

NUVEEN INSURED NEW YORK TAX FREE ADVANTAGE MUNICIPAL FUND
Form N-CSRS
June 06, 2011

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 811-21211

Nuveen Insured New York Tax-Free Advantage Municipal 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)

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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: September 30

Date of reporting period: March 31, 2011

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 STOCKHOLDERS.

INVESTMENT ADVISER NAME CHANGE

Effective January 1, 2011, Nuveen Asset Management, the Funds' investment adviser, changed its name to Nuveen Fund Advisors, Inc. ("Nuveen Fund Advisors"). Concurrently, Nuveen Fund Advisors formed a wholly-owned subsidiary, Nuveen Asset Management, LLC, to house its portfolio management capabilities.

NUVEEN INVESTMENTS COMPLETES STRATEGIC COMBINATION WITH FAF ADVISORS

On December 31, 2010, Nuveen Investments completed the strategic combination between Nuveen Asset Management, LLC, the largest investment affiliate of Nuveen Investments, and FAF Advisors. As part of this transaction, U.S. Bancorp – the parent of FAF Advisors – received cash consideration and a 9.5% stake in Nuveen Investments in exchange for the long term investment business of FAF Advisors, including investment management responsibilities for the non-money market mutual funds of the First American Funds family.

The approximately \$27 billion of mutual fund and institutional assets managed by FAF Advisors, along with the investment professionals managing these assets and other key personnel, have become part of Nuveen Asset Management, LLC. With these additions to Nuveen Asset Management, LLC, this affiliate now manages more than \$100 billion of assets across a broad range of strategies from municipal and taxable fixed income to traditional and specialized equity investments.

This combination does not affect the investment objectives or strategies of the Funds in this report. 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 HydePark, NWQ Investment Management, Santa Barbara Asset Management, Symphony Asset Management, Tradewinds Global Investors and Winslow Capital. Nuveen Investments managed approximately \$206 billion of assets as of March 31, 2011.

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Chairman's
Letter to Shareholders

Dear Shareholders,

In 2010, the global economy recorded another year of recovery from the financial and economic crises of 2008, but many of the factors that caused the downturn still weigh on the prospects for continued improvement. In the U.S., ongoing weakness in housing values has put pressure on homeowners and mortgage lenders. Similarly, the strong earnings recovery for corporations and banks is only slowly being translated into increased hiring or more active lending. Globally, deleveraging by private and public borrowers has inhibited economic growth and that process is far from complete.

Encouragingly, constructive actions are being taken by governments around the world to deal with economic issues. In the U.S., the recent passage of a stimulatory tax bill relieved some of the pressure on the Federal Reserve to promote economic expansion through quantitative easing and offers the promise of sustained economic growth. A number of European governments are undertaking programs that could significantly reduce their budget deficits. Governments across the emerging markets are implementing various steps to deal with global capital flows without undermining international trade and investment.

The success of these government actions could determine whether 2011 brings further economic recovery and financial market progress. One risk associated with the extraordinary efforts to strengthen U.S. economic growth is that the debt of the U.S. government will continue to grow to unprecedented levels. Another risk is that over time there could be inflationary pressures on asset values in the U.S. and abroad, because what happens in the U.S. impacts the rest of the world economy. Also, these various actions are being taken in a setting of heightened global economic uncertainty, primarily about the supplies of energy and other critical commodities. In this challenging environment, your Nuveen investment team continues to seek sustainable investment opportunities and to remain alert to potential risks in a recovery still facing many headwinds. On your behalf, we monitor their activities to assure they maintain their investment disciplines.

As you will note elsewhere in this report, on December 31, 2010, Nuveen Investments completed a strategic combination with FAF Advisors, Inc., the manager of the First American Funds. The combination adds highly respected and distinct investment teams to meet the needs of investors and their advisors and is designed to benefit all fund shareholders by creating a fund organization with the potential for further economies of scale and the ability to draw from even greater talent and expertise to meet those investor needs.

As of the end of April, 2011, Nuveen Investments had completed the refinancing of all of the Auction Rate Preferred Securities issued by its taxable closed-end funds and 89% of the MuniPreferred shares issued by its tax-exempt closed-end funds. Please consult the Nuveen Investments web site, www.Nuveen.com, for the current status of this important refinancing program.

As always, I encourage you to contact your financial consultant if you have any questions about your investment in a Nuveen Fund. On behalf of the other members of your Fund Board, we look forward to continuing to earn your trust in the months and years ahead.

Sincerely,

Robert P. Bremner
Chairman of the Board
May 19, 2011

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Portfolio Manager's Comments

Nuveen New York Investment Quality Municipal Fund, Inc. (NQN)
Nuveen New York Select Quality Municipal Fund, Inc. (NVN)
Nuveen New York Quality Income Municipal Fund, Inc. (NUN)
Nuveen Insured New York Premium Income Municipal Fund, Inc. (NNF)
Nuveen Insured New York Dividend Advantage Municipal Fund (NKO)
Nuveen Insured New York Tax-Free Advantage Municipal Fund (NRK)

Portfolio manager Scott Romans discusses key investment strategies and the six-month performance of the Funds. Scott, who joined Nuveen in 2000, assumed portfolio management responsibility for the New York Funds in January 2011 from Cathryn Steeves, who managed these six Funds from 2006 to December 2010.

What key strategies were used to manage the New York Funds during the six-month reporting period ended March 31, 2011?

After rallying through most of 2010, municipal bond prices generally declined during this six-month period, impacted by investor concerns about inflation, the federal deficit, and the deficits impact on demand for U.S. Treasuries. Adding to this situation was media coverage of the strained finances of many state and local governments. As a result, money began to flow out of municipal funds, yields rose and valuations declined. Toward the end of this period, we saw the environment in the municipal market improve, as crossover buyers were attracted by municipal bond prices and tax-exempt yields, resulting in decreased outflows, declining yields and rising valuations.

The municipal bond market also was affected by a significant decline in new tax-exempt issuance during this period. One reason for this decrease was the heavy issuance of taxable municipal debt under the Build America Bond (BAB) program, which was created as part of the American Recovery and Reinvestment Act of February 2009 and which expired December 31, 2010. During the fourth quarter of 2010, taxable Build America Bonds issuance nationwide totaled \$44.1 billion, accounting for 33% of new bonds in the municipal market. This program also meaningfully impacted the availability of tax-exempt bonds in New York, which ranked second (after California) in terms of dollar amount of BABs issued during this period. For the three months ended December 31, 2010, taxable Build America Bond issuance in New York totaled \$5.7 billion, representing approximately 37% of new bonds issued in the municipal marketplace. Since interest payments from Build America Bonds represent taxable income, we did not view these bonds as good investment opportunities for these Funds. Further compounding the supply situation was the decline in new municipal issuance during the first three months of 2011, when issuance in New York declined 16% from that of the same period in 2010.

In addition, because of the continued severe decline in the issuance of AAA rated insured bonds, this was an especially difficult period for Funds with an insured mandate, such as

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 manager 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 Funds disclaim any obligation to update publicly or revise any forward-looking statements or views expressed herein.

Any reference to credit ratings for portfolio holdings denotes the highest rating assigned by a Nationally Recognized Statistical Rating Organization (NRSRO) such as Standard & Poor's (S&P), Moody's or Fitch. AAA, AA, A and BBB ratings are investment grade; BB, B, CCC, CC, C and D ratings are below investment grade. Holdings and ratings

may change over time.

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these six New York Funds. Over the six-month period, new insured issuance accounted for only about 6% of national issuance, down approximately 30% from the levels of a year earlier. Even though these Funds may now invest up to 20% of their net assets in uninsured investment-grade credits rated BBB- or higher, the combination of constrained tax-exempt supply and little insured issuance meant that the insured Funds were, for the most part, less active than their non-insured counterparts during this period.

In this environment, we continued to seek individual credits with the potential to perform well over the long term. Overall, the Funds focused on purchasing higher-grade issues. To find bonds that fit our investment parameters, we took an opportunistic approach, monitoring the Funds' cash levels and watching for attractive deals in both the primary and secondary markets.

Cash for new purchases during this period was generated primarily by the proceeds from bond calls and maturing bonds, which we worked to redeploy to keep the Funds as fully invested as possible. The Funds also sold a few holdings during this period, but overall, selling was very minimal because of the difficulty in finding adequate replacement securities.

As of March 31, 2011, all six Funds continued to use inverse floating rate securities. We employ inverse floaters as a form of leverage for a variety of reasons, including duration management, income enhancement and total return enhancement.

How did the Funds perform?

Individual results for the Nuveen New York Funds, as well as relevant index and peer group information, are presented in the accompanying table.

Average Annual Total Returns on Common Share Net Asset Value*
For periods ended 3/31/11

Fund	6-Month	1-Year	5-Year	10-Year
NQN	-5.68%	1.43%	4.03%	5.42%
NVN	-6.56%	0.39%	3.80%	5.39%
NUN	-5.91%	0.81%	3.83%	5.24%
NNF	-5.51%	1.36%	3.89%	5.14%
NKO	-4.45%	1.57%	4.04%	N/A
NRK	-5.83%	-0.47%	4.10%	N/A
Standard & Poor's (S&P) New York Municipal Bond Index ¹	-3.53%	1.47%	4.10%	4.72%
Standard & Poor's (S&P) Insured National Municipal Bond Index ²	-4.61%	0.90%	3.67%	4.62%
Lipper Single-State Insured Municipal Debt Funds Average ³	-7.64%	-0.69%	3.40%	4.85%

For the six months ended March 31, 2011, the cumulative returns on common share net asset value (NAV) for these New York Funds underperformed the return for the Standard & Poor's (S&P) New York Municipal Bond Index. NKO exceeded the return for the Standard & Poor's (S&P) Insured National Municipal Bond Index, while the remaining five Funds lagged this measure. All six of the New York Funds outperformed the average return for the Lipper Single-State Insured Municipal Debt Funds Average.

Key management factors that influenced the Funds' returns during this period included duration and yield curve positioning, credit exposure, and sector allocation. The use of financial leverage also factored into the Funds'

performance. Leverage is discussed in more detail below.

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

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 individual Performance Overview for your Fund in this report.

- 1 The Standard & Poor's (S&P) New York Municipal Bond Index is an unleveraged, market value-weighted index designed to measure the performance of the tax-exempt, investment-grade New York municipal bond market. This index does not reflect any initial or ongoing expenses and is not available for direct investment.
 - 2 The Standard & Poor's (S&P) Insured National Municipal Bond Index is a national unleveraged, market value-weighted index designed to measure the performance of the tax-exempt insured U.S. municipal bond market. This index does not reflect any initial or ongoing expenses and is not available for direct investment.
 - 3 The Lipper Single-State Insured Municipal Debt Funds Average is calculated using the returns of all leveraged and unleveraged closed-end funds in this category for each period as follows: 6-month, funds, 1-year, 44 funds; 5-year, 44 funds; and 10-year, 24 funds. The performance of the Lipper Single-State Insured Municipal Debt Funds Average represents the overall average of returns for funds from eight different states with a wide variety of municipal market conditions. Lipper returns account for the effects of management fees and assume reinvestment of dividends, but do not reflect any applicable sales charges. The Lipper average is not available for direct investment.
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During this period, municipal bonds with shorter maturities generally outperformed other maturity categories, with credits at the longest end of the yield curve posting the weakest returns. Among these six Funds, NKO was the most advantageously positioned in terms of duration and yield curve positioning, with more exposure to the outperforming shorter part of the curve. Duration and yield curve positioning also was a modestly positive contributor to the performance of NQN, NUN, NNF and NRK. NVN, on the other hand, had the longest duration among these six Funds, and its greater exposure to the underperforming long end of the curve detracted from its performance.

Credit exposure also played an important role in performance. During the market reversal of late 2010, as the redemption activity in high-yield funds increased, lower-rated credits were negatively impacted. For the period as a whole, bonds rated BBB typically underperformed those rated AAA. Overall, the credit exposure of these Funds had a positive to neutral impact on their performance.

Holdings that generally helped the Funds' returns included resource recovery bonds, housing credits, and general obligation and other tax-supported bonds. The health care sector of the New York market also was a modest outperformer. In general, these Funds tended to be overweighted in housing and health care bonds, which enhanced their returns. In addition, pre-refunded bonds, which are typically backed by U.S. Treasury securities, were among the stronger performers during this period, primarily due to their shorter effective maturities and higher credit quality.

In contrast, the industrial development revenue (IDR), transportation, and "other revenue" sectors turned in relatively weaker performance and zero coupon bonds were among the poorest performers. The insured segment as a whole also failed to keep pace with the general municipal market return for the six months. These Funds were generally underweighted in transportation and "other revenue," which lessened the negative impact of these sectors.

IMPACT OF THE FUNDS' LEVERAGE STRATEGIES ON PERFORMANCE

One important factor impacting the returns of most of these Funds relative to the comparative indexes was the Funds' use of structural leverage. The Funds use leverage because their managers believe that, over time, leveraging provides opportunities for additional income and total return for common shareholders. However, use of leverage also can expose common shareholders to additional volatility. For example, as the prices of securities held by a Fund decline, the negative impact of these valuation changes on common share net asset value and common shareholder total return is magnified by the use of leverage. This is what happened in these Funds during this period, and the use of structural leverage hurt their overall performance.

RECENT DEVELOPMENTS REGARDING THE FUNDS' REDEMPTION OF AUCTION RATE PREFERRED SHARES

Shortly after their respective inception, each of the Funds issued auction rate preferred shares (ARPS) to create structural leverage. As noted in past shareholder reports, the ARPS issued by many closed-end funds, including these Funds, have been hampered by a lack of liquidity since February 2008. Since that time, more ARPS have been submitted for sale in each of their regularly scheduled auctions than there have been offers to buy. In fact, offers to buy have been almost completely nonexistent since late February 2008. This means that these auctions have "failed to clear," and that many, or all, of the ARPS shareholders who wanted to sell their shares in these auctions were unable to do so. This lack of liquidity in ARPS did not lower the credit quality of these shares, and ARPS shareholders unable to sell their shares continued to receive distributions at the "maximum rate" applicable to failed auctions, as calculated in accordance with the pre-established terms of the ARPS. In the recent market, with short term rates at multi-generational lows, those maximum rates also have been low.

One continuing implication for common shareholders from the auction failures is that each Fund's cost of leverage likely has been incrementally higher at times than it otherwise might have been had the auctions continued to be successful. As a result, each Fund's common share earnings likely have been incrementally lower at times than they otherwise might have been.

As noted in past shareholder reports, the Nuveen funds' Board of Directors/Trustees authorized several methods that can be used separately or in combination to refinance a portion of the Nuveen funds' outstanding ARPS. Some funds have utilized tender option bonds (TOBs), also known as inverse floating rate securities, for leverage purposes. The amount of TOBs that a fund may use varies according to the composition of each fund's portfolio. Some funds have a greater ability to use TOBs than others. Some funds have issued Variable Rate Demand Preferred (VRDP) Shares as well as Variable MuniFund Term Preferred (VMTP) Shares, which are a floating rate form of preferred stock with a mandatory term redemption. Some funds have issued MuniFund Term Preferred (MTP) Shares, a fixed rate form of preferred stock with a mandatory redemption period of three to five years.

While all these efforts have reduced the total amount of outstanding ARPS issued by the Nuveen funds, the funds cannot provide any assurance on when the remaining outstanding ARPS might be redeemed.

During 2010 and 2011, certain Nuveen leveraged closed-end funds (including NVN and NUN) received a demand letter from a law firm on behalf of purported holders of common shares of each such fund, alleging that Nuveen and the funds' officers and

Board of Directors/Trustees breached their fiduciary duties related to the redemption at par of the funds' ARPS. In response, the Board established an ad hoc Demand Committee consisting of certain of its disinterested and independent Board members to investigate the claims. The Demand Committee retained independent counsel to assist it in conducting an extensive investigation. Based upon its investigation, the Demand Committee found that it was not in the best interests of each fund or its shareholders to take the actions suggested in the demand letters, and recommended that the full Board reject the demands made in the demand letters. After reviewing the findings and recommendation of the Demand Committee, the full Board of each fund unanimously adopted the Demand Committee's recommendation.

Subsequently, the funds that received demand letters (including NUN) were named in a consolidated complaint as nominal defendants in a putative shareholder derivative action captioned Martin Safier, et al. v. Nuveen Asset Management, et al. that was filed in the Circuit Court of Cook County, Illinois, Chancery Division (the "Cook County Chancery Court") on February 18, 2011 (the "Complaint"). The Complaint, filed on behalf of purported holders of each fund's common shares, also name Nuveen Fund Advisors, Inc. as a defendant, together with current and former Officers and interested Director/Trustees of each of the funds (together with the nominal defendants, collectively, the "Defendants"). The Complaint contains the same basic allegations contained in the demand letters. The suits seek a declaration that the Defendants have breached their fiduciary duties, an order directing the Defendants not to redeem any ARPS at their liquidation value using fund assets, indeterminate monetary damages in favor of the funds and an award of plaintiffs' costs and disbursements in pursuing the action. Nuveen Fund Advisors, Inc. believes that the Complaint is without merit, and is defending vigorously against these charges.

As of March 31, 2011, the amount of ARPS redeemed by the Funds is shown in the accompanying table.

Fund	ARPS Redeemed	% of Original ARPS
NQN	\$ 144,000,000	100.0%
NVN	\$ 193,000,000	100.0%
NUN	\$ 197,000,000	100.0%
NNF	\$ 14,650,000	22.5%
NKO	\$ 61,000,000	100.0%
NRK	\$ 27,000,000	100.0%

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MTP

As noted in previous shareholder reports, as of March 31, 2011, the following Fund has issued and outstanding MTP Shares, at liquidation value, as shown in the accompanying table.

Fund	MTP Shares at Liquidation Value
NRK	27,680,000

VRDP

As noted in previous shareholder reports, as of March 31, 2011, the following Fund has issued and outstanding VRDP Shares, at liquidation value, as shown in the accompanying table.

Fund	VRDP Shares at Liquidation Value
NQN	112,300,000
NVN	164,800,000
NKO	50,000,000

During the current reporting period, NUN issued \$161.7 million of VRDP to redeem at par its remaining outstanding ARPS. As noted previously, VRDP is a newly-developed instrument that essentially replaces all or a portion of the ARPS used as leverage and potentially could be used to refinance all or a portion of the ARPS of other funds. VRDP shares include a liquidity feature that allows holders of VRDP to have their shares purchased by a liquidity provider in the event that sell orders have not been matched with purchase orders and successfully settled in a remarketing. VRDP is offered only to qualified institutional buyers, defined pursuant to Rule 144A under the Securities Act of 1933.

(Refer to Notes to Financial Statements, Footnote 1 – General Information and Significant Accounting Policies and Footnote 4 – Fund Shares for further details on MTP and VRDP Shares.)

At the time this report was prepared, all 84 of the Nuveen closed-end municipal funds that had issued ARPS have redeemed at par all or a portion of these shares. These redemptions bring the total amount of Nuveen's municipal closed-end funds' ARPS redemptions to approximately \$8.8 billion of the approximately \$11.0 billion originally outstanding.

For up-to-date information, please visit the Nuveen CEF Auction Rate Preferred Resource Center at:
<http://www.nuveen.com/arps>.

Regulatory Matter

During May 2011, Nuveen Securities, LLC (Nuveen) entered into a settlement with the Financial Industry Regulatory Authority (FINRA) with respect to certain allegations regarding Nuveen-sponsored closed-end fund Auction Rate Preferred Securities (ARPS) marketing brochures. As part of this settlement, Nuveen neither admitted to nor denied FINRA's allegations. Nuveen is the broker-dealer subsidiary of Nuveen Investments, Inc.

The settlement with FINRA concludes an investigation that followed the widespread failure of auctions for ARPS and other auction rate securities, which generally began in mid-February 2008. In the settlement, FINRA alleged that certain marketing materials provided by Nuveen were false and misleading. Nuveen agreed to a censure and the payment of a \$3 million fine.

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Common Share Dividend
and Share Price Information

The dividends of NQN, NVN, NUN, NNF, NKO and NRK remained stable throughout the six-month period ended March 31, 2011.

Due to normal portfolio activity, common shareholders of the following Funds received capital gains distributions in December 2010 as follows:

Fund	Long-Term Capital Gains (per share)
NQN	\$ 0.0507
NVN	\$ 0.0292
NUN	\$ 0.0044

All of the Funds in this report seek to pay stable dividends at rates that reflect each Fund's past results and projected future performance. During certain periods, each Fund may pay dividends at a rate that may be more or less than the amount of net investment income actually earned by the Fund during the period. If a Fund has cumulatively earned more than it has paid in dividends, it holds the excess in reserve as undistributed net investment income (UNII) as part of the Fund's NAV. Conversely, if a Fund has cumulatively paid dividends in excess of its earnings, the excess constitutes negative UNII that is likewise reflected in the Fund's NAV. Each Fund will, over time, pay all of its net investment income as dividends to shareholders. As of March 31, 2011, all of the Funds in this report had positive UNII balances, based upon our best estimate, for both tax and financial reporting purposes.

COMMON SHARE REPURCHASES AND SHARE PRICE INFORMATION

As of March 31, 2011, and since the inception of the Funds' repurchase program, the Funds have cumulatively repurchased and retired their common shares as shown in the accompanying table.

Fund	Common Shares Repurchased and Retired	% of Outstanding Common Shares
NQN	105,600	0.6%
NVN	118,000	0.5%
NUN	159,800	0.7%
NNF	85,700	1.0%
NKO	27,000	0.3%
NRK	6,800	0.2%

During the six-month reporting period, the Funds did not repurchase any of their outstanding common shares.

As of March 31, 2011 and during the six-month reporting period, the Funds' share prices were trading at (-) discounts to their NAVs as shown in the accompanying table.

Fund	3/31/11 Six-Month Average
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