

The performance of JCE, as well as a widely followed equity index and a comparative index, is presented in the accompanying table.

Average Annual Total Returns on Common Share Net Asset Value

For periods ended 6/30/10

| | 6-Month | 1-Year | Since Inception¹ |
|--------------------------------|----------------|---------------|------------------------------------|
| JCE | -5.61% | 14.18% | -5.10% |
| S&P 500 Index ² | -6.65% | 14.43% | -7.37% |
| Comparative Index ³ | -7.95% | 10.22% | -5.86% |

Six-month returns are cumulative; all other returns are annualized.

For the six-month period ended June 30, 2010, the Fund generated a negative return, but outperformed both the S&P 500 Index and its comparative index.

Since INTECH uses a purely portfolio-theoretic methodology, we do not specifically select stocks or overweight sectors in response to market conditions or expectations. Instead, we modify the Fund's equity holdings in an attempt to construct a portfolio that is slightly more efficient than the S&P 500 Index by using an optimization program that analyzes a stock's relative volatility and its price correlation with other equities. Since the sector structure of the market is not taken into account in our methodology, any sector underweights or overweights are likely to be coincidental.

INTECH's relative performance is typically impacted by the market's relative volatility, structure and size (market diversity). In the first six months of 2010, the U.S. stock market continued to exhibit more normal patterns of relative volatility, which were relatively beneficial to INTECH's investment process.

Size (market diversity) is a measure of how capital is distributed among stocks in a market or an index. The relationship between the market-cap size of stocks (small vs. large) affects the relative performance of all managers. Since INTECH's strategies tend to overweight smaller stocks and underweight larger stocks in a large-cap index, increasing diversity (i.e., relatively more investment dollars going into relatively smaller market-cap stocks), which the U.S. equity market experienced in the first half of 2010, tended to benefit INTECH's relative performance.

Past performance is not predictive of future results. Current performance may be higher or lower than the data shown. Returns do not reflect the deduction of taxes that shareholders may have to pay on Fund distributions or upon the sale of Fund shares.

For additional information, see the Performance Overview in this report.

1 JCE since inception returns are as of 3/27/07. Index since inception returns are as of 3/31/07.

2 The S&P 500 Index is an unmanaged Index generally considered representative of the U.S. Stock Market. Index returns do not include the effects of sales charges or management fees. It is not possible to invest directly in an index.

3 JCE's Comparative Index is a blend of returns consisting of 1) 50% of the S&P 500 Index and 2) 50% of the CBOE S&P 500 BuyWrite Index (BXM) which is a passive total return index based on selling the near-term, at-the-money S&P 500 Index (SPX) call option against the S&P 500 Index portfolio each month, on the day the current contract expires. Index returns do not include the effects of sales charges or management fees. It is not possible to invest directly in an index.

Over this six-month period, the Fund's overweight in health care and consumer staples positively contributed to performance. However, the Fund's underweight to industrials versus the S&P 500 Index dragged slightly on relative performance.

While the cash flow generated by the sale of call options did help to mitigate some of the risk inherent in the Fund's portfolio, these inflows were not sufficient to prevent the Fund from posting a negative overall return for the period.

6 Nuveen Investments

Distribution and Share Price Information

The following information regarding your Fund's distributions is current as of June 30, 2010, and likely will vary over time based on the Fund's investment activities and portfolio investment value changes.

During the six-month reporting period, the Fund did not make any changes to its quarterly distribution to shareholders. Some of the important factors affecting the amount and composition of these distributions are summarized below.

The Fund has a managed distribution program. The goal of this program is to provide shareholders with relatively consistent and predictable cash flow by systematically converting the Fund's expected long-term return potential into regular distributions. As a result, regular distributions throughout the year are likely to include a portion of expected long-term gains (both realized and unrealized), along with net investment income.

Important points to understand about a managed distribution program are:

The Fund seeks to establish a relatively stable distribution rate that roughly corresponds to the projected total return from its investment strategy over an extended period of time. However, you should not draw any conclusions about the Fund's past or future investment performance from its current distribution rate.

Actual returns will differ from projected long-term returns (and therefore the Fund's distribution rate), at least over shorter time periods. Over a specific timeframe, the difference between actual returns and total distributions will be reflected in an increasing (returns exceed distributions) or a decreasing (distributions exceed returns) Fund net asset value.

Each distribution is expected to be paid from some or all of the following sources:

- net investment income (regular interest and dividends),
- realized capital gains, and
- unrealized gains, or, in certain cases, a return of principal (non-taxable distributions).

A non-taxable distribution is a payment of a portion of the Fund's capital. When the Fund's returns exceed distributions, it may represent portfolio gains generated, but not realized as a taxable capital gain. In periods when the Fund's returns fall short of distributions, the shortfall will represent a portion of your original principal, unless the shortfall is offset during other time periods over the life of your investment (previous or subsequent) when the Fund's total return exceeds distributions.

Because distribution source estimates are updated during the year based on the Fund's performance and forecast for its current fiscal year (which is the calendar year for the Fund), estimates on the nature of your distributions provided at the time the distributions are paid may differ from both the tax information reported to you in your Fund's

IRS Form 1099 statement provided at year end, as well as the ultimate economic sources of distributions over the life of your investment.

The following table provides estimated information regarding the Fund's distributions and total return performance for the six months ended June 30, 2010. The distribution information is presented on a tax basis rather than a generally accepted accounting principles (GAAP) basis. This information is intended to help you better understand whether the Fund's returns for the specified time period were sufficient to meet the Fund's distributions.

| As of 6/30/10 | JCE |
|-------------------------------------|------------|
| Inception date | 3/27/07 |
| Six months ended June 30, 2010: | |
| Per share distribution: | |
| From net investment income | \$0.04 |
| From realized capital gains | 0.52 |
| Return of capital | 0.00 |
| Total per share distribution | \$0.56 |
| Annualized distribution rate on NAV | 9.40% |
| Average annual total returns: | |
| Six-Month (Cumulative) on NAV | -5.61% |
| 1-Year on NAV | 14.18% |
| Since Inception on NAV | -5.10% |

Share Repurchases and Share Price Information

As of June 30, 2010, and since the inception of the Fund's repurchase program, the Fund has cumulatively repurchased shares as shown in the accompanying table.

| Shares Repurchased | % of Outstanding Shares |
|---------------------------|--------------------------------|
| 444,800 | 2.8% |

During the six-month reporting period, the Fund repurchased its shares at a weighted average price and a weighted average discount per share as shown in the accompanying table.

| Shares Repurchased | Weighted Average Price Per Share Repurchased | Weighted Average Discount Per Share Repurchased |
|---------------------------|---|--|
| 7,100 | \$10.36 | 23.38% |

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

As of June 30, 2010, the Fund was trading at a -3.27% discount to its net asset value, compared with an average discount of -8.61% for the six-month period.

8 Nuveen Investments

JCE
Performance
OVERVIEW

Nuveen Core Equity Alpha Fund

June 30, 2010

Fund Snapshot

| | | |
|--|--|-----------|
| Share Price | | \$11.52 |
| Net Asset Value | | \$11.91 |
| Premium/(Discount) to NAV | | -3.27% |
| Current Distribution Rate ¹ | | 9.72% |
| Net Assets (\$000) | | \$190,929 |

Average Annual Total Return
(Inception 3/27/07)

| | On Share Price | On NAV |
|----------------------|-----------------------|---------------|
| 6-Month (Cumulative) | -1.18% | -5.61% |
| 1-Year | 30.23% | 14.18% |
| Since Inception | -6.30% | -5.10% |

Portfolio Composition

(as a % of total investments)²

| | |
|----------------------------------|------|
| Computers & Peripherals | 6.8% |
| Health Care Providers & Services | 6.7% |
| Pharmaceuticals | 6.4% |
| Oil, Gas & Consumable Fuels | 5.7% |
| Food Products | 4.0% |
| IT Services | 3.9% |
| Health Care Equipment & Supplies | 3.9% |
| Software | 3.9% |

| | |
|--|-------|
| Beverages | 2.9% |
| Industrial Conglomerates | 2.8% |
| Commercial Banks | 2.6% |
| Diversified Telecommunication Services | 2.5% |
| Media | 2.3% |
| Multi-Utilities | 2.2% |
| Internet Software & Services | 2.2% |
| Communications Equipment | 2.1% |
| Insurance | 2.0% |
| Household Products | 2.0% |
| Semiconductors & Equipment | 1.9% |
| Internet & Catalog Retail | 1.9% |
| Aerospace & Defense | 1.8% |
| Specialty Retail | 1.7% |
| Tobacco | 1.5% |
| Household Durables | 1.4% |
| Short-Term Investments | 5.3% |
| Other | 19.6% |

Portfolio Allocation (as a % of total investments)²

2009-2010 Distributions Per Share

Share Price Performance Weekly Closing Price

1 Current Distribution Rate is based on the Fund's current annualized quarterly distribution divided by the Fund's current market price. The Fund's quarterly distributions to its shareholders may be comprised of ordinary income, net realized capital gains and, if at the end of the calendar year the Fund's cumulative net ordinary income and net realized gains are less than the amount of the Fund's distributions, a return of capital for tax purposes.

2 Excluding investments in derivatives.

Nuveen Investments 9

Shareholder Meeting Report

The annual meeting of shareholders was held in the offices of Nuveen Investments on April 6, 2010; at this meeting the shareholders were asked to vote on the election of Board Members.

| | JCE |
|--|---------------|
| | Common Shares |
| Approval of the Board Members was reached as follows: | |
| William C. Hunter | |
| For | 13,997,056 |
| Withhold | 502,611 |
| Total | 14,499,667 |
| Judith M. Stockdale | |
| For | 13,974,177 |
| Withhold | 525,490 |
| Total | 14,499,667 |
| Carole E. Stone | |
| For | 13,970,249 |
| Withhold | 529,418 |
| Total | 14,499,667 |

JCE Nuveen Core Equity Alpha Fund
Portfolio of INVESTMENTS

June 30, 2010 (Unaudited)

| Shares | Description (1) | Value |
|---------|---|------------|
| | Common Stocks 96.6% | |
| | Aerospace & Defense 1.8% | |
| 4,100 | Boeing Company | \$ 257,275 |
| 4,500 | General Dynamics Corporation | 263,520 |
| 7,400 | Goodrich Corporation | 490,250 |
| 800 | Honeywell International Inc. | 31,224 |
| 500 | L-3 Communications Holdings, Inc. | 35,420 |
| 2,100 | Northrop Grumman Corporation | 114,324 |
| 7,700 | Precision Castparts Corporation | 792,484 |
| 2,400 | Raytheon Company | 116,136 |
| 10,200 | Rockwell Collins, Inc. | 541,926 |
| 12,000 | United Technologies Corporation | 778,920 |
| | Total Aerospace & Defense | 3,421,479 |
| | Air Freight & Logistics 0.5% | |
| 12,400 | FedEx Corporation | 869,364 |
| | Airlines 0.9% | |
| 147,900 | Southwest Airlines Co. | 1,643,169 |
| | Auto Components 0.1% | |
| 6,800 | Johnson Controls, Inc. | 182,716 |
| | Automobiles 0.6% | |
| 105,300 | Ford Motor Company, (2) | 1,061,424 |
| | Beverages 3.0% | |
| 700 | Brown-Forman Corporation | 40,061 |
| 42,800 | Coca-Cola Company | 2,145,136 |

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

| | | |
|--------|--|-----------|
| 12,700 | Coca-Cola Enterprises Inc. | 328,422 |
| 31,000 | Constellation Brands, Inc., Class A, (2) | 484,220 |
| 31,400 | Dr. Pepper Snapple Group, (2) | 1,174,046 |
| 24,974 | PepsiCo, Inc. | 1,522,165 |
| | Total Beverages | 5,694,050 |

Biotechnology 0.4%

| | | |
|-------|--------------------------|---------|
| 6,400 | Amgen Inc., (2) | 336,640 |
| 7,100 | Celgene Corporation, (2) | 360,822 |
| 2,200 | Cephalon, Inc., (2) | 124,850 |
| | Total Biotechnology | 822,312 |

Capital Markets 1.2%

| | | |
|--------|----------------------------|-----------|
| 13,800 | Ameriprise Financial, Inc. | 498,594 |
| 15,200 | Franklin Resources, Inc. | 1,310,088 |
| 3,000 | Goldman Sachs Group, Inc. | 393,810 |
| 300 | T. Rowe Price Group Inc. | 13,317 |
| | Total Capital Markets | 2,215,809 |

Chemicals 1.3%

| | | |
|--------|---|-----------|
| 7,200 | Air Products & Chemicals Inc. | 466,632 |
| 2,000 | Airgas, Inc. | 124,400 |
| 400 | CF Industries Holdings, Inc. | 25,380 |
| 28,300 | Dow Chemical Company | 671,276 |
| 1,900 | E.I. Du Pont de Nemours and Company | 65,721 |
| 2,900 | Eastman Chemical Company | 154,744 |
| 900 | International Flavors & Fragrances Inc. | 38,178 |
| 13,900 | PPG Industries, Inc. | 839,699 |
| | Total Chemicals | 2,386,030 |

Commercial Banks 2.7%

| | | |
|--------|------------------------------------|-----------|
| 10,600 | BB&T Corporation | 278,886 |
| 19,100 | Comerica Incorporated | 703,453 |
| 86,500 | Fifth Third Bancorp. | 1,063,085 |
| 2,500 | Huntington BancShares Inc. | 13,850 |
| 7,600 | M&T Bank Corporation | 645,620 |
| 13,300 | PNC Financial Services Group, Inc. | 751,450 |

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

JCE Nuveen Core Equity Alpha Fund (continued)
Portfolio of INVESTMENTS June 30, 2010 (Unaudited)

| Shares | Description (1) | Value |
|---------|--|------------|
| | Commercial Banks (continued) | |
| 74,600 | Regions Financial Corporation | \$ 490,868 |
| 4,900 | SunTrust Banks, Inc. | 114,170 |
| 8,200 | U.S. Bancorp | 183,270 |
| 31,950 | Wells Fargo & Company | 817,920 |
| 1,500 | Zions Bancorporation | 32,355 |
| | Total Commercial Banks | 5,094,927 |
| | Commercial Services & Supplies 0.5% | |
| 8,700 | Avery Dennison Corporation | 279,531 |
| 37,900 | R.R. Donnelley & Sons Company | 620,423 |
| 1,600 | Waste Management, Inc. | 50,064 |
| | Total Commercial Services & Supplies | 950,018 |
| | Communications Equipment 2.1% | |
| 118,400 | Cisco Systems, Inc., (2) | 2,523,104 |
| 25,300 | Harris Corporation | 1,053,745 |
| 14,700 | JDS Uniphase Corporation, (2) | 144,648 |
| 49,900 | Motorola, Inc., (2) | 325,348 |
| 700 | QUALCOMM, Inc. | 22,988 |
| | Total Communications Equipment | 4,069,833 |
| | Computers & Peripherals 6.9% | |
| 20,400 | Apple, Inc., (2) | 5,131,212 |
| 22,300 | Dell Inc., (2) | 268,938 |
| 25,600 | EMC Corporation, (2) | 468,480 |
| 72,600 | Hewlett-Packard Company | 3,142,128 |
| 14,400 | Lexmark International, Inc., Class A, (2) | 475,632 |
| 47,200 | Network Appliance Inc., (2) | 1,761,032 |
| 14,300 | QLogic Corporation, (2) | 237,666 |
| 13,300 | SanDisk Corporation, (2) | 559,531 |
| 13,600 | Teradata Corporation, (2) | 414,528 |
| 25,300 | Western Digital Corporation, (2) | 763,048 |

| | | |
|---------|--|------------|
| | Total Computers & Peripherals | 13,222,195 |
| | Consumer Finance 1.1% | |
| 33,300 | American Express Company | 1,322,010 |
| 2,300 | Capital One Financial Corporation | 92,690 |
| 32,600 | Discover Financial Services | 455,748 |
| 22,600 | SLM Corporation, (2) | 234,814 |
| | Total Consumer Finance | 2,105,262 |
| | Diversified Consumer Services 0.4% | |
| 11,300 | Devry, Inc. | 593,137 |
| 14,200 | H & R Block Inc. | 222,798 |
| | Total Diversified Consumer Services | 815,935 |
| | Diversified Financial Services 1.3% | |
| 58,600 | Bank of America Corporation | 842,082 |
| 300 | CME Group, Inc. | 84,465 |
| 41,705 | JPMorgan Chase & Co. | 1,526,820 |
| | Total Diversified Financial Services | 2,453,367 |
| | Diversified Telecommunication Services 2.5% | |
| 170,600 | AT&T Inc. | 4,126,814 |
| 16,528 | CenturyTel, Inc. | 550,548 |
| 14,900 | Windstream Corporation | 157,344 |
| | Total Diversified Telecommunication Services | 4,834,706 |
| | Electric Utilities 0.9% | |
| 10,800 | American Electric Power Company, Inc. | 348,840 |
| 16,600 | Duke Energy Corporation | 265,600 |
| 41,600 | Pepco Holdings, Inc. | 652,288 |
| 11,100 | Pinnacle West Capital Corporation | 403,596 |
| | Total Electric Utilities | 1,670,324 |

| Shares | Description (1) | Value |
|--------|--|-----------|
| | Electrical Equipment 0.6% | |
| 1,400 | Emerson Electric Company | \$ 61,166 |
| 20,600 | Rockwell Automation, Inc. | 1,011,254 |
| | Total Electrical Equipment | 1,072,420 |
| | Electronic Equipment & Instruments 1.3% | |
| 65,400 | Agilent Technologies, Inc., (2) | 1,859,322 |
| 300 | Amphenol Corporation, Class A | 11,784 |
| 8,400 | FLIR Systems Inc., (2) | 244,356 |
| 30,100 | Jabil Circuit Inc. | 400,330 |
| | Total Electronic Equipment & Instruments | 2,515,792 |
| | Energy Equipment & Services 0.6% | |
| 2,127 | Baker Hughes Incorporated | 88,419 |
| 3,200 | Cooper Cameron Corporation, (2) | 104,064 |
| 100 | FMC Technologies Inc., (2) | 5,266 |
| 15,300 | Halliburton Company | 375,615 |
| 9,500 | Schlumberger Limited | 525,730 |
| 1,600 | Smith International, Inc. | 60,240 |
| | Total Energy Equipment & Services | 1,159,334 |
| | Food & Staples Retailing 1.2% | |
| 11,700 | Costco Wholesale Corporation | 641,511 |
| 2,000 | Safeway Inc. | 39,320 |
| 3,100 | Sysco Corporation | 88,567 |
| 21,500 | Walgreen Co. | 574,050 |
| 11,200 | Wal-Mart Stores, Inc. | 538,384 |
| 13,400 | Whole Foods Market, Inc., (2) | 482,668 |
| | Total Food & Staples Retailing | 2,364,500 |
| | Food Products 4.0% | |
| 11,600 | Campbell Soup Company | 415,628 |
| 9,000 | ConAgra Foods, Inc. | 209,880 |
| 43,800 | General Mills, Inc. | 1,555,776 |
| 8,200 | H.J. Heinz Company | 354,404 |
| 19,500 | JM Smucker Company | 1,174,290 |

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

| | | |
|--------|--|-----------|
| 13,900 | Kellogg Company | 699,170 |
| 9,400 | Kraft Foods Inc. | 263,200 |
| 1,900 | McCormick & Company, Incorporated | 72,124 |
| 33,500 | Mead Johnson Nutrition Company, Class A Shares | 1,679,020 |
| 82,700 | Sara Lee Corporation | 1,166,070 |
| 8,600 | Tyson Foods, Inc., Class A | 140,954 |

Total Food Products 7,730,516

Gas Utilities 0.5%

| | | |
|--------|-------------|---------|
| 4,100 | Nicor Inc. | 166,050 |
| 17,800 | ONEOK, Inc. | 769,850 |

Total Gas Utilities 935,900

Health Care Equipment & Supplies 4.0%

| | | |
|--------|-----------------------------------|-----------|
| 3,500 | Baxter International, Inc. | 142,240 |
| 29,100 | CareFusion Corporation, (2) | 660,570 |
| 27,900 | Hospira Inc., (2) | 1,602,855 |
| 6,200 | Intuitive Surgical, Inc., (2) | 1,956,844 |
| 21,200 | Medtronic, Inc. | 768,924 |
| 20,000 | Stryker Corporation | 1,001,200 |
| 13,900 | Varian Medical Systems, Inc., (2) | 726,692 |
| 13,200 | Zimmer Holdings, Inc., (2) | 713,460 |

Total Health Care Equipment & Supplies 7,572,785

Health Care Providers & Services 6.8%

| | | |
|--------|---------------------------------|-----------|
| 6,900 | Aetna Inc. | 182,022 |
| 37,500 | AmerisourceBergen Corporation | 1,190,625 |
| 37,000 | Cardinal Health, Inc. | 1,243,570 |
| 46,800 | CIGNA Corporation | 1,453,608 |
| 21,300 | Coventry Health Care, Inc., (2) | 376,584 |
| 15,300 | Davita Inc., (2) | 955,332 |
| 25,200 | Express Scripts, Inc., (2) | 1,184,904 |

Nuveen Investments 13

JCE Nuveen Core Equity Alpha Fund (continued)
Portfolio of INVESTMENTS June 30, 2010 (Unaudited)

| Shares | Description (1) | Value |
|--------|---|--------------|
| | Health Care Providers & Services (continued) | |
| 25,100 | Humana Inc., (2) | \$ 1,146,317 |
| 30,700 | McKesson HBOC Inc. | 2,061,812 |
| 23,300 | Medco Health Solutions, Inc., (2) | 1,283,364 |
| 13,700 | Patterson Companies, Inc., (2) | 390,861 |
| 87,700 | Tenet Healthcare Corporation, (2) | 380,618 |
| 11,800 | UnitedHealth Group Incorporated | 335,120 |
| 17,800 | Wellpoint Inc., (2) | 870,954 |
| | Total Health Care Providers & Services | 13,055,691 |
| | Health Care Technology 0.1% | |
| 2,400 | Cerner Corporation, (2) | 182,136 |
| | Hotels, Restaurants & Leisure 1.1% | |
| 4,100 | McDonald's Corporation | 270,067 |
| 52,700 | Starbucks Corporation, (2) | 1,280,610 |
| 1,900 | Starwood Hotels & Resorts Worldwide, Inc. | 78,717 |
| 25,200 | Wyndham Worldwide Corporation | 507,528 |
| | Total Hotels, Restaurants & Leisure | 2,136,922 |
| | Household Durables 1.4% | |
| 16,000 | Harman International Industries Inc., (2) | 478,240 |
| 6,400 | Leggett and Platt Inc. | 128,384 |
| 21,100 | Newell Rubbermaid Inc. | 308,904 |
| 13,187 | Black & Decker Inc. | 666,207 |
| 12,700 | Whirlpool Corporation | 1,115,314 |
| | Total Household Durables | 2,697,049 |
| | Household Products 2.0% | |
| 8,100 | Colgate-Palmolive Company | 637,956 |
| 2,700 | Kimberly-Clark Corporation | 163,701 |
| 50,300 | Procter & Gamble Company | 3,016,994 |

| | | |
|---------|--|-----------|
| | Total Household Products | 3,818,651 |
| | Independent Power Producers & Energy Traders 0.4% | |
| 53,200 | AES Corporation, (2) | 491,568 |
| 10,300 | Constellation Energy Group | 332,175 |
| | Total Independent Power Producers & Energy Traders | 823,743 |
| | Industrial Conglomerates 2.8% | |
| 20,900 | 3M Co. | 1,650,891 |
| 212,600 | General Electric Company | 3,065,692 |
| 40,200 | Textron Inc. | 682,194 |
| | Total Industrial Conglomerates | 5,398,777 |
| | Insurance 2.0% | |
| 11,600 | AFLAC Incorporated | 494,972 |
| 1,000 | Allstate Corporation | 28,730 |
| 200 | American International Group, (2) | 6,888 |
| 100 | Assurant Inc. | 3,470 |
| 8,131 | Berkshire Hathaway Inc., Class B, (2) | 647,959 |
| 1,000 | Chubb Corporation | 50,010 |
| 74,400 | Genworth Financial Inc., Class A, (2) | 972,408 |
| 7,800 | Hartford Financial Services Group, Inc. | 172,614 |
| 17,200 | Loews Corporation | 572,932 |
| 4,000 | Travelers Companies, Inc. | 197,000 |
| 45,400 | XL Capital Ltd, Class A | 726,854 |
| | Total Insurance | 3,873,837 |
| | Internet & Catalog Retail 1.9% | |
| 16,400 | Amazon.com, Inc., (2) | 1,791,864 |
| 16,300 | Expedia, Inc., (2) | 306,114 |
| 8,800 | Priceline.com Incorporated, (2) | 1,553,552 |
| | Total Internet & Catalog Retail | 3,651,530 |

| Shares | Description (1) | Value |
|--------|--|------------|
| | Internet Software & Services 2.2% | |
| 5,200 | Akamai Technologies, Inc., (2) | \$ 210,964 |
| 63,600 | eBay Inc., (2) | 1,247,196 |
| 6,300 | Google Inc., Class A, (2) | 2,803,185 |
| | Total Internet Software & Services | 4,261,345 |
| | IT Services 4.0% | |
| 48,300 | Cognizant Technology Solutions Corporation, Class A, (2) | 2,417,898 |
| 10,800 | Computer Sciences Corporation, (2) | 488,700 |
| 7,400 | Fidelity National Information Services | 198,468 |
| 28,300 | International Business Machines Corporation (IBM) | 3,494,484 |
| 1,200 | MasterCard, Inc. | 239,436 |
| 800 | Total System Services Inc. | 10,880 |
| 10,400 | Visa Inc. | 735,800 |
| | Total IT Services | 7,585,666 |
| | Leisure Equipment & Products 0.3% | |
| 34,200 | Eastman Kodak Company, (2) | 148,428 |
| 8,200 | Hasbro, Inc. | 337,020 |
| 3,000 | Mattel, Inc. | 63,480 |
| | Total Leisure Equipment & Products | 548,928 |
| | Life Sciences Tools & Services 0.8% | |
| 16,600 | Life Technologies Corporation, (2) | 784,350 |
| 10,300 | Perkinelmer Inc. | 212,901 |
| 1,600 | Thermo Fisher Scientific, Inc., (2) | 78,480 |
| 8,300 | Waters Corporation, (2) | 537,010 |
| | Total Life Sciences Tools & Services | 1,612,741 |
| | Machinery 0.9% | |
| 19,800 | Caterpillar Inc. | 1,189,386 |
| 4,800 | Eaton Corporation | 314,112 |
| 4,300 | Illinois Tool Works, Inc. | 177,504 |
| 1,300 | Pall Corporation | 44,681 |

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

| | | |
|---------------------------------|--|-----------|
| Total Machinery | | 1,725,683 |
| Media 2.3% | | |
| 7,400 | CBS Corporation, Class B | 95,682 |
| 9,500 | Comcast Corporation, Class A | 165,015 |
| 3,100 | DIRECTV Group, Inc., (2) | 105,152 |
| 5,800 | Discovery Communications Inc., Class A Shares, (2) | 207,118 |
| 41,800 | Gannett Company Inc. | 562,628 |
| 600 | McGraw-Hill Companies, Inc. | 16,884 |
| 13,000 | New York Times, Class A, (2) | 112,450 |
| 11,400 | News Corporation, Class A | 136,344 |
| 2,700 | Omnicom Group, Inc. | 92,610 |
| 15,500 | Scripps Networks Interactive, Class A Shares | 625,270 |
| 16,100 | Time Warner Cable, Class A, (2) | 838,488 |
| 4,766 | Time Warner Inc. | 137,785 |
| 27,700 | Viacom Inc., Class B, (2) | 868,949 |
| 14,500 | Walt Disney Company | 456,750 |
| 100 | Washington Post Company | 41,048 |
| Total Media | | 4,462,173 |
| Metals & Mining 0.1% | | |
| 2,400 | Cliffs Natural Resources Inc. | 113,184 |
| Multiline Retail 0.5% | | |
| 2,200 | Big Lots, Inc., (2) | 70,598 |
| 1,100 | Family Dollar Stores, Inc. | 41,459 |
| 5,000 | Kohl's Corporation, (2) | 237,500 |
| 6,800 | Nordstrom, Inc. | 218,892 |
| 1,000 | Sears Holding Corporation, (2) | 64,650 |
| 4,600 | Target Corporation | 226,182 |
| Total Multiline Retail | | 859,281 |

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

JCE Nuveen Core Equity Alpha Fund (continued)
Portfolio of INVESTMENTS June 30, 2010 (Unaudited)

| Shares | Description (1) | Value |
|---------|---|------------|
| | Multi-Utilities 2.2% | |
| 12,700 | Ameren Corporation | \$ 301,879 |
| 61,800 | CenterPoint Energy, Inc. | 813,288 |
| 6,200 | Consolidated Edison, Inc. | 267,220 |
| 1,300 | Dominion Resources, Inc. | 50,362 |
| 27,900 | DTE Energy Company | 1,272,519 |
| 14,900 | Integrus Energy Group, Inc. | 651,726 |
| 31,300 | NiSource Inc. | 453,850 |
| 1,100 | PG&E Corporation | 45,210 |
| 25,500 | TECO Energy, Inc. | 384,285 |
| 1,000 | Wisconsin Energy Corporation | 50,740 |
| | Total Multi-Utilities | 4,291,079 |
| | Oil, Gas & Consumable Fuels 5.8% | |
| 5,200 | Anadarko Petroleum Corporation | 187,668 |
| 26,300 | Chevron Corporation | 1,784,718 |
| 4,300 | ConocoPhillips | 211,087 |
| 135,400 | Exxon Mobil Corporation | 7,727,280 |
| 4,400 | Massey Energy Company | 120,340 |
| 5,300 | Occidental Petroleum Corporation | 408,895 |
| 7,000 | Pioneer Natural Resources Company | 416,150 |
| 8,300 | Spectra Energy Corporation | 166,581 |
| | Total Oil, Gas & Consumable Fuels | 11,022,719 |
| | Paper & Forest Products 0.5% | |
| 9,400 | International Paper Company | 212,722 |
| 31,000 | MeadWestvaco Corporation | 688,200 |
| | Total Paper & Forest Products | 900,922 |
| | Personal Products 0.7% | |
| 11,700 | Avon Products, Inc. | 310,050 |
| 18,900 | Estee Lauder Companies Inc., Class A | 1,053,297 |

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

| | | |
|---------|---|------------|
| | Total Personal Products | 1,363,347 |
| | Pharmaceuticals 6.5% | |
| 26,100 | Abbott Laboratories | 1,220,958 |
| 1,300 | Allergan, Inc. | 75,738 |
| 38,100 | Bristol-Myers Squibb Company | 950,214 |
| 11,800 | Forest Laboratories, Inc., (2) | 323,674 |
| 49,800 | Johnson & Johnson | 2,941,188 |
| 29,500 | King Pharmaceuticals Inc., (2) | 223,905 |
| 106,832 | Merck & Company Inc. | 3,735,915 |
| 38,200 | Mylan Laboratories Inc., (2) | 650,928 |
| 152,490 | Pfizer Inc. | 2,174,507 |
| 1,900 | Watson Pharmaceuticals Inc., (2) | 77,083 |
| | Total Pharmaceuticals | 12,374,110 |
| | Real Estate 0.6% | |
| 13,600 | Apartment Investment & Management Company, Class A | 263,432 |
| 600 | AvalonBay Communities, Inc. | 56,022 |
| 4,800 | Equity Residential | 199,872 |
| 900 | Health Care REIT, Inc. | 37,908 |
| 3,900 | ProLogis | 39,507 |
| 2,920 | Simon Property Group, Inc. | 235,790 |
| 6,500 | Ventas Inc. | 305,175 |
| 700 | Vornado Realty Trust | 51,065 |
| | Total Real Estate | 1,188,771 |
| | Road & Rail 0.6% | |
| 10,400 | CSX Corporation | 516,152 |
| 8,700 | Norfolk Southern Corporation | 461,535 |
| 2,400 | Ryder System, Inc. | 96,552 |
| | Total Road & Rail | 1,074,239 |
| | Semiconductors & Equipment 1.9% | |
| 55,700 | Advanced Micro Devices, Inc., (2) | 407,724 |
| 2,700 | Altera Corporation | 66,987 |
| 16,300 | Analog Devices, Inc. | 454,118 |

| Shares | Description (1) | Value |
|---------|---|-----------|
| | Semiconductors & Equipment (continued) | |
| 300 | Broadcom Corporation, Class A, (2) | \$ 9,891 |
| 61,900 | Intel Corporation | 1,203,955 |
| 2,700 | KLA-Tencor Corporation | 75,276 |
| 600 | Linear Technology Corporation | 16,686 |
| 800 | Microchip Technology Incorporated | 22,192 |
| 37,500 | Micron Technology, Inc., (2) | 318,375 |
| 1,400 | NVIDIA Corporation, (2) | 14,294 |
| 46,600 | Texas Instruments Incorporated | 1,084,848 |
| | Total Semiconductors & Equipment | 3,674,346 |
| | Software 4.0% | |
| 7,100 | Adobe Systems Incorporated, (2) | 187,653 |
| 12,900 | Citrix Systems, (2) | 544,767 |
| 187,600 | Microsoft Corporation | 4,316,676 |
| 56,500 | Oracle Corporation | 1,212,490 |
| 15,500 | Red Hat, Inc., (2) | 448,570 |
| 9,700 | Salesforce.com, Inc., (2) | 832,454 |
| | Total Software | 7,542,610 |
| | Specialty Retail 1.7% | |
| 4,500 | Gap, Inc. | 87,570 |
| 51,600 | Limited Brands, Inc. | 1,138,812 |
| 6,200 | RadioShack Corporation | 120,962 |
| 19,200 | Tiffany & Co. | 727,872 |
| 11,600 | TJX Companies, Inc. | 486,620 |
| 21,800 | Urban Outfitters, Inc., (2) | 749,702 |
| | Total Specialty Retail | 3,311,538 |
| | Textiles, Apparel & Luxury Goods 0.5% | |
| 6,800 | Coach, Inc. | 248,540 |
| 10,400 | Polo Ralph Lauren Corporation | 758,784 |
| | Total Textiles, Apparel & Luxury Goods | 1,007,324 |
| | Tobacco 1.6% | |
| 12,200 | Altria Group, Inc. | 244,488 |
| 4,700 | Lorillard Inc. | 338,306 |
| 21,700 | Philip Morris International | 994,728 |
| 26,900 | Reynolds American Inc. | 1,402,028 |

Total Tobacco 2,979,550

Wireless Telecommunication Services 0.0%
 1,000 American Tower Corporation, (2) 44,500

Total Common Stocks (cost \$184,379,614) 184,446,559

| Principal Amount (000) | Description (1) | Coupon | Maturity | Rating (3) | Value |
|-------------------------------|--|---------------|-----------------|-------------------|-----------------------|
| | Short-Term Investments 5.4% | | | | |
| | U.S. Government and Agency Obligations 2.1% | | | | |
| \$ 2,000 | U.S. Treasury Bills, (4) | 0.000% | 7/29/10 | AAA | \$ 1,999,782 |
| 2,000 | U.S. Treasury Bills, (4) | 0.000% | 9/09/10 | AAA | 1,999,436 |
| 4,000 | Total U.S. Government and Agency Obligations | | | | 3,999,218 |
| | Repurchase Agreements 3.3% | | | | |
| 6,293 | Repurchase Agreement with State Street Bank, dated 6/30/10, repurchase price \$6,292,899, collateralized by \$6,365,000 U.S. Treasury Notes, 1.000%, 4/30/12 value \$6,423,558 | 0.000% | 7/01/10 | N/A | 6,292,899 |
| \$ 10,293 | Total Short-Term Investments (cost \$10,291,853) | | | | 10,292,117 |
| | Total Investments (cost \$194,671,467) 102.0% | | | | 194,738,676 |
| | Other Assets Less Liabilities (2.0%) | | | | (3,809,472) |
| | Net Assets 100% | | | | \$ 190,929,204 |

JCE Nuveen Core Equity Alpha Fund (continued)
Portfolio of INVESTMENTS June 30, 2010 (Unaudited)

Investment in Derivatives

Call Options Written outstanding at June 30, 2010:

| Number of Contracts | Type | Notional Amount (5) | Expiration Date | Strike Price | Value |
|--------------------------------|--|--------------------------------|----------------------------|-------------------------|--------------------|
| (482,957) | Custom Basket 2 NASDAQ | \$ (48,295,698) | 7/08/10 | \$ 103.0 | \$ (145) |
| (449,246) | Custom Basket 4 NASDAQ | (44,924,554) | 7/22/10 | 103.0 | (41,870) |
| (932,203) | Total Call Options (cost \$(1,661,116)) | \$ (93,220,252) | | | \$ (42,015) |

Futures Contracts outstanding at June 30, 2010:

| Type | Contract Position | Number of Contracts | Contract Expiration | Value at June 30, 2010 | Unrealized Appreciation (Depreciation) |
|------------------|------------------------------|------------------------------------|--------------------------------|-----------------------------------|---|
| S&P 500 Index | Long | 125 | 9/10 | 6,416,250 | \$ (177,250) |

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, as/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 higher of Standard & Poor's Group (Standard & Poor's), Moody's Investor Service, Inc. (Moody's) or Fitch, Inc. (Fitch) rating. Rating below BBB by Standard & Poor's, Baa by Moody's or BBB by Fitch are considered to below investment grade.
 - (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.

See accompanying notes to financial statements.

18 Nuveen Investments

Statement of
ASSETS & LIABILITIES

June 30, 2010 (Unaudited)

Assets

| | |
|--|--------------------|
| Investments, at value (cost \$194,671,467) | \$ 194,738,676 |
| Dividends receivable | 264,316 |
| Other assets | 13,414 |
| Total assets | 195,016,406 |

Liabilities

| | |
|--|-----------------------|
| Call options written, at value (premiums received \$1,661,116) | 42,015 |
| Payables: | |
| Dividends | 3,678,421 |
| Variation margin on futures contracts | 54,375 |
| Accrued expenses: | |
| Management fees | 155,889 |
| Other | 156,502 |
| Total liabilities | 4,087,202 |
| Net assets | \$ 190,929,204 |
| Shares outstanding | 16,026,686 |
| Net asset value per share outstanding | \$ 11.91 |

Net assets consist of:

| | |
|--|-----------------------|
| Shares, \$.01 par value per share | \$ 160,267 |
| Paid-in surplus | 253,081,291 |
| Undistributed (Over-distribution of) net investment income | (8,330,940) |
| Accumulated net realized gain (loss) | (55,490,474) |
| Net unrealized appreciation (depreciation) | 1,509,060 |
| Net assets | \$ 190,929,204 |
| Authorized shares | Unlimited |

See accompanying notes to financial statements.

Statement of
OPERATIONSSix Months Ended June 30, 2010
(Unaudited)**Investment Income**

| | |
|-------------------------|--------------|
| Dividends | \$ 1,826,223 |
| Interest | 2,984 |
| Total investment income | 1,829,207 |

Expenses

| | |
|--|-----------|
| Management fees | 981,171 |
| Shareholders' servicing agent fees and expenses | 254 |
| Custodian's fees and expenses | 90,895 |
| Trustees' fees and expenses | 2,473 |
| Professional fees | 16,634 |
| Shareholders' reports' printing and mailing expenses | 42,523 |
| Stock exchange listing fees | 4,507 |
| Investor relations expense | 15,604 |
| Other expenses | 22,047 |
| Total expenses before custodian fee credit | 1,176,108 |
| Custodian fee credit | (34) |
| Net expenses | 1,176,074 |
| Net investment income | 653,133 |

Realized and Unrealized Gain (Loss)

| | |
|--|-----------------|
| Net realized gain (loss) from: | |
| Investments and foreign currency | 10,872,603 |
| Call options written | (492,456) |
| Futures contracts | (135,875) |
| Change in net unrealized appreciation (depreciation) of: | |
| Investments and foreign currency | (23,332,790) |
| Call options written | 1,383,963 |
| Futures contracts | (335,625) |
| Net realized and unrealized gain (loss) | (12,040,180) |
| Net increase (decrease) in net assets from operations | \$ (11,387,047) |

See accompanying notes to financial statements.

20 Nuveen Investments

Statement of
CHANGES IN NET ASSETS (Unaudited)

| | Six Months Ended 6/30/10 | Year Ended 12/31/09 |
|---|---|--------------------------------|
| Operations | | |
| Net investment income | \$ 653,133 | \$ 2,278,503 |
| Net realized gain (loss) from: | | |
| Investments and foreign currency | 10,872,603 | (30,916,731) |
| Call options written | (492,456) | (479,434) |
| Futures contracts | (135,875) | 1,591,913 |
| Change in net unrealized appreciation (depreciation) of: | | |
| Investments and foreign currency | (23,332,790) | 68,063,304 |
| Call options written | 1,383,963 | 24,246 |
| Futures contracts | (335,625) | 47,450 |
| Net increase (decrease) in net assets from operations | (11,387,047) | 40,609,251 |
| Distributions to Shareholders | | |
| From and in excess of net investment income | (8,976,932) | |
| From net investment income | | (2,458,704) |
| Return of capital | | (15,338,552) |
| Decrease in net assets from distributions to shareholders | (8,976,932) | (17,797,256) |
| Capital Share Transactions | | |
| Offering costs adjustments | | 4,600 |
| Cost of shares repurchased and retired | (73,692) | (2,629,545) |
| Net increase (decrease) in net assets from capital share transactions | (73,692) | (2,624,945) |
| Net increase (decrease) in net assets | (20,437,671) | 20,187,050 |
| Net assets at the beginning of period | 211,366,875 | 191,179,825 |
| Net assets at the end of period | \$ 190,929,204 | \$ 211,366,875 |
| Undistributed (Over-distribution of) net investment income at the end of period | \$ (8,330,940) | \$ (7,141) |

See accompanying notes to financial statements.

Notes to
FINANCIAL STATEMENTS (Unaudited)

1. General Information and Significant Accounting Policies

Nuveen Core Equity Alpha Fund (the Fund) is a closed-end management investment company registered under the Investment Company Act of 1940, as amended. The Fund's shares are listed on the New York Stock Exchange (NYSE) and trade under the ticker symbol JCE. The Fund was organized as a Massachusetts business trust on January 9, 2007.

The Fund's investment objective is to provide an attractive level of total return, primarily through long-term capital appreciation and secondarily through income and gains. The Fund will invest in a portfolio of common stocks selected from among the 500 stocks comprising the S&P 500 Index, using a proprietary mathematical process designed by the Fund's sub-adviser INTECH Investment Management LLC (INTECH) to select large cap, core equity securities and will also employ innovative risk reduction techniques. Typically, the Fund's equity portfolio will hold 250-450 stocks included in the S&P 500 Index. The Fund will also employ an option strategy that seeks to enhance the Fund's risk-adjusted performance over time through a meaningful reduction in the volatility of the Fund's returns relative to the returns of the S&P 500 Index. The Fund expects to write custom basket call options with a notional value of up to 50% of the value of its equity portfolio. Nuveen Asset Management (the Adviser), a wholly-owned subsidiary of Nuveen Investments, Inc. (Nuveen), is responsible for the Fund's option strategy.

The following is a summary of significant accounting policies followed by the Fund in the preparation of its financial statements in accordance with accounting principles generally accepted in the United States (U.S. GAAP).

Investment Valuation

Common stocks and other equity-type securities are valued at the last sales price on the securities exchange on which such securities are primarily traded and are generally classified as Level 1. Securities primarily traded on the NASDAQ National Market (NASDAQ) are valued, except as indicated below, at the NASDAQ Official Closing Price and are generally classified as Level 1. However, securities traded on a securities exchange or NASDAQ for which there were no transactions on a given day or securities not listed on a securities exchange or NASDAQ are valued at the mean between the quoted bid and ask prices.

The value of exchange-traded options are based on the last sale price or, in the absence of such a price, at the mean of the bid and ask prices. Futures contracts are valued using the closing settlement price or, in the absence of such a price, at the mean of the bid and ask prices. Exchange-traded options and futures contracts are generally classified as Level 1. Options traded in the over-the-counter market are valued using market implied volatilities and are generally classified as Level 2.

Temporary investments in securities that have variable rate and demand features qualifying them as short-term investments are valued at amortized cost, which approximates market value. These securities are generally classified as Level 1.

Certain securities may not be able to be priced by the pre-established pricing methods as described above. Such securities may be valued by the Fund's Board of Trustees or its designee at fair value. These securities generally include, but are not limited to, restricted securities (securities which may not be publicly sold without registration

under the Securities Act) for which a pricing service is unable to provide a market price; securities whose trading has been formally suspended; fixed-income securities that have gone into default and for which there is no current market quotation; a security whose market price is not available from a pre-established pricing source; a security with respect to which an event has occurred that is likely to materially affect the value of the security after the market has closed but before the calculation of the Fund's net asset value (as may be the case in non-U.S. markets on which the security is primarily traded) or make it difficult or impossible to obtain a reliable market quotation; and a security whose price, as provided by the pricing service, is not deemed to reflect the security's fair value. As a general principle, the fair value of an issue of securities would appear to be the amount that the owner might reasonably expect to receive for them in a current sale. A variety of factors may be considered in determining the fair value of these securities, which may include consideration of the following: yields or prices of investments of comparable quality, type of issue, coupon, maturity and rating, market quotes or indications of value from security dealers, evaluations of anticipated cash flows or collateral, general market conditions and other information and analysis, including the obligor's credit characteristics considered relevant. These securities are classified as Level 2 or as Level 3 depending on the priority of the significant inputs. Regardless of the method employed to value a particular security, all valuations are subject to review by the Fund's Board of Trustees, or its designee.

Refer to Footnote 2 Fair Value Measurements for further details on the leveling of securities held by the Funds as of the end of the reporting period.

Investment Transactions

Investment transactions are recorded on a trade date basis. Realized gains and losses from investment transactions are determined on the specific identification method.

Investment Income

Dividend income is recorded on the ex-dividend date or, for foreign securities, when information is available. Interest income is recorded on an accrual basis.

Income Taxes

The Fund intends to comply with the requirements of Subchapter M of the Internal Revenue Code applicable to regulated investment companies. The Fund intends to distribute substantially all of its investment company taxable income to shareholders. In any year when the Fund realizes net capital gains, the Fund may choose to distribute all or a portion of its net capital gains to shareholders, or alternatively, to retain all or a portion of its net capital gains and pay federal corporate income taxes on such retained gains.

For all open tax years and all major taxing jurisdictions, management of the Fund has concluded that there are no significant uncertain tax positions that would require recognition in the financial statements. Open tax years are those that are open for examination by taxing authorities (i.e., generally the last four tax year ends and the interim tax period since then). Furthermore, management of the Fund is also not aware of any tax positions for which it is reasonably possible that the total amounts of unrecognized tax benefits will significantly change in the next twelve months.

Dividends and Distributions to Shareholders

Distributions to shareholders are recorded on the ex-dividend date. The amount and timing of distributions are determined in accordance with federal income tax regulations, which may differ from U.S. GAAP.

The Fund makes quarterly cash distributions to shareholders of a stated dollar amount per share. Subject to approval and oversight by the Fund's Board of Trustees, the Fund seeks to maintain a stable distribution level designed to deliver the long-term return potential of the Fund's investment strategy through regular quarterly distributions (a Managed Distribution Program). Total distributions during a calendar year generally will be made from the Fund's net investment income, net realized capital gains and net unrealized capital gains in the Fund's portfolio, if any. The portion of distributions paid from net unrealized gains, if any, would be distributed from the Fund's assets and would be treated by shareholders as a non-taxable distribution for tax purposes. In the event that total distributions during a calendar year exceed the Fund's total return on net asset value, the difference will be treated as a return of capital for tax purposes and will reduce net asset value per share. If the Fund's total return on net asset value exceeds total distributions during a calendar year, the excess will be reflected as an increase in net asset value per share. The final determination of the source and character of all distributions for the fiscal year are made after the end of the fiscal year and are reflected in the financial statements contained in the annual report as of December 31 each year.

The actual character of distributions made by the Fund during the fiscal year ended December 31, 2009, is reflected in the accompanying financial statements.

The distributions made by the Fund during the six months ended June 30, 2010, are provisionally classified as being From and in excess of net investment income, and those distributions will be classified as being from net investment income, net realized capital gains and/or a return of capital for tax purposes after the fiscal year end. For purposes of calculating Undistributed (Over-distribution of) net investment income as of June 30, 2010, the distribution amounts provisionally classified as From and in excess of net investment income were treated as being entirely from net investment income. Consequently, the financial statements at June 30, 2010, reflect an over-distribution of net investment income.

Foreign Currency Transactions

The Fund is authorized to engage in foreign currency exchange transactions, including foreign currency forward, futures, options and swap contracts. To the extent that the Fund invests in securities and/or contracts that are denominated in a currency other than U.S. dollars, the Fund will be subject to currency risk, which is the risk that an increase in the U.S. dollar relative to the foreign currency will reduce returns or portfolio value. Generally, when the U.S. dollar rises in value against a foreign currency, the Fund's investments denominated in that currency will lose value because its currency is worth fewer U.S. dollars; the opposite effect occurs if the U.S. dollar falls in relative value. Investments and other assets and liabilities denominated in foreign currencies are converted into U.S. dollars on a spot (i.e. cash) basis at the spot rate prevailing in the foreign currency exchange market at the time of valuation. Purchases and sales of investments and income denominated in foreign currencies are translated into U.S. dollars on the respective dates of such transactions.

The books and records of the Fund are maintained in U.S. dollars. Foreign currencies, investments and other assets and liabilities are translated into U.S. dollars at 4:00 p.m. Eastern time. Investments and income and expenses are translated on the respective dates of such transactions. Net realized foreign currency gains and losses resulting from changes in exchange rates include foreign currency gains and losses between trade date and settlement date of the transactions, foreign currency transactions, and the difference between the amounts of interest and dividends recorded on the books of the Fund and the amounts actually received.

Notes to
FINANCIAL STATEMENTS (Unaudited) (continued)

The realized and unrealized gains or losses resulting from changes in foreign currency exchange rates are recognized as a component of Net realized gain (loss) from investments and foreign currency and Change in net unrealized appreciation (depreciation) of investments and foreign currency on the Statement of Operations, when applicable.

Futures Contracts

The Fund is subject to equity price risk in the normal course of pursuing its investment objectives and is authorized to invest in futures contracts in attempt to manage such risk. Upon entering into a futures contract, the Fund is required to deposit with the broker an amount of cash or liquid securities equal to a specified percentage of the contract amount. This is known as the initial margin. Cash held by the broker to cover initial margin requirements on open futures contracts, if any, is recognized as Deposits with brokers for open futures contracts on the Statement of Assets and Liabilities. Subsequent payments (variation margin) are made or received by a Fund each day, depending on the daily fluctuation of the value of the contract. Variation margin is recognized as a receivable or payable for Variation margin on futures contracts on the Statement of Assets and Liabilities, when applicable.

During the period the futures contract is open, changes in the value of the contract are recorded as an unrealized gain or loss by marking-to-market on a daily basis to reflect the changes in market value of the contract and is recognized as Change in net unrealized appreciation (depreciation) of futures contracts on the Statement of Operations. When the contract is closed or expired, a Fund records a realized gain or loss equal to the difference between the value of the contract on the closing date and value of the contract when originally entered into and is recognized as Net realized gain (loss) from futures contracts on the Statement of Operations.

Risks of investments in futures contracts include the possible adverse movement of the securities or indices underlying the contracts, the possibility that there may not be a liquid secondary market for the contracts and/or that a change in the value of the contract may not correlate with a change in the value of the underlying securities or indices.

The average number of futures contracts outstanding during the six months ended June 30, 2010, was 125. Refer to Footnote 3 Derivative Instruments and Hedging Activities for further details on futures contract activity.

Options Transactions

The Fund is subject to equity price risk in the normal course of pursuing its investment objectives and is authorized to write (sell) call options, primarily on custom baskets of securities, in an attempt to manage such risk. When the Fund writes a call option, an amount equal to the net premium received (the premium less commission) is recognized as a component of Call options written, at value on the Statement of Asset and Liabilities and is subsequently adjusted to reflect the current value of the written option until the option expires or the Fund enters into a closing purchase transaction. The changes in value of the options during the fiscal period are reflected as Change in net unrealized appreciation (depreciation) of call options written on the Statement of Operations. When a call option expires or the Fund enters into a closing purchase transaction, the difference between the net premium received and any amount paid at expiration or upon executing a closing purchase transaction, including commission, is recognized as Net realized gain (loss) from call options written on the Statements of Operations. The Fund, as writer of a call option, has no control over whether the underlying instrument may be sold (called) and as a result bears the risk of an unfavorable change in the market value of the instrument or index underlying the written option. There is the risk the Fund may not be able to enter into a closing transaction because of an illiquid market.

The average notional amount of call options written during the six months ended June 30, 2010, was \$(89,305,836). Refer to Footnote 3 Derivative Instruments and Hedging Activities for further details on call options written.

Market and Counterparty Credit Risk

In the normal course of business the Fund may invest in financial instruments and enter into financial transactions where risk of potential loss exists due to changes in the market (market risk) or failure of the other party to the transaction to perform (counterparty credit risk). The potential loss could exceed the value of the financial assets recorded on the financial statements. Financial assets, which potentially expose the Fund to counterparty credit risk, consist principally of cash due from counterparties on forward, option and swap transactions, when applicable. The extent of the Fund's exposure to counterparty credit risk in respect to these financial assets approximates their carrying value as recorded on the Statement of Assets and Liabilities. Futures contracts, when applicable, expose the Fund to minimal counterparty credit risk as they are exchange traded and the exchange's clearinghouse, which is counterparty to all exchange traded futures, guarantees the futures contracts against default.

The Fund helps manage counterparty credit risk by entering into agreements only with counterparties the Adviser believes have the financial resources to honor their obligations and by having the Adviser monitor the financial stability of the counterparties. Additionally, counterparties may be required to pledge collateral daily (based on the daily valuation of the financial asset) on behalf of the Fund with a value approximately equal to the amount of any unrealized gain above a pre-determined threshold. Reciprocally, when the Fund has an unrealized loss, the Fund has instructed the custodian to pledge assets of the Fund as collateral with a value approximately equal to the amount of the unrealized loss above a pre-determined threshold. Collateral pledges are monitored and subsequently adjusted if and when the valuations fluctuate, either up or down, by at least the predetermined threshold amount.

Repurchase Agreements

In connection with transactions in repurchase agreements, it is the Fund's policy that its custodian take possession of the underlying collateral securities, the fair value of which exceeds the principal amount of the repurchase transaction, including accrued interest, at all times. If the seller defaults, and the fair value of the collateral declines, realization of the collateral may be delayed or limited.

Zero Coupon Securities

The Fund is authorized to invest in zero coupon securities. A zero coupon security does not pay a regular interest coupon to its holders during the life of the security. Tax-exempt income to the holder of the security comes from accretion of the difference between the original purchase price of the security at issuance and the par value of the security at maturity and is effectively paid at maturity. The market prices of zero coupon securities generally are more volatile than the market prices of securities that pay interest periodically.

Custodian Fee Credit

The Fund has an arrangement with the custodian bank whereby certain custodian fees and expenses are reduced by net credits earned on the Fund's cash on deposit with the bank. Such deposit arrangements are an alternative to overnight investments. Credits for cash balances may be offset by charges for any days on which the Fund overdraws its account at the custodian bank.

Indemnifications

Under the Fund's organizational documents, its officers and trustees are indemnified against certain liabilities arising out of the performance of their duties to the Fund. In addition, in the normal course of business, the Fund enters into contracts that provide general indemnifications to other parties. The Fund's maximum exposure under these arrangements is unknown as this would involve future claims that may be made against the Fund that have not yet occurred. However, the Fund has not had prior claims or losses pursuant to these contracts and expects the risk of loss to be remote.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of increases and decreases in net assets from operations during the reporting period. Actual results may differ from those estimates.

2. Fair Value Measurements

In determining the 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 June 30, 2010:

| | Level 1 | Level 2 | Total |
|--|----------------|----------------|--------------|
|--|----------------|----------------|--------------|

| | | | Level 3 | |
|------------------------|----------------|-------------|--------------------|----------------|
| Investments: | | | | |
| Common Stocks | \$ 184,446,559 | \$ | \$ | \$ 184,446,559 |
| Short-Term Investments | 10,292,117 | | | 10,292,117 |
| Derivatives: | | | | |
| Call Options Written | | (42,015) | | (42,015) |
| Futures Contracts * | (177,250) | | | (177,250) |
| Total | \$ 194,561,426 | \$ (42,015) | \$ | \$ 194,519,411 |

* Represents net unrealized appreciation (depreciation).

3. Derivative Instruments and Hedging Activities

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. For additional information on the derivative instruments in which the Fund was invested during and at the end of the reporting period, refer to the Portfolio of Investments, Financial Statements and Footnote 1 General Information and Significant Accounting Policies.

Nuveen Investments 25

Notes to
FINANCIAL STATEMENTS (Unaudited) (continued)

The following table presents the fair value of all derivative instruments held by the Fund as of June 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* | \$ | Payable for variation margin on futures contracts* | \$ 177,250 |
| Equity Price | Options | | | Call options written, at value | 42,015 |
| Total | | | \$ | | 219,265 |

* 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.

The following tables present the amount of net realized gain (loss) and change in net unrealized appreciation (depreciation) recognized for the six months ended June 30, 2010, on derivative instruments, as well as the primary risk exposure associated with each.

Net Realized Gain (Loss) from Call Options Written

Risk Exposure

Equity Price \$ (492,456)

Net Realized Gain (Loss) from Futures Contracts

Risk Exposure

Equity Price \$ (135,875)

Change in Net Unrealized Appreciation (Depreciation) of Call Options Written

Risk Exposure

Equity Price \$ 1,383,963

Change in Net Unrealized Appreciation (Depreciation) of Futures Contracts**Risk Exposure**

| | | |
|--------------|--|--------------|
| Equity Price | | \$ (335,625) |
|--------------|--|--------------|

4. Fund Shares

Transactions in shares were as follows:

| | Six Months Ended 6/30/10 | Year Ended 12/31/09 |
|--|---|------------------------------------|
| Shares repurchased and retired | (7,100) | (255,100) |
| Weighted average: | | |
| Price per share repurchased and retired | \$ 10.36 | \$ 10.29 |
| Discount per share repurchased and retired | 23.38% | 15.00% |

5. Investment Transactions

Purchases and sales (excluding short-term investments and derivative transactions) during the six months ended June 30, 2010, aggregated \$125,242,626 and \$130,587,569, respectively.

Transactions in call options written during the six months ended June 30, 2010, were as follows:

| | Number of Contracts | Premiums Received |
|--|--------------------------------|------------------------------|
| Outstanding, beginning of period | 899,509 | \$ 998,023 |
| Call options written | 4,242,097 | 4,665,780 |
| Call options terminated in closing purchase transactions | (1,778,992) | (1,745,017) |
| Call options expired | (2,430,411) | (2,257,670) |
| Outstanding, end of period | 932,203 | \$ 1,661,116 |

6. 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

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

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 June 30, 2010, the cost and unrealized appreciation (depreciation) of investments (excluding investments in derivatives), as determined on a federal income tax basis, were as follows:

| | |
|---|----------------|
| Cost of investments | \$ 196,236,577 |
| Gross unrealized: | |
| Appreciation | \$ 13,393,278 |
| Depreciation | (14,891,179) |
| Net unrealized appreciation (depreciation) of investments | \$ (1,497,901) |

The tax components of undistributed net ordinary income and net long-term capital gains at December 31, 2009, the Fund's last tax year end, were as follows:

| | |
|---|----|
| Undistributed net ordinary income * | \$ |
| Undistributed net long-term capital gains | |

* Net ordinary income consists of net taxable income derived from dividends, interest, and net short-term capital gains, if any.

The tax character of distributions paid during the Fund's last tax year ended December 31, 2009, was designated for purposes of the dividends paid deduction as follows:

| | |
|--|--------------|
| Distributions from net ordinary income * | \$ 2,458,704 |
| Return of capital | 15,338,552 |

* Net ordinary income consists of net taxable income derived from dividends, interest, and net short-term capital gains, if any.

At December 31, 2009, the Fund's last tax year end, the Fund had unused capital loss carryforwards available for federal income tax purposes to be applied against future capital gains, if any. If not applied, the carryforwards will expire as follows:

| | |
|-------------------|---------------|
| Expiration: | |
| December 31, 2016 | \$ 13,413,513 |
| December 31, 2017 | 50,597,748 |
| Total | \$ 64,011,261 |

7. Management Fees and Other Transactions with Affiliates

The Fund’s management fee is separated into two components – a fund-level fee, based only on the amount of assets within the Fund, and a complex-level fee, based on the aggregate amount of all fund assets managed by the Adviser. This pricing structure enables Fund shareholders to benefit from growth in the assets within the Fund as well as from growth in the amount of complex-wide assets managed by the Adviser.

The annual fund-level fee, payable monthly, is calculated according to the following schedule:

| Average Daily Managed Assets* | Fund-Level Fee Rate |
|--------------------------------------|----------------------------|
| For the first \$500 million | .7500% |
| For the next \$500 million | .7250 |
| For the next \$500 million | .7000 |
| For the next \$500 million | .6750 |
| For Managed Assets over \$2 billion | .6500 |

Notes to
FINANCIAL STATEMENTS (Unaudited) (continued)

The annual complex-level fee, payable monthly, is calculated according to the following schedule:

| Complex-Level Managed Asset Breakpoint Level* | Effective Rate at Breakpoint Level |
|--|---|
| \$55 billion | .2000% |
| \$56 billion | .1996 |
| \$57 billion | .1989 |
| \$60 billion | .1961 |
| \$63 billion | .1931 |
| \$66 billion | .1900 |
| \$71 billion | .1851 |
| \$76 billion | .1806 |
| \$80 billion | .1773 |
| \$91 billion | .1691 |
| \$125 billion | .1599 |
| \$200 billion | .1505 |
| \$250 billion | .1469 |
| \$300 billion | .1445 |

* The complex-level fee is calculated based upon the aggregate daily managed assets of all Nuveen funds, with such daily managed assets defined separately for each fund in its management agreement, but excluding assets attributable to investments in other Nuveen funds. For the complex-level and fund-level fees, daily managed assets include closed-end fund assets managed by the Adviser that are attributable to financial leverage. For these purposes, financial leverage includes the funds' use of preferred stock and borrowings and certain investments in the residual interest certificates (also called inverse floating rate securities) in tender option bond (TOB) trusts, including the portion of assets held by a TOB trust that has been effectively financed by the trust's issuance of floating rate securities, subject to an agreement by the Adviser to limit the amount of such assets for determining managed assets in certain circumstances. As of June 30, 2010, the complex-level fee rate was .1857%.

The management fee compensates the Adviser for overall investment advisory and administrative services and general office facilities. The Adviser is responsible for the overall investment strategy and asset allocation decisions. The Adviser has entered into a Sub-Advisory Agreement with INTECH. INTECH is compensated for its services to the Fund from the management fee paid to the Adviser.

The Fund pays no compensation directly to those of its trustees who are affiliated with the Adviser or to its officers, all of whom receive remuneration for their services to the Fund from the Adviser or its affiliates. The Board of Trustees has adopted a deferred compensation plan for independent trustees that enables trustees to elect to defer receipt of all or a portion of the annual compensation they are entitled to receive from certain Nuveen advised funds. Under the plan, deferred amounts are treated as though equal dollar amounts had been invested in shares of select Nuveen advised funds.

8. New Accounting Standards

On January 21, 2010, Financial Accounting Standards Board issued changes to the authoritative guidance under U.S. GAAP for fair value measurements. The objective of which is to provide guidance on how investment assets and liabilities are to be valued and disclosed. Specifically, the amendment requires reporting entities disclose Level 3 activity for purchases, sales, issuances and settlements in the Level 3 roll-forward on a gross basis rather than as one net number. The effective date of the amendment is for interim and annual periods beginning after December 15, 2010. At this time, management is evaluating the implications of this guidance and the impact it will have to the financial statement amounts and footnote disclosures, if any.

9. Subsequent Events

Investment Policy Changes

Subsequent to the reporting period, the Fund's Board of Trustees approved minor changes to the investment policies of the Equity Portfolio Strategy of the Fund. Specifically, the Board of Trustees approved a change to the Fund's non-fundamental investment policy to provide that, under normal market circumstances, the Equity Portfolio will consist of a diversified portfolio of 150 to 450 common stocks included in the Index. The changes are a result of INTECH's enhancements to the engineering parameters of the mathematical portfolio construction process. The turnover in the portfolio (measured in terms of total dollar volume of stock trading) is estimated to range between 70% and 100% (versus the previous 80% and 120%) per year. The expected investment outcomes including excess return and tracking error targets have not changed as a result of this portfolio engineering enhancement but the portfolio is expected to have a lower weighted average market capitalization.

Financial
HIGHLIGHTS (Unaudited)

Nuveen Investments 29

Financial

HIGHLIGHTS (Unaudited)

Selected data for a share outstanding throughout each period:

| | Investment Operations | | | | Less Distributions | | | Discount from Shares | | Ending Net Asset Value | Ending Market Value | |
|-------------------|---------------------------|--------------------------|---------------------------------|-----------------------------|--------------------|-------------------|-------------------------|----------------------|-----|------------------------|---------------------|-------|
| | Beginning Net Asset Value | Net Investment Income(a) | Realized/Unrealized Gain (Loss) | Net Investment Total Income | Capital Gains | Return of Capital | Repurchased and Retired | Offering Costs | | | | |
| Year ended 12/31: | | | | | | | | | | | | |
| 2010(e) | \$ 13.18 | \$.04 | \$ (.75) | \$ (0.71) | \$ (.56)*** | \$ | \$ (.56) | \$ * | \$ | \$ 11.91 | \$ 11.52 | |
| 2009 | 11.74 | .14 | 2.38 | 2.52 | (.15) | | (.95) | (1.10) | .02 | * | 13.18 | 12.21 |
| 2008 | 18.72 | .16 | (5.65) | (5.49) | (.16) | | (1.34) | (1.50) | .01 | * | 11.74 | 9.61 |
| 2007(d) | 19.10 | .15 | .81 | 0.96 | (.14) | | (1.16) | (1.30) | * | (0.04) | 18.72 | 16.35 |

| Total Returns | | | Ratios/Supplemental Data Ratios to Average Net Assets(c) | | |
|-----------------------------------|--------------------------------------|-------------------------------|--|-----------------------------|-------------------------------|
| Based on Market Value(b) | Based on Net Asset Value(b) | Ending Net Assets (000) | Expenses | Net Investment Income | Portfolio Turnover Rate |
| (1.18)% | (5.61)% | \$ 190,929 | 1.12%** | .62%** | 60% |
| 41.27 | 23.16 | 211,367 | 1.15 | 1.20 | 112 |
| (34.06) | (30.84) | 191,180 | 1.11 | 1.04 | 51 |
| (12.08) | 4.84 | 307,877 | 1.07** | 1.03** | 73 |

- (a) Per share Net Investment Income is calculated using the average daily shares method.
- (b) Total Return Based on Market Value is the combination of changes in the market price per share and the effect of reinvested dividend income and reinvested capital gains distributions, if any, at the average price paid per share at the time of reinvestment. The last dividend declared in the period, which is typically paid on the first business day of the following month, is assumed to be reinvested at the ending market price. The actual reinvestment for the last dividend declared in the period may take place over several days, and in some instances may not be based on the market price, so the actual reinvestment price may be different from the price used in the calculation. Total returns are not annualized.

Total Return Based on Net Asset Value is the combination of changes in net asset value, reinvested dividend income at net asset value and reinvested capital gains distributions at net asset value, if any. The last dividend declared in the period, which is typically paid on the first business day of the following month, is assumed to be reinvested at the ending net asset value. The actual reinvest price for the last dividend declared in the period may often be based on the Fund's market price (and not its net asset value), and therefore may be different from the price used in the calculation. Total returns are not annualized.

- (c) Ratios do not reflect the effect of custodian fee credits earned on the Fund's net cash on deposit with the custodian bank, where applicable.
- (d) For the period March 27, 2007 (commencement of operations) through December 31, 2007.
- (e) For the six months ended June 30, 2010.
- * Rounds to less than \$.01 per share.
- ** Annualized.
- *** Represents distributions paid From and in excess of net investment income for the six months ended June 30, 2010.

See accompanying notes to financial statements.

Annual Investment Management
Agreement Approval Process

The Investment Company Act of 1940, as amended (the *1940 Act*), provides, in substance, that each investment advisory agreement between a fund and its investment adviser (including sub-advisers) will continue in effect from year to year only if its continuance is approved at least annually by the fund's board members, including by a vote of a majority of the board members who are not parties to the advisory agreement or interested persons of any parties (the *Independent Board Members*), cast in person at a meeting called for the purpose of considering such approval. In connection with such approvals, the fund's board members must request and evaluate, and the investment adviser is required to furnish, such information as may be reasonably necessary to evaluate the terms of the advisory agreement. Accordingly, at a meeting held on May 25-26, 2010 (the *May Meeting*), the Board of Trustees (the *Board*, and each Trustee, a *Board Member*) of the Fund, including a majority of the Independent Board Members, considered and approved the continuation of the advisory and sub-advisory agreements for the Fund for an additional one-year period. These agreements include the investment advisory agreement between Nuveen Asset Management (*NAM*) and the Fund and the sub-advisory agreement between NAM and INTECH Investment Management LLC (the *Sub-Adviser*). In preparation for their considerations at the May Meeting, the Board also held a separate meeting on April 21-22, 2010 (the *April Meeting*). Accordingly, the factors considered and determinations made regarding the renewals by the Independent Board Members include those made at the April Meeting.

In addition, in evaluating the advisory agreement (the *Investment Management Agreement*) and the sub-advisory agreement (the *Sub-advisory Agreement*, and the Investment Management Agreement and Sub-advisory Agreement are each an *Advisory Agreement*), the Independent Board Members reviewed a broad range of information relating to the Fund, NAM and the Sub-Adviser (NAM and the Sub-Adviser are each a *Fund Adviser*), including absolute and comparative performance, fee and expense information for the Fund (as described in more detail below), the profitability of Nuveen for its advisory activities (which includes its wholly owned subsidiaries), and other information regarding the organization, personnel, and services provided by the respective Fund Adviser. The Independent Board Members also met quarterly as well as at other times as the need arose during the year and took into account the information provided at such meetings and the knowledge gained therefrom. Prior to approving the renewal of the Advisory Agreements, the Independent Board Members reviewed the foregoing information with their independent legal counsel and with management, reviewed materials from independent legal counsel describing applicable law and their duties in reviewing advisory contracts, and met with independent legal counsel in private sessions without management present. The Independent Board Members considered the legal advice provided by independent legal counsel and relied upon their knowledge of the Fund Adviser, its services and the Fund resulting from their meetings and other interactions throughout the year and their own business judgment in determining the factors to be considered in evaluating the Advisory Agreements. Each Board Member may have accorded different weight to the various factors in reaching his or her conclusions with respect to the Fund's Advisory Agreements. The Independent Board Members did not identify any single factor as all-important or controlling. The Independent Board Members' considerations were instead based on a comprehensive consideration of all the information presented. The principal factors considered by the Board and its conclusions are described below.

A. Nature, Extent and Quality of Services

In considering renewal of the Advisory Agreements, the Independent Board Members considered the nature, extent and quality of the Fund Adviser's services, including advisory services and administrative services. The Independent Board Members reviewed materials outlining, among other things, the Fund Adviser's organization and business; the types of services that the Fund Adviser or its affiliates provide and are expected to provide to the Fund; the

performance record of the Fund (as described in further detail below); and any initiatives Nuveen had taken for the applicable fund product line, including continued activities to refinance auction rate preferred

32 Nuveen Investments

securities, manage leverage during periods of market turbulence and implement an enhanced leverage management process, modify investment mandates in light of market conditions and seek shareholder approval as necessary, maintain the fund share repurchase program and maintain shareholder communications to keep shareholders apprised of Nuveen's efforts in refinancing preferred shares. In addition to the foregoing, the Independent Board Members also noted the additional services that NAM or its affiliates provide to closed-end funds, including, in particular, Nuveen's continued commitment to supporting the secondary market for the common shares of its closed-end funds through a variety of programs designed to raise investor and analyst awareness and understanding of closed-end funds. These efforts include maintaining an investor relations program to provide timely information and education to financial advisers and investors; providing marketing for the closed-end funds; maintaining and enhancing a closed-end fund website; participating in conferences and having direct communications with analysts and financial advisors.

As part of their review, the Independent Board Members also evaluated the background, experience and track record of the Fund Adviser's investment personnel. In this regard, the Independent Board Members considered any changes in the personnel, and the impact on the level of services provided to the Fund, if any. The Independent Board Members also reviewed information regarding portfolio manager compensation arrangements to evaluate the Fund Adviser's ability to attract and retain high quality investment personnel, preserve stability, and reward performance but not provide an incentive for taking undue risks.

In addition to advisory services, the Independent Board Members considered the quality of administrative services provided by NAM and its affiliates including product management, fund administration, oversight of service providers, shareholder services, administration of Board relations, regulatory and portfolio compliance and legal support. Given the importance of compliance, the Independent Board Members also considered NAM's compliance program, including the report of the chief compliance officer regarding the Fund's compliance policies and procedures.

The Independent Board Members also considered NAM's oversight of the performance, business activities and compliance of the Sub-Adviser. In that regard, the Independent Board Members reviewed an evaluation of the Sub-Adviser from NAM. The evaluation also included information relating to the Sub-Adviser's organization, operations, personnel, assets under management, investment philosophy, strategies and techniques in managing the Fund, developments affecting the Sub-Adviser, and an analysis of the Sub-Adviser. As described in further detail below, the Board also considered the performance of the Fund. In addition, the Board recognized that the Sub-advisory Agreement was essentially an agreement for portfolio management services only and the Sub-Adviser was not expected to supply other significant administrative services to the Fund. As part of their oversight, the Independent Board Members also continued their program of seeking to visit each sub-adviser to the Nuveen funds at least once over a multiple year rotation, meeting with key investment and business personnel. The Independent Board Members noted that NAM recommended the renewal of the Sub-advisory Agreement and considered the basis for such recommendations.

Based on their review, the Independent Board Members found that, overall, the nature, extent and quality of services provided (and expected to be provided) to the Fund under the Investment Management Agreement or Sub-advisory Agreement, as applicable, were satisfactory.

B. The Investment Performance of the Fund and Fund Advisers

The Board considered the performance results of the Fund over various time periods. The Board reviewed, among other things, the Fund's historic investment performance as well as information comparing the Fund's performance information with that of other funds (the *Performance Peer Group*) based on data provided by an independent provider of mutual fund data and with recognized and/or customized benchmarks. In this regard, the performance information the Board reviewed included the Fund's total return information compared to the returns of its Performance Peer Group and recognized and/or customized benchmarks for the quarter and one-year periods ending December 31, 2009 and for the quarter, one-year and three-year periods ending March 31, 2010. The Independent

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

Board Members also reviewed historic premium and discount levels, including a summary of actions taken to date for the Fund. This information supplemented the Fund performance information provided to the Board at each of its quarterly meetings.

In reviewing peer comparison information, the Independent Board Members recognized that the Performance Peer Group of certain funds may not adequately represent the objectives and strategies of the funds, thereby

Nuveen Investments 33

Annual Investment Management
Agreement Approval Process (continued)

limiting the usefulness of comparing a fund's performance with that of its Performance Peer Group. Based on their review, the Independent Board Members determined that the Fund's investment performance over time had been satisfactory. More specifically, the Board noted that the performance of the Fund over time was satisfactory compared to peers, falling within the second or third quartile over various periods.

C. Fees, Expenses and Profitability

1. Fees and Expenses

The Board evaluated the management fees and expenses of the Fund reviewing, among other things, the Fund's gross management fees, net management fees and net expense ratios in absolute terms as well as compared to the fee and expenses of a comparable universe of funds based on data provided by an independent fund data provider (the *Peer Universe*) and in certain cases, to a more focused subset of funds in the Peer Universe (the *Peer Group*) and any expense limitations.

The Independent Board Members further reviewed the methodology regarding the construction of the applicable Peer Universe and/or Peer Group. In reviewing the comparisons of fee and expense information, the Independent Board Members took into account that in certain instances various factors such as: the asset level of a fund relative to peers; the limited size and particular composition of the Peer Universe or Peer Group; the investment objectives of the peers; expense anomalies; changes in the funds comprising the Peer Universe or Peer Group from year to year; levels of reimbursement; the timing of information used; and the differences in the type and use of leverage may impact the comparative data, thereby limiting the ability to make a meaningful comparison with peers.

In reviewing the fee schedule for the Fund, the Independent Board Members also considered the fund-level and complex-wide breakpoint schedules (described in further detail below) and any fee waivers and reimbursements provided by Nuveen (applicable, in particular, for certain closed-end funds launched since 1999). The Independent Board Members noted that the Fund had net management fees and/or a net expense ratio below the peer average of its Peer Group or Peer Universe.

Based on their review of the fee and expense information provided, the Independent Board Members determined that the Fund's management fees were reasonable in light of the nature, extent and quality of services provided to the Fund.

2. Comparisons with the Fees of Other Clients

The Independent Board Members further reviewed information regarding the nature of services and fee rates offered by NAM to other clients. Such clients include separately managed accounts (both retail and institutional accounts), foreign investment funds offered by Nuveen and funds that are not offered by Nuveen but are sub-advised by one of Nuveen's investment management teams. In evaluating the comparisons of fees, the Independent Board Members noted that the fee rates charged to the Fund and other clients vary, among other things, because of the different services involved and the additional regulatory and compliance requirements associated with registered investment companies, such as the Fund. Accordingly, the Independent Board Members considered the differences in the product types, including, but not limited to, the services provided, the structure and operations, product distribution and costs thereof, portfolio investment policies, investor profiles, account sizes and regulatory requirements. The Independent Board Members noted, in particular, that the range of services provided to the Fund (as discussed above) is much more extensive than that provided to separately managed accounts. Given the inherent differences in the products, particularly the extensive services provided to the Fund, the Independent Board Members believe such facts justify the different levels of fees.

In considering the fees of the Sub-Adviser, the Independent Board Members also considered the pricing schedule or fees that the Sub-Adviser charges for similar investment management services for other fund sponsors or clients (such as retail and/or institutional managed accounts) as applicable. The Independent Board Members noted that such fees were the result of arm's-length negotiations.

3. Profitability of Fund Advisers

In conjunction with its review of fees, the Independent Board Members also considered the profitability of Nuveen for its advisory activities (which incorporated Nuveen's wholly-owned affiliated sub-advisers) and its financial condition. The Independent Board Members reviewed the revenues and expenses of Nuveen's

34 Nuveen Investments

advisory activities for the last two years, the allocation methodology used in preparing the profitability data and an analysis of the key drivers behind the changes in revenues and expenses that impacted profitability in 2009. The Independent Board Members noted this information supplemented the profitability information requested and received during the year to help keep them apprised of developments affecting profitability (such as changes in fee waivers and expense reimbursement commitments). In this regard, the Independent Board Members noted that they had also appointed an Independent Board Member as a point person to review and keep them apprised of changes to the profitability analysis and/or methodologies during the year. The Independent Board Members also considered Nuveen's revenues for advisory activities, expenses, and profit margin compared to that of various unaffiliated management firms with similar amounts of assets under management and relatively comparable asset composition prepared by Nuveen.

In reviewing profitability, the Independent Board Members recognized the subjective nature of determining profitability which may be affected by numerous factors including the allocation of expenses. Further, the Independent Board Members recognized the difficulties in making comparisons as the profitability of other advisers generally is not publicly available and the profitability information that is available for certain advisers or management firms may not be representative of the industry and may be affected by, among other things, the adviser's particular business mix, capital costs, types of funds managed and expense allocations. Notwithstanding the foregoing, the Independent Board Members reviewed Nuveen's methodology and assumptions for allocating expenses across product lines to determine profitability. In reviewing profitability, the Independent Board Members recognized Nuveen's investment in its fund business.

Based on their review, the Independent Board Members concluded that Nuveen's level of profitability for its advisory activities was reasonable in light of the services provided. The Independent Board Members also considered the Sub-Adviser's revenues, expenses and profitability margins (pre- and post-tax). Based on their review, the Independent Board Members were satisfied that the Sub-Adviser's level of profitability was reasonable in light of the services provided.

In evaluating the reasonableness of the compensation, the Independent Board Members also considered other amounts paid to a Fund Adviser by the Fund as well as any indirect benefits (such as soft dollar arrangements, if any) the Fund Adviser and its affiliates receive, or are expected to receive, that are directly attributable to the management of the Fund, if any. See Section E below for additional information on indirect benefits a Fund Adviser may receive as a result of its relationship with the Fund. Based on their review of the overall fee arrangements of the Fund, the Independent Board Members determined that the advisory fees and expenses of the Fund were reasonable.

D. Economies of Scale and Whether Fee Levels Reflect These Economies of Scale

With respect to economies of scale, the Independent Board Members have recognized the potential benefits resulting from the costs of a fund being spread over a larger asset base, although economies of scale are difficult to measure and predict with precision, particularly on a fund-by-fund basis. One method to help ensure the shareholders share in these benefits is to include breakpoints in the advisory fee schedule. Generally, management fees for funds in the Nuveen complex are comprised of a fund-level component and a complex-level component, subject to certain exceptions. Accordingly, the Independent Board Members reviewed and considered the applicable fund-level breakpoints in the advisory fee schedules that reduce advisory fees as asset levels increase. Further, the Independent Board Members noted that although closed-end funds may from time to time make additional share offerings, the growth of their assets will occur primarily through the appreciation of such funds' investment portfolio.

In addition to fund-level advisory fee breakpoints, the Board also considered the Fund's complex-wide fee arrangement. Pursuant to the complex-wide fee arrangement, the fees of the funds in the Nuveen complex are generally reduced as the assets in the fund complex reach certain levels. The complex-wide fee arrangement seeks to provide the benefits of economies of scale to fund shareholders when total fund complex assets increase, even if assets

of a particular fund are unchanged or have decreased. The approach reflects the notion that some of Nuveen's costs are attributable to services provided to all its funds in the complex and therefore all funds benefit if these costs are spread over a larger asset base.

Annual Investment Management
Agreement Approval Process (continued)

Based on their review, the Independent Board Members concluded that the breakpoint schedules and complex-wide fee arrangement were acceptable and reflect economies of scale to be shared with shareholders when assets under management increase.

E. Indirect Benefits

In evaluating fees, the Independent Board Members received and considered information regarding potential fall out or ancillary benefits the respective Fund Adviser or its affiliates may receive as a result of its relationship with the Fund. In this regard, the Independent Board Members considered any revenues received by affiliates of NAM for serving as agent at Nuveen's trading desk and as co-manager in initial public offerings of new closed-end funds.

In addition to the above, the Independent Board Members considered whether each Fund Adviser received any benefits from soft dollar arrangements whereby a portion of the commissions paid by the Fund for brokerage may be used to acquire research that may be useful to the Fund Adviser in managing the assets of the Fund and other clients. With respect to NAM, the Independent Board Members noted that NAM does not currently have any soft dollar arrangements; however, to the extent certain bona fide agency transactions that occur on markets that traditionally trade on a principal basis and riskless principal transactions are considered as generating commissions, NAM intends to comply with the applicable safe harbor provisions. With respect to the Sub-Adviser, the Independent Board Members considered that the Sub-Adviser does not participate in soft dollar arrangements. It may, however, pay higher commissions for execution services as permitted under applicable law.

Based on their review, the Independent Board Members concluded that any indirect benefits received by a Fund Adviser as a result of its relationship with the Fund were reasonable and within acceptable parameters.

F. Other Considerations

The Independent Board Members did not identify any single factor discussed previously as all-important or controlling. The Board Members, including the Independent Board Members, unanimously concluded that the terms of the Investment Management Agreement and Sub-advisory Agreement are fair and reasonable, that the respective Fund Adviser's fees are reasonable in light of the services provided to the Fund and that the Investment Management Agreement and the Sub-advisory Agreement be renewed.

Reinvest Automatically
Easily and Conveniently

Nuveen makes reinvesting easy. A phone call is all it takes to set up your reinvestment account.

Nuveen Closed-End Funds Automatic Reinvestment Plan

Your Nuveen Closed-End Fund allows you to conveniently reinvest distributions in additional Fund shares.

By choosing to reinvest, you'll be able to invest money regularly and automatically, and watch your investment grow through the power of compounding. Just like distributions in cash, there may be times when income or capital gains taxes may be payable on distributions that are reinvested.

It is important to note that an automatic reinvestment plan does not ensure a profit, nor does it protect you against loss in a declining market.

Easy and convenient

To make recordkeeping easy and convenient, each quarter you'll receive a statement showing your total distributions, the date of investment, the shares acquired and the price per share, and the total number of shares you own.

How shares are purchased

The shares you acquire by reinvesting will either be purchased on the open market or newly issued by the Fund. If the shares are trading at or above net asset value at the time of valuation, the Fund will issue new shares at the greater of the net asset value or 95% of the then-current market price. If the shares are trading at less than net asset value, shares for your account will be purchased on the open market. If the Plan Agent begins purchasing Fund shares on the open market while shares are trading below net asset value, but the Fund's shares subsequently trade at or above their net asset value before the Plan Agent is able to complete its purchases, the Plan Agent may cease open-market purchases and may invest the uninvested portion of the distribution in newly-issued Fund shares at a price equal to the greater of the shares' net asset value or 95% of the shares' market value on the last business day immediately prior to the purchase date. Distributions received to purchase shares in the open market will normally be invested shortly after the distribution payment date. No interest will be paid on distributions awaiting reinvestment. Because the market price of the shares may increase before purchases are completed, the average purchase price per share may exceed the market price at the time of valuation, resulting in the acquisition of fewer shares than if the distribution had been paid in shares issued by the Fund. A pro rata portion of any applicable brokerage commissions on open market purchases will be paid by Plan participants. These commissions usually will be lower than those charged on individual transactions.

Flexible

You may change your distribution option or withdraw from the Plan at any time, should your needs or situation change.

You can reinvest whether your shares are registered in your name, or in the name of a brokerage firm, bank, or other nominee. Ask your financial advisor if his or her firm will participate on your behalf. Participants whose shares are registered in the name of one firm may not be able to transfer the shares to another firm and continue to participate in the Plan.

The Fund reserves the right to amend or terminate the Plan at any time. Although the Fund reserves the right to amend the Plan to include a service charge payable by the participants, there is no direct service charge to participants in the Plan at this time.

Call today to start reinvesting distributions

For more information on the Nuveen Automatic Reinvestment Plan or to enroll in or withdraw from the Plan, speak with your financial advisor or call us at (800) 257-8787.

Glossary of Terms
Used in this Report

- n **Average Annual Total Return:** This is a commonly used method to express an investment's performance over a particular, usually multi-year time period. It expresses the return that would have been necessary each year to equal the investment's actual cumulative performance (including change in NAV or market price and reinvested dividends and capital gains distributions, if any) over the time period being considered.
- n **Current Distribution Rate:** Market yield is based on the Fund's current annualized quarterly distribution divided by the Fund's current market price. The Fund's quarterly distributions to its shareholders may be comprised of ordinary income, net realized capital gains and, if at the end of the calendar year the Fund's cumulative net ordinary income and net realized gains are less than the amount of the Fund's distributions, a tax return of capital.
- n **Net Asset Value (NAV):** A Fund's NAV per share is calculated by subtracting the liabilities of the Fund from its total assets and then dividing the remainder by the number of shares outstanding. Fund NAVs are calculated at the end of each business day.

Notes

40 Nuveen Investments

Notes

Nuveen Investments 41

Notes

42 Nuveen Investments

Other Useful Information

Board of Trustees

John P. Amboian
Robert P. Bremner
Jack B. Evans
William C. Hunter
David J. Kundert
William J. Schneider
Judith M. Stockdale
Carole E. Stone
Terence J. Toth

Fund Manager

Nuveen Asset Management
333 West Wacker Drive
Chicago, IL 60606

Custodian

State Street Bank & Trust Company
Boston, MA

**Transfer Agent and
Shareholder Services**

State Street Bank & Trust Company
Nuveen Funds
P.O. Box 43071
Providence, RI 02940-3071
(800) 257-8787

Legal Counsel

Chapman and Cutler LLP
Chicago, IL

**Independent Registered
Public Accounting Firm**

PricewaterhouseCoopers LLP
Chicago, IL

Quarterly Portfolio of Investments and Proxy Voting Information

You may obtain (i) the Fund's quarterly portfolio of investments, (ii) information regarding how the Fund voted proxies relating to portfolio securities held during the most recent twelve-month period ended June 30, and (iii) a description of the policies and procedures that the Fund used to determine how to vote proxies relating to portfolio securities without charge, upon request, by calling Nuveen Investments toll-free at (800) 257-8787 or on Nuveen's

website at www.nuveen.com.

You may also obtain this and other Fund information directly from the Securities and Exchange Commission (SEC). The SEC may charge a copying fee for this information. Visit the SEC on-line at <http://www.sec.gov> or in person at the SEC's Public Reference Room in Washington, D.C. Call the SEC at (202) 942-8090 for room hours and operation. You may also request Fund information by sending an e-mail request to publicinfo@sec.gov or by writing to the SEC's Public Reference Section at 100 F Street NE, Washington, D.C. 20549.

CEO Certification Disclosure

The Fund's Chief Executive Officer has submitted to the New York Stock Exchange (NYSE) the annual CEO certification as required by Section 303A.12(a) of the NYSE Listed Company Manual.

The Fund has filed with the SEC the certification of its Chief Executive Officer and Chief Financial Officer required by Section 302 of the Sarbanes-Oxley Act.

Common Share Information

The Fund intends to repurchase shares of its own common stock in the future at such times and in such amounts as is deemed advisable. During the period covered by this report, the Fund repurchased shares of its common stock as shown in the accompanying table.

| |
|--|
| Common Shares Repurchased |
| 7,100 |

Any future repurchases will be reported to shareholders in the next annual or semi-annual report.

Nuveen Investments:
Serving Investors for Generations

Since 1898, financial advisors and their clients have relied on Nuveen Investments to provide dependable investment solutions through continued adherence to proven, longterm investing principles. Today, we offer a range of high quality equity and fixed-income solutions designed to be integral components of a well-diversified core portfolio.

Focused on meeting investor needs.

Nuveen Investments is a global investment management firm that seeks to help secure the long-term goals of institutions and high net worth investors as well as the consultants and financial advisors who serve them. We market our growing range of specialized investment solutions under the high-quality brands of HydePark, NWQ, Nuveen, Santa Barbara, Symphony, Tradewinds and Winslow Capital. In total, Nuveen Investments managed approximately \$150 billion of assets on June 30, 2010.

Find out how we can help you.

To learn more about the products and services of Nuveen Investments may be able to help you meet your financial goals, talk to your financial advisor, or call us at **(800) 257-8787**. Please read the information provided carefully before you invest. Investors should consider the investment objective and policies, risk considerations, charges and expenses of any investment carefully. Where applicable, be sure to obtain a prospectus, which contains this and other relevant information. To obtain a prospectus, please contact your securities representative or **Nuveen Investments, 333 W. Wacker Dr., Chicago, IL 60606**. Please read the prospectus carefully before you invest or send money.

Learn more about Nuveen Funds at: www.nuveen.com/cef

Nuveen makes things e-simple.

It only takes a minute to sign up for e-Reports. Once enrolled, you'll receive an e-mail as soon as your Nuveen Fund information is ready - no more waiting for delivery by regular mail. Just click on the link within the e-mail to see the report and save it on your computer if you wish.

Free e-Reports right to your e-mail!

www.investordelivery.com

If you receive your Nuveen Fund distributions and statements from your financial advisor or brokerage account.

OR

www.nuveen.com/accountaccess

If you receive your Nuveen Fund distributions and statements directly from Nuveen.

Distributed by
Nuveen Investments, LLC

333 West Wacker Drive
Chicago, IL 60606
www.nuveen.com
ESA-I-0610D

ITEM 2. CODE OF ETHICS.

Not applicable to this filing.

ITEM 3. AUDIT COMMITTEE FINANCIAL EXPERT.

Not applicable to this filing.

ITEM 4. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

Not applicable to this filing.

ITEM 5. AUDIT COMMITTEE OF LISTED REGISTRANTS.

Not applicable to this filing.

ITEM 6. SCHEDULE OF INVESTMENTS.

(a) See Portfolio of Investments in Item 1.

(b) Not applicable.

ITEM 7. DISCLOSURE OF PROXY VOTING POLICIES AND PROCEDURES FOR CLOSED-END MANAGEMENT INVESTMENT COMPANIES.

Not applicable to this filing.

ITEM 8. PORTFOLIO MANAGERS OF CLOSED-END MANAGEMENT INVESTMENT COMPANIES.

Not applicable to this filing.

ITEM 9. PURCHASES OF EQUITY SECURITIES BY CLOSED-END MANAGEMENT INVESTMENT COMPANY AND AFFILIATED PURCHASERS.

| Period* | (a) TOTAL NUMBER OF SHARES (OR UNITS) PURCHASED | (b) AVERAGE PRICE PAID PER SHARE (OR UNIT) | (c) TOTAL NUMBER OF SHARES (OR UNITS) PURCHASED AS PART OF PUBLICLY ANNOUNCED PLANS OR PROGRAMS | (d)* MAXIMUM NUMBER (OR APPROXIMATE DOLLAR VALUE) OF SHARES (OR UNITS) THAT MAY YET BE PURCHASED UNDER THE PLANS OR PROGRAMS |
|---------------------|--|---|---|---|
| JANUARY 1-31, 2010 | 0 | | 0 | 1,462,500 |
| FEBRUARY 1-28, 2010 | 0 | | 0 | 1,462,500 |
| MARCH 1-31, 2010 | 0 | | 0 | 1,462,500 |
| APRIL 1-30, 2010 | 0 | | 0 | 1,462,500 |
| MAY 1-31, 2009 | 7,100 | 10.36 | 7,100 | 1,455,400 |
| JUNE 1-30, 2009 | 0 | | 0 | 1,455,400 |
| TOTAL | 7,100 | | | |

* The registrant's repurchase program, which authorized the repurchase of 1,620,000 shares, was announced October 3, 2009. Any

repurchases
made by the
registrant
pursuant to the
program were
made through
open-market
transactions.

ITEM 10. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

There have been no material changes to the procedures by which shareholders may recommend nominees to the Registrant's Board implemented after the registrant last provided disclosure in response to this item.

ITEM 11. 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 Rules 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (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 second fiscal quarter of the period covered by this report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

ITEM 12. EXHIBITS.

File the exhibits listed below as part of this Form.

(a)(1) Any code of ethics, or amendment thereto, that is the subject of the disclosure required by Item 2, to the extent that the registrant intends to satisfy the Item 2 requirements through filing of an exhibit: Not applicable to this filing.

(a)(2) 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)) in the exact form set forth below: Ex-99.CERT attached hereto.

(a)(3) Any written solicitation to purchase securities under Rule 23c-1 under the 1940 Act (17 CFR 270.23c-1) sent or given during the period covered by the report by or on behalf of the registrant to 10 or more persons: Not applicable.

(b) If the report is filed under Section 13(a) or 15(d) of the Exchange Act, provide the certifications required by Rule 30a-2(b) under the 1940 Act (17 CFR 270.30a-2(b)); Rule 13a-14(b) or Rule 15d-14(b) under the Exchange Act (17 CFR 240.13a-14(b) or 240.15d-14(b)), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. 1350) as an exhibit. A certification furnished pursuant to this paragraph will not be deemed filed for purposes of Section 18 of the Exchange Act (15 U.S.C. 78r), or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference. Ex-99.906 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: September 8, 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: September 8, 2010

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

Date: September 8, 2010