NUVEEN MISSOURI PREMIUM INCOME MUNICIPAL FUND Form N-Q October 30, 2014

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549

FORM N-O

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number 811-07616

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: 8/31/14

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) August 31, 2014

Principal Amount (000)	Description (1) LONG-TERM INVESTMENTS – 156.0% (100.0% of Total Investments)	Optional Call Provisions (2)	Ratings (3)	Value
	MUNICIPAL BONDS – 156.0% (100.0% of Total Investments)			
\$ 1,055	Consumer Staples – 3.8% (2.5% of Total Investments) Missouri Development Finance Board, Solid Waste Disposal Revenue Bonds, Procter and Gamble Inc., Series 1999, 5.200%, 3/15/29 (Alternative Minimum Tax) Education and Civic Organizations – 20.8% (13.3% of Total Investments)	No Opt. Call	AA-	\$ 1,270,790
	Curators of the University of Missouri, System Facilities Revenue Bonds, Refunding	11/24 at		
300	Series 2012A,	100.00	AA+	324,618
250	4.000%, 11/01/33 Lincoln University, Missouri, Auxiliary System Revenue Bonds, Series 2007, 5.125%, 6/01/37 – AGC Insured	6/17 at 100.00	AA	262,013
410	Missouri Health and Educational Facilities Authority, Educational Facilities Revenue Bonds, Kansas City University of Medicine and Biosciences, Series 2013A, 5.000%, 6/01/33	6/23 at 100.00	A1	449,048
750	Missouri Health and Educational Facilities Authority, Educational Facilities Revenue Bonds, Saint Louis College of Pharmacy, Series 2013, 5.500%, 5/01/43	5/23 at 100.00	BBB+	822,780
600	Missouri Health and Educational Facilities Authority, Educational Facilities Revenue Bonds, Southwest Baptist University Project, Series 2012, 5.000%, 10/01/33	10/22 at 100.00	BBB-	630,720
725	2012, 5.000 %, 10/01/55		A	808,716

	Missouri Health and Educational Facilities Authority, Educational Facilities Revenue Bonds,	10/23 at 100.00		
	University of Central Missouri, Series 2013C2, 5.000%, 10/01/34			
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-	694,298
510	Missouri Health and Educational Facilities Authority, Revenue Bonds, A.T. Still University of Health Sciences, Series 2014, 5.000%, 10/01/39	10/23 at 100.00	A-	558,904
700	Missouri Health and Educational Facilities Authority, Revenue Bonds, Rockhurst University, Series 2011A, 6.500%, 10/01/35	10/18 at 103.00	BBB-	788,641
550	Missouri Health and Educational Facilities Authority, Revenue Bonds, Washington University,	11/21 at 100.00	AAA	625,224
600	Series 2011B, 5.000%, 11/15/37 Missouri Health and Educational Facilities Authority, Revenue Bonds, Webster University, Series	4/21 at 100.00	A2	654,930
250	2011, 5.000%, 4/01/36 Northwest Missouri State University, Housing System Revenue Bonds, Refunding Series 2012,	No Opt. Call	A3	236,903
	3.125%, 6/01/29			·
6,275	Total Education and Civic Organizations Health Care – 36.1% (23.1% of Total Investments) Cape Girardeau County Industrial Development Authority, Missouri, Health			6,856,795
525	Facilities Revenue Bonds, Saint Francis Medical Center, Series 2009A, 5.750%, 6/01/39 Cape Girardeau County Industrial	6/19 at 100.00	AA-	572,460
	Development Authority, Missouri, Health Facilities Revenue Bonds, Southeast Missouri Hospital Association, Series 2007:			
760	5.000%, 6/01/27	6/17 at 100.00	BBB+	776,408
560	5.000%, 6/01/36	6/17 at 100.00	BBB+	568,882
020	Cass County, Missouri, Hospital Revenue	11/16 at	DDD	0.46.240
930	Bonds, Series 2007, 5.625%, 5/01/38 Clinton County Industrial Development Authority, Missouri, Revenue Bonds,	100.00 12/17 at	BBB-	946,349
480	Cameron Regional Medical Center, Series 2007, 5.000%, 12/01/37	100.00	N/R	482,899

750	Joplin Industrial Development Authority, Missouri, Health Facilities Revenue Bonds, Freeman	2/15 at 102.00	BBB+	770,003
730	Health System, Series 2004, 5.500%, 2/15/29 Joplin Industrial Development Authority, Missouri, Health Facilities Revenue Bonds,	2/13 at 102.00	DDD+	770,003
200	Freeman Health System, Series 2011, 5.500%, 2/15/31 Missouri Health and Educational Facilities	2/21 at 100.00	BBB+	217,284
500	Authority, Health Facilities Revenue Bonds, SSM Health Care, Series 2014A, 5.000%, 6/01/31 Missouri Health and Educational Facilities	6/24 at 100.00	AA-	572,175
540	Authority, Health Facilities Revenue Bonds, Capital Region Medical Center, Series 2011, 5.000%,	11/20 at 100.00	A3	587,088
	11/01/27 Missouri Health and Educational Facilities Authority, Health Facilities Revenue Bonds,	11/23 at		
1,730	CoxHealth, Series 2013A, 5.000%, 11/15/44 Missouri Health and Educational Facilities	100.00	A2	1,880,164
335	Authority, Health Facilities Revenue Bonds, Heartland Regional Medical Center, Series 2012, 5.000%, 2/15/37	2/22 at 100.00	A1	362,028
	Missouri Health and Educational Facilities			
250	Authority, Health Facilities Revenue Bonds, Mercy Health, Series 2012, 4.000%, 11/15/42 Missouri Health and Educational Facilities	No Opt. Call	AA-	250,423
500	Authority, Health Facilities Revenue Bonds, Saint Luke's Episcopal and Presbyterian Hospitals, Series 2011, 5.000%, 12/01/25	12/21 at 100.00	A+	561,795
	Missouri Health and Educational Facilities Authority, Health Facility Revenue Bonds, St. Luke's			
	Health System, Series 2010A:	11/20 at		
40	5.250%, 11/15/25	100.00 11/20 at	A+	45,130
2,000	5.000%, 11/15/30 Saline County Industrial Development	100.00	A+	2,191,780
720	Authority, Missouri, Health Facilities Revenue Bonds, John Fitzgibbon Memorial Hospital Inc., Series 2010, 5.600%, 12/01/28	12/20 at 100.00	BBB-	798,516
	St. Louis County Industrial Development Authority, Missouri, Healthcare Facilities	11/16 at		
350	Revenue Bonds,	100.00	N/R	350,592

	Ranken-Jordan Project, Refunding Series 2007, 5.000%, 11/15/27			
11,170	Total Health Care			11,933,976
	Housing/Single Family – 0.8% (0.5% of Total Investments)			
	Missouri Housing Development Commission,			
165	Single Family Mortgage Revenue Bonds,	9/16 at 100.00	AA+	168,930
	Homeownership Loan Program, Series			
	2007A-1, 4.700%, 9/01/27 (Alternative Minimum Tax)			
	Missouri Housing Development Commission,			
100	Single Family Mortgage Revenue Bonds,	3/17 at 100.00	AA+	100,056
100	Homeownership Loan Program, Series	5,1, a 100.00	122	100,000
	2007C-1, 4.800%, 9/01/38 (Alternative			
	Minimum Tax)			
265	Total Housing/Single Family			268,986
	Long-Term Care – 12.6% (8.1% of Total			
	Investments)			
	Bridgeton Industrial Development Authority, Missouri, Senior Housing Revenue Bonds,			
250	The Sarah	5/18 at 100.00	N/R	244,245
230	Community Project, Series 2013, 4.500%,	3/10 at 100.00	11/10	244,243
	5/01/28			
	Joplin Industrial Development Authority,			
	Missouri, Revenue Bonds, Christian Homes			
500	Inc., Series	5/17 at 100.00	BBB-	515,875
	2007F, 5.750%, 5/15/31			
	Lees Summit Industrial Development			
475	Authority, Missouri, Revenue Bonds, John Knox Village	8/17 at 100.00	BBB-	484,386
473	Obligated Group, Series 2007A, 5.125%,	6/17 at 100.00	DDD-	404,300
	8/15/32			
	Lees Summit Industrial Development			
	Authority, Missouri, Revenue Bonds, John			
250	Knox Village	No Opt. Call	BBB-	251,923
	Obligated Group, Series 2014A, 5.250%, 8/15/39			
	Missouri Health and Educational Facilities			
2.7.	Authority, Revenue Bonds, Lutheran Senior	2/24	~	
250	Services	2/21 at 100.00	BBB+	276,573
500	Projects, Series 2011, 6.000%, 2/01/41			
500				