

NUVEEN MISSOURI PREMIUM INCOME MUNICIPAL FUND  
Form N-Q  
April 29, 2013

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT  
COMPANY

Investment Company Act file number 811-7616

Nuveen Missouri Premium Income Municipal Fund  
(Exact name of registrant as specified in charter)

Nuveen Investments  
333 West Wacker Drive, Chicago, Illinois 60606  
(Address of principal executive offices) (Zip code)

Kevin J. McCarthy  
Vice President and Secretary  
333 West Wacker Drive, Chicago, Illinois 60606  
(Name and address of agent for service)

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

Date of fiscal year end: 5/31

Date of reporting period: 2/28/13

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

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



## Item 1. Schedule of Investments

## Portfolio of Investments (Unaudited)

Nuveen Missouri Premium Income  
Municipal Fund (NOM)  
February 28, 2013

| Principal<br>Amount (000) | Description (1)  | Optional Call<br>Provisions (2) | Ratings (3) | Value        |
|---------------------------|--|---------------------------------|-------------|--------------|
| \$ 1,000                  | Consumer Staples – 3.6% (2.3% of Total Investments)<br>Missouri Development Finance Board, Solid Waste Disposal Revenue Bonds, Procter and Gamble Inc., Series 1999, 5.200%, 3/15/29 (Alternative Minimum Tax) | No Opt. Call                    | AA–         | \$ 1,241,610 |
| 250                       | Education and Civic Organizations – 9.0% (5.8% of Total Investments)<br>Lincoln University, Missouri, Auxiliary System Revenue Bonds, Series 2007, 5.125%, 6/01/37 – AGC Insured                               | 6/17 at 100.00                  | AA–         | 265,583      |
| 630                       | Missouri Health and Educational Facilities Authority, Revenue Bonds, A.T. Still University of Health Sciences, Series 2011, 5.250%, 10/01/41   | 10/21 at 100.00                 | A–          | 709,040      |
| 700                       | Missouri Health and Educational Facilities Authority, Revenue Bonds, Rockhurst University, Series 2011A, 6.500%, 10/01/35  | 10/18 at 103.00                 | BBB         | 802,179      |
| 550                       | Missouri Health and Educational Facilities Authority, Revenue Bonds, Washington University, Series 2011B, 5.000%, 11/15/37   | 11/21 at 100.00                 | AAA         | 647,383      |
| 600                       | Missouri Health and Educational Facilities Authority, Revenue Bonds, Webster University, Series 2011, 5.000%, 4/01/36  | 4/21 at 100.00                  | A2          | 668,070      |
| 2,730                     | Total Education and Civic Organizations Health Care – 35.3% (22.9% of Total Investments)   |                                 |             | 3,092,255    |
| 485                       |  | 6/19 at 100.00                  | AA–         | 547,133      |

|       |  |                    |      |           |
|-------|--|--------------------|------|-----------|
|       | Cape Girardeau County Industrial<br>Development Authority, Missouri, Health<br>Facilities Revenue<br>Bonds, Saint Francis Medical Center, Series<br>2009A, 5.750%, 6/01/39           |                    |      |           |
| 760   | Cape Girardeau County Industrial<br>Development Authority, Missouri, Health<br>Facilities Revenue<br>Bonds, Southeast Missouri Hospital<br>Association, Series 2007, 5.000%, 6/01/27 | 6/17 at 100.00     | BBB+ | 789,290   |
| 930   | Cass County, Missouri, Hospital Revenue<br>Bonds, Series 2007, 5.625%, 5/01/38   | 11/16 at<br>100.00 | BBB- | 955,184   |
| 480   | Clinton County Industrial Development<br>Authority, Missouri, Revenue Bonds, Cameron<br>Regional<br>Medical Center, Series 2007, 5.000%, 12/01/37                                    | 12/17 at<br>100.00 | N/R  | 482,688   |
| 750   | Joplin Industrial Development Authority,<br>Missouri, Health Facilities Revenue Bonds,<br>Freeman<br>Health System, Series 2004, 5.500%, 2/15/29                                     | 2/15 at 102.00     | BBB+ | 788,925   |
| 200   | Joplin Industrial Development Authority,<br>Missouri, Health Facilities Revenue Bonds,<br>Freeman<br>Health System, Series 2011, 5.500%, 2/15/31                                     | 2/21 at 100.00     | BBB+ | 223,536   |
| 540   | Missouri Health and Educational Facilities<br>Authority, Health Facilities Revenue Bonds,<br>Capital<br>Region Medical Center, Series 2011, 5.000%,<br>11/01/27                      | 11/20 at<br>100.00 | A3   | 600,032   |
| 335   | Missouri Health and Educational Facilities<br>Authority, Health Facilities Revenue Bonds,<br>Heartland Regional Medical Center, Series<br>2012, 5.000%, 2/15/37                      | 2/22 at 100.00     | A1   | 369,170   |
| 750   | Missouri Health and Educational Facilities<br>Authority, Health Facilities Revenue Bonds,<br>Mercy<br>Health, Series 2012, 4.000%, 11/15/42  | No Opt. Call       | AA-  | 761,753   |
| 500   | Missouri Health and Educational Facilities<br>Authority, Health Facilities Revenue Bonds,<br>St.<br>Luke's Episcopal and Presbyterian Hospitals,<br>Series 2011, 5.000%, 12/01/25    | 12/21 at<br>100.00 | A+   | 573,470   |
| 2,000 | Missouri Health and Educational Facilities<br>Authority, Health Facility Revenue Bonds, St.<br>Lukes's Health System, Series 2010A, 5.000%,<br>11/15/30                              | 11/20 at<br>100.00 | A+   | 2,237,740 |
| 1,500 | Missouri Health and Educational Facilities<br>Authority, Revenue Bonds, BJC Health<br>System,<br>Series 2003:<br>5.125%, 5/15/25   | 5/13 at 100.00     | AA   | 1,513,935 |

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|        |   |                 |      |            |
|--------|---|-----------------|------|------------|
| 1,155  | 5.250%, 5/15/32   | 5/13 at 100.00  | AA   | 1,165,176  |
|        | Saline County Industrial Development Authority, Missouri, Health Facilities Revenue Bonds,  | 12/20 at 100.00 | BBB- | 787,097    |
| 720    | John Fitzgibbon Memorial Hospital Inc., Series 2010, 5.600%, 12/01/28   |                 |      |            |
|        | St. Louis County Industrial Development Authority, Missouri, Healthcare Facilities Revenue  | 11/16 at 100.00 | N/R  | 354,946    |
| 350    | Bonds, Ranken-Jordan Project, Refunding Series 2007, 5.000%, 11/15/27   |                 |      |            |
| 11,455 | Total Health Care Housing/Multifamily – 1.3% (0.8% of Total Investments)  |                 |      | 12,150,075 |
|        | Missouri Housing Development Commission, Multifamily Housing Revenue Bonds, Series 2001II,  | 6/13 at 100.00  | AA   | 105,344    |
| 105    | 5.250%, 12/01/16  |                 |      |            |
|        | Northwest Missouri State University, Housing System Revenue Bonds, Refunding Series 2012,   | No Opt. Call    | A3   | 332,773    |
| 350    | 3.125%, 6/01/29   |                 |      |            |
| 455    | Total Housing/Multifamily Housing/Single Family – 1.9% (1.3% of Total Investments)  |                 |      | 438,117    |
|        | Missouri Housing Development Commission, Single Family Mortgage Revenue Bonds, Homeownership  | 9/16 at 100.00  | AA+  | 265,970    |
| 255    | Loan Program, Series 2007A-1, 4.700%, 9/01/27 (Alternative Minimum Tax)   |                 |      |            |
|        | Missouri Housing Development Commission, Single Family Mortgage Revenue Bonds, Homeownership  | 3/17 at 100.00  | AA+  | 398,004    |
| 380    | Loan Program, Series 2007C-1, 4.800%, 9/01/38 (Alternative Minimum Tax)   |                 |      |            |
| 635    | Total Housing/Single Family Long-Term Care – 12.0% (7.8% of Total Investments)  |                 |      | 663,974    |
|        | Cole County Industrial Development Authority, Missouri, Revenue Bonds, Lutheran Senior Services – Heisinger Project, Series 2004, 5.500%, 2/01/35 | 2/14 at 100.00  | BBB+ | 1,772,505  |
| 1,750  | Joplin Industrial Development Authority, Missouri, Revenue Bonds, Christian Homes Inc., Series 2007F, 5.750%, 5/15/31                             | 5/17 at 100.00  | BBB- | 530,305    |
| 500    | Lees Summit Industrial Development Authority, Missouri, Revenue Bonds, John Knox Village  | 8/17 at 100.00  | BBB- | 483,037    |
| 475    |   |                 |      |            |

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|       |  |                    |      |           |
|-------|--|--------------------|------|-----------|
|       | Obligated Group, Series 2007A, 5.125%,<br>8/15/32  |                    |      |           |
| 250   | Missouri Health and Educational Facilities<br>Authority, Revenue Bonds, Lutheran Senior<br>Services  | 2/21 at 100.00     | BBB+ | 281,585   |
| 100   | Projects, Series 2011, 6.000%, 2/01/41<br>St. Louis County Industrial Development<br>Authority, Missouri, Revenue Bonds,<br>Friendship Village                                       | No Opt. Call       | BBB- | 98,557    |
| 425   | of Chesterfield, Series 2012, 5.000%, 9/01/42<br>St. Louis County Industrial Development<br>Authority, Missouri, Revenue Bonds,<br>Friendship Village                                | 9/22 at 100.00     | A    | 448,868   |
| 500   | of Sunset Hills, Series 2012, 5.000%, 9/01/42<br>St. Louis County Industrial Development<br>Authority, Missouri, Revenue Bonds,<br>Friendship Village                                | 9/17 at 100.00     | BBB- | 521,750   |
| 4,000 | of West County, Series 2007A, 5.500%,<br>9/01/28<br>Total Long-Term Care<br>Tax Obligation/General – 17.2% (11.2% of<br>Total Investments)   |                    |      | 4,136,607 |
| 600   | Branson Reorganized School District R-4,<br>Taney County, Missouri, General Obligation<br>Bonds,   | 3/22 at 100.00     | A+   | 655,044   |
| 1,500 | School Building Series 2012, 4.375%, 3/01/32<br>Camdenton Reorganized School District R3,<br>Camden County, Missouri, General Obligation<br>Bonds,                                   | 3/15 at 100.00     | AA-  | 1,636,155 |
| 1,685 | Series 2005, 5.250%, 3/01/24 – AGM Insured<br>Independence School District, Jackson County,<br>Missouri, General Obligation Bonds, Series<br>2010,                                   | 3/20 at 100.00     | AA+  | 1,971,147 |
| 500   | 5.000%, 3/01/27<br>Missouri School Boards Association, Lease<br>Participation Certificates, Clay County School<br>District 53 Liberty, Series 2007, 5.250%,<br>3/01/27 – AGM Insured | 3/17 at 100.00     | AA-  | 567,330   |
| 1,000 | Puerto Rico, General Obligation and Public<br>Improvement Bonds, Series 2002A, 5.500%,<br>7/01/20 –  | No Opt. Call       | BBB+ | 1,094,890 |
| 5,285 | NPFG Insured<br>Total Tax Obligation/General<br>Tax Obligation/Limited – 25.4% (16.5% of<br>Total Investments)   |                    |      | 5,924,566 |
| 600   | Chesterfield, Missouri, Certificates of<br>Participation, Series 2005, 5.000%, 12/01/24 –<br>FGIC Insured  | 12/15 at<br>100.00 | Aa1  | 666,570   |
| 150   | Fenton, Missouri, Tax Increment Revenue<br>Bonds, Gravois Bluffs Redevelopment Project,<br>Series  | 4/14 at 100.00     | BBB+ | 153,017   |

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|       |   |                    |      |           |
|-------|---|--------------------|------|-----------|
|       | 2006, 4.500%, 4/01/21<br>Fulton, Missouri, Tax Increment Revenue<br>Bonds, Fulton Commons Redevelopment<br>Project, Series  | 6/16 at 100.00     | N/R  | 271,587   |
| 315   |   |                    |      |           |
|       | 2006, 5.000%, 6/01/28<br>Government of Guam, Business Privilege Tax<br>Bonds, Series 2012B-1, 5.000%, 1/01/42   | 1/22 at 100.00     | A    | 502,306   |
| 455   |   |                    |      |           |
|       | Howard Bend Levee District, St. Louis<br>County, Missouri, Levee District Improvement<br>Bonds,<br>Series 2013B:  |                    |      |           |
| 180   | 4.875%, 3/01/33 (WI/DD, Settling 3/12/13)   | 3/23 at 100.00     | BBB+ | 192,501   |
| 115   | 5.000%, 3/01/38 (WI/DD, Settling 3/12/13)   | 3/23 at 100.00     | BBB+ | 122,406   |
|       | Jackson County, Missouri, Special Obligation<br>Bonds, Truman Medical Center Project, Series  | 12/21 at<br>100.00 | Aa3  | 545,659   |
| 485   |   |                    |      |           |
|       | 2011B, 4.350%, 12/01/23<br>Kansas City Industrial Development Authority,<br>Missouri, Downtown Redevelopment District   | 9/21 at 100.00     | AA-  | 329,967   |
| 300   |   |                    |      |           |
|       | Revenue Bonds, Series 2011A, 5.000%,<br>9/01/32<br>Kansas City Tax Increment Financing<br>Commission, Missouri, Tax Increment<br>Revenue Bonds,                             | 6/14 at 102.00     | N/R  | 470,226   |
| 475   |   |                    |      |           |
|       | Briarcliff West Project, Series 2006A, 5.400%,<br>6/01/24<br>Kansas City Tax Increment Financing<br>Commission, Missouri, Tax Increment<br>Revenue Bonds, Shoal             | 6/16 at 100.00     | N/R  | 104,450   |
| 100   |   |                    |      |           |
|       | Creek Parkway Project, Series 2011, 5.000%,<br>6/01/21<br>Missouri Development Finance Board,<br>Infrastructure Facilities Revenue Bonds,<br>Branson Landing                | 6/15 at 100.00     | A    | 369,990   |
| 360   |   |                    |      |           |
|       | Project, Series 2005A, 5.000%, 6/01/35<br>Missouri Development Finance Board,<br>Infrastructure Facilities Revenue Bonds, City<br>of  | 3/16 at 100.00     | A-   | 425,529   |
| 415   |   |                    |      |           |
|       | Independence, Crackerneck Creek Project,<br>Series 2006C, 5.000%, 3/01/28<br>Monarch-Chesterfield Levee District, St. Louis<br>County, Missouri, Levee District Improvement | 9/13 at 100.00     | A    | 246,036   |
| 245   |   |                    |      |           |
|       | Bonds, Series 1999, 5.750%, 3/01/19 – NPFG<br>Insured<br>Osage Beach, Missouri, Tax Increment<br>Revenue Bonds, Prewitts Point Transportation<br>Development                | 5/13 at 101.00     | N/R  | 478,800   |
| 500   |   |                    |      |           |
|       | District, Series 2006, 5.000%, 5/01/23<br>Puerto Rico Sales Tax Financing Corporation,<br>Sales Tax Revenue Bonds, First Subordinate<br>Series                              | 8/19 at 100.00     | A+   | 1,933,488 |
| 1,750 |   |                    |      |           |
|       | 2009A, 6.000%, 8/01/42  |                    |      |           |

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|       |   |                    |          |           |
|-------|---|--------------------|----------|-----------|
| 225   | Puerto Rico Sales Tax Financing Corporation,<br>Sales Tax Revenue Bonds, Senior Series<br>2011C,<br>0.000%, 8/01/41   | No Opt. Call       | AA-      | 47,664    |
| 1,500 | Puerto Rico Sales Tax Financing Corporation,<br>Sales Tax Revenue Bonds, Series 2007A,<br>0.000%,<br>8/01/41 – NPMG Insured   | No Opt. Call       | AA-      | 314,430   |
| 600   | Riverside, Missouri, L-385 Levee<br>Redevelopment Plan Tax Increment Revenue<br>Bonds, Series 2004,<br>5.250%, 5/01/20  | 5/15 at 100.00     | A        | 634,566   |
| 340   | St. Joseph Industrial Development Authority,<br>Missouri, Tax Increment Bonds, Shoppes at<br>North<br>Village Project, Series 2005A:<br>5.375%, 11/01/24                              | 11/14 at<br>100.00 | N/R      | 341,890   |
| 400   | 5.500%, 11/01/27  | 11/14 at<br>100.00 | N/R      | 401,740   |
| 200   | St. Joseph Industrial Development Authority,<br>Missouri, Tax Increment Bonds, Shoppes at<br>North<br>Village Project, Series 2005B, 5.500%,<br>11/01/27                              | 11/14 at<br>100.00 | N/R      | 200,870   |
| 9,710 | Total Tax Obligation/Limited<br>Transportation – 13.0% (8.4% of Total<br>Investments)   |                    |          | 8,753,692 |
| 500   | Kansas City, Missouri, Passenger Facility<br>Charge Revenue Bonds, Kansas City<br>International<br>Airport, Series 2001, 5.000%, 4/01/23 –<br>AMBAC Insured (Alternative Minimum Tax) | 4/13 at 100.00     | A        | 502,015   |
| 1,000 | St. Louis, Missouri, Airport Revenue Bonds,<br>Lambert-St. Louis International Airport, Series<br>2005, 5.500%, 7/01/18 – NPMG Insured  | No Opt. Call       | A-       | 1,170,100 |
| 2,500 | St. Louis, Missouri, Airport Revenue Bonds,<br>Lambert-St. Louis International Airport, Series<br>2007A, 5.000%, 7/01/21 – AGM Insured  | 7/17 at 100.00     | AA-      | 2,801,047 |
| 4,000 | Total Transportation<br>U.S. Guaranteed – 10.9% (7.1% of Total<br>Investments) (4)  |                    |          | 4,473,162 |
| 80    | Cottleville, Missouri, Certificates of<br>Participation, Series 2006, 5.250%, 8/01/31<br>(Pre-refunded 8/01/14)   | 8/14 at 100.00     | N/R (4)  | 85,684    |
| 500   | Missouri Health and Educational Facilities<br>Authority, Revenue Bonds, Lake Regional<br>Health<br>System, Series 2003, 5.700%, 2/15/34<br>(Pre-refunded 2/15/14)                     | 2/14 at 100.00     | BBB+ (4) | 525,815   |
| 1,395 |   | 6/13 at 100.00     | N/R (4)  | 1,395,000 |



|       |  |                    |         |           |
|-------|--|--------------------|---------|-----------|
|       | Springfield Public Building Corporation,<br>Missouri, Lease Revenue Bonds, Jordan Valley<br>Park<br>Projects, Series 2000A, 6.125%, 6/01/21 –<br>AMBAC Insured (ETM)             |                    |         |           |
| 80    | Insured  | 3/14 at 100.00     | AA (4)  | 84,041    |
| 250   | 5.250%, 3/01/20 (Pre-refunded 3/01/14) – AGM<br>Insured  | 3/14 at 100.00     | AA- (4) | 262,628   |
| 20    | 5.250%, 3/01/20 (Pre-refunded 3/01/14) – AGM<br>Insured  | 3/14 at 100.00     | AA (4)  | 21,016    |
| 500   | St. Louis County, Missouri, GNMA<br>Collateralized Mortgage Revenue Bonds,<br>Series 1993D, 5.650%,<br>7/01/20 (Alternative Minimum Tax) (ETM)                                   | No Opt. Call       | AA+ (4) | 628,685   |
| 750   | Sugar Creek, Missouri, Industrial Development<br>Revenue Bonds, Lafarge North America Inc.,<br>Series 2003A, 5.650%, 6/01/37 (Pre-refunded<br>6/01/13) (Alternative Minimum Tax) | 6/13 at 101.00     | A (4)   | 767,213   |
| 3,575 | Total U.S. Guaranteed<br>Utilities – 6.1% (3.9% of Total Investments)  |                    |         | 3,770,082 |
| 110   | Missouri Joint Municipal Electric Utility<br>Commission, Iatan 2 Power Project Revenue<br>Bonds,<br>Series 2006A, 4.125%, 1/01/21 – AMBAC<br>Insured                             | 1/16 at 100.00     | A2      | 118,433   |
| 500   | Missouri Joint Municipal Electric Utility<br>Commission, Plum Point Project, Revenue<br>Bonds,<br>Series 2006, 5.000%, 1/01/34 – NPFGE Insured                                   | 1/16 at 100.00     | A–      | 520,305   |
| 400   | Missouri Joint Municipal Electric Utility<br>Commission, Power Supply System Revenue<br>Bonds, MoPEP<br>Facilities, Series 2012:<br>5.000%, 1/01/32                              | 1/21 at 100.00     | A2      | 443,568   |
| 425   | 5.000%, 1/01/37  | 1/21 at 100.00     | A2      | 464,559   |
| 530   | Puerto Rico Electric Power Authority, Power<br>Revenue Bonds, Series 2010XX, 5.250%,<br>7/01/40  | 7/20 at 100.00     | BBB+    | 536,238   |
| 1,965 | Total Utilities<br>Water and Sewer – 18.4% (12.0% of Total<br>Investments)   |                    |         | 2,083,103 |
| 600   | Carroll County Public Water Supply District 1,<br>Missouri, Water System Revenue Bonds,<br>Refunding<br>Series 2009, 6.000%, 3/01/39   | 3/18 at 100.00     | A       | 675,252   |
| 1,150 | Kansas City, Missouri, Water Revenue Bonds,<br>Series 2012A, 4.500%, 12/01/36  | 12/21 at<br>100.00 | AA+     | 1,294,682 |

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| 1,000     | Kansas City, Missouri, Water Revenue Bonds,<br>Series 2013A, 4.000%, 12/01/37 (WI/DD,<br>Settling 3/14/13)   | 12/21 at<br>100.00 | AA+ | 1,058,030     |
| 200       | Metropolitan St. Louis Sewerage District,<br>Missouri, Wastewater System Revenue Bonds,<br>Series<br>2006C, 5.000%, 5/01/36 – NPFG Insured   | 5/17 at 100.00     | AAA | 225,960       |
| 2,965     | Missouri Environmental Improvement and<br>Energy Resources Authority, Water Facility<br>Revenue<br>Bonds, Missouri-American Water Company,<br>Series 2006, 4.600%, 12/01/36 – AMBAC<br>Insured<br>(Alternative Minimum Tax) (UB) (5) | 12/16 at<br>100.00 | AA+ | 3,090,775     |
| 5,915     | Total Water and Sewer  |                    |     | 6,344,699     |
| \$ 50,725 | Total Investments (cost \$49,788,827) – 154.1%   |                    |     | 53,071,942    |
|           | Floating Rate Obligations – (6.5)%   |                    |     | (2,225,000)   |
|           | MuniFund Term Preferred Shares, at<br>Liquidation Value – (51.9)% (6)  |                    |     | (17,880,000)  |
|           | Other Assets Less Liabilities - 4.3%   |                    |     | 1,464,299     |
|           | Net Assets Applicable to Common Shares -<br>100%   |                    |     | \$ 34,431,241 |

### Fair Value Measurements

Fair value is defined as the price that the Funds would receive upon selling an investment or transferring a liability in an orderly transaction to an independent buyer in the principal or most advantageous market for the investment. A three-tier hierarchy is used to maximize the use of observable market data and minimize the use of unobservable inputs and to establish classification of fair value measurements for disclosure purposes. Observable inputs reflect the assumptions market participants would use in pricing the asset or liability. Observable inputs are based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability. Unobservable inputs are based on the best information available in the circumstances. The following is a summary of the three-tiered hierarchy of valuation input levels.

Level 1 – Inputs are unadjusted and prices are determined using quoted prices in active markets for identical securities.

Level 2 – Prices are determined using other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3 – Prices are determined using 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 risks associated with investing in those securities. The following is a summary of the Fund's fair value measurements as of the end of the reporting period:

|                        | Level 1 | Level 2      | Level 3 | Total        |
|------------------------|---------|--------------|---------|--------------|
| Long-Term Investments: |         |              |         |              |
| Municipal Bonds        | \$ —    | \$53,071,942 | \$ —    | \$53,071,942 |

### 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 taxable market discount, timing differences in recognizing certain gains and losses on investment transactions and the treatment of investments in inverse floating rate securities reflected as financing transactions, if any. 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.

As of February 28, 2013, the cost of investments was \$47,516,106.

Gross unrealized appreciation and gross unrealized depreciation of investments as of February 28, 2013, were as follows:

|                   |             |
|-------------------|-------------|
| Gross unrealized: |             |
| Appreciation      | \$3,416,463 |

|   |             |
|---|-------------|
| Depreciation  | (85,883)    |
| Net unrealized appreciation (depreciation) of investments | \$3,330,580 |

- (1) All percentages shown in the Portfolio of Investments are based on net assets applicable to Common shares unless otherwise noted.
  - (2) Optional Call Provisions: Dates (month and year) and prices of the earliest optional call or redemption. There may be other call provisions at varying prices at later dates. Certain mortgage-backed securities may be subject to periodic principal paydowns.
  - (3) Ratings: Using the highest of Standard & Poor's Group ("Standard & Poor's"), Moody's Investors Service, Inc. ("Moody's") or Fitch, Inc. ("Fitch") rating. Ratings below BBB by Standard & Poor's, Baa by Moody's or BBB by Fitch are considered to be below investment grade. Holdings designated N/R are not rated by any of these national rating agencies.
  - (4) Backed by an escrow or trust containing sufficient U.S. Government or U.S. Government agency securities, which ensure the timely payment of principal and interest. Certain bonds backed by U.S. Government or agency securities are regarded as having an implied rating equal to the rating of such securities.
  - (5) Investment, or portion of investment, has been pledged to collateralize the net payment obligations for investments in inverse floating rate transactions.
  - (6) MuniFund Term Preferred Shares, at Liquidation Value as a percentage of Total Investments is 33.7%
- N/R Not rated.
- WI/DD Investment, or portion of investment, purchased on a when-issued or delayed delivery basis.
- (ETM) Escrowed to maturity.
- (IF) Inverse floating rate investment.
- (UB) Underlying bond of an inverse floating rate trust reflected as a financing transaction.
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Item 2. Controls and Procedures.

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

Item 3. Exhibits.

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

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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 Missouri Premium Income Municipal Fund

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

Date: April 29, 2013

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: April 29, 2013

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

Date: April 29, 2013