Pioneer Floating Rate Trust Form N-Q October 30, 2009

> OMB APPROVAL OMB Number: 3235-0578 Expires: April 30, 2010 Estimated average burden hours per response..... 10.5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM N-Q

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-21654

Pioneer Floating Rate Trust (Exact name of registrant as specified in charter)

60 State Street, Boston, MA 02109 (Address of principal executive offices) (ZIP code)

Dorothy E. Bourassa, Pioneer Investment Management, Inc., 60 State Street, Boston, MA 02109 (Name and address of agent for service)

Registrant's telephone number, including area code: (617) 742-7825

Date of fiscal year end: November 30

Date of reporting period: August 31, 2009

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 close of the first and third fiscal quarters, pursuant to Rule 30b1-5under the Investment Company Act of 1940 (17 CFR 270.30b-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 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. Schedule of Investments. Pioneer Floating Rate Trust SCHEDULE OF INVESTMENTS 8/31/09 (unaudited) Principal Amount USD (\$) Value (\$) COLLATERALIZED LOAN OBLIGATIONS - 0.4% of Net Assets Banks - 0.3% Diversified Banks - 0.1% 1,000,000(a) (b) Primus, Ltd., 2007-2A D, 2.909%, 7/15/21 (144A) 50,000 1,000,000(a)(b)Rampart, Ltd., 2006-1A, 4.06%, 4/18/21 (144A) 132,800 1,000,000(a)(b)Stanfield McLaren, Ltd., 2007-1A B2L, 4.88%, 2/ 77,400 260,200 Thrifts & Mortgage Finance - 0.2% 1,013,186(a)(b)Gulf Stream Sextant, Ltd., 2007-1A D, 3.014%, 6 35,543 1,000,000(a)(b)Landmark CDO, Ltd., 2007-9A E, 4.009%, 4/15/21 110,000 2,000,000(a)(b)Stone Tower, Ltd., 2007-6A C, 1.864%, 4/17/21 (500,000 645,543 Total Banks 905,743 Diversified Financials - 0.1% Other Diversified Financial Services - 0.1% 1,000,000(a)(b)ACA, Ltd. 2007-1A D, 2.859%, 6/15/22 (144A) 100,000 Investment Banking & Brokerage - 0.0% 1,034,842(a) (b)Goldman Sachs Asset Management, Plc, 2007-1A D, 41,394 Total Diversified Financials 141,394 TOTAL COLLATERALIZED LOAN OBLIGATIONS (Cost \$6,264,318) 1,047,137 SENIOR SECURED FLOATING RATE LOAN INTERESTS - 151.6%* Energy - 5.7% Oil & Gas Drilling - 1.7% 2,184,684 Big West Oil LLC, Delayed Advance Term Loan, 4. 2,037,217 Big West Oil LLC, Initial Advance Term Loan, 4. 1,620,514 1,737,816 1,250,000(a)(c)TARH E&P Holdings, L.P., First Lien Term Loan, 718,750 4,376,481 Oil & Gas Equipment & Services - 1.8% 280,642 Coffeyville Resources LLC, Funded LC Loan, 3.15 276,257 2,248,437 Coffeyville Resources LLC, Tranche D Term Loan, 2,213,305 4,190,832(a) Value Creation, Inc., Term Loan, 12.5%, 2/15/10 2,304,958 4,794,520 Oil & Gas Exploration & Production - 1.8% 4,995,000(a)(c)Crusader Energy Group, Inc., Second Lien Term L 3,621,375 Venoco, Inc., Second Lien Term Loan, 4.313%, 5/ 1,270,192 1,612,942 4,891,567 Oil & Gas Storage & Transportation - 0.4% 1,042,109 Atlas Pipeline Partners, L.P., Term Loan, 6.75% 1,021,267 Total Energy 15,083,835 Materials - 9.7% Diversified Chemicals - 5.8% Ashland, Inc., Term B Borrowing, 7.65%, 5/13/14 635,733 621,998 14,787,343 Solutia, Inc., Term Loan, 7.25%, 2/28/14 14,691,847 15,327,580 Specialty Chemicals - 0.3% Nalco Co., Term Loan, 6.5%, 5/13/16 750,000 762,656

458,554 893,336 1,999,540	Paper Packaging - 1.2% Graham Packaging Co., L.P., Term Loan B., 2.563 Graham Packaging Co., L.P., Term Loan C, 6.75%, Graphic Packaging International, Inc., Incremen	895,250
4,107,982	Diversified Metals & Mining - 1.5% Murray Energy Corp., First Lien Tranche B Term	3,984,743
1,402,907	Steel - 0.5% Essar Steel Algoma, Inc., Term Loan, 2.77%, 6/2	1,276,645
	Paper Products - 0.4% Newark Group, Inc., Credit-Link LC Loan, 6.79%, Newark Group, Inc., Term Loan, 10.75%, 3/9/13 NewPage Corp., Term Loan, 4.063%, 12/22/14 Total Materials	447,849 109,581 604,822 1,162,252 25,816,497
491,250 2,024,301 757,268 943,185 906,867 (d) 742,732	Capital Goods - 6.0% Aerospace & Defense - 2.0% Aeroflex, Inc., Tranche B-2 Term Loan, 4.063% - BE Aerospace, Inc., Tranche B Term Loan, 5.75%, DAE Aviation Holdings, Inc., Tranche B-1 Term L Hunter Defense Technologies, Inc., Term Loan, 3 IAP Worldwide Services, Inc., First Lien Term L Standard Aero, Ltd., Tranche B-2 Term Loan, 4.0	2,025,567 634,212 804,065 672,594
5,592,411(c)(d) 1,578,063	Building Products - 1.5% Atrium Companies, Inc., Closing Date Term Loan, Custom Building Products, Inc., First Lien Term	2,534,061
1,880,581	Construction & Engineering - 0.7% URS Corp., Tranche B Term Loan, 2.511% - 2.845%	1,875,879
994,872	Industrial Conglomerates - 0.3% Kansas City Southern Railway Co., Advance Term	930 , 205
4,235,000	Construction & Farm Machinery & Heavy Trucks - 1 Manitowoc Co., Inc., Term Loan B, 7.5%, 11/6/14 Total Capital Goods	
72,040 2,523,244 750,000	Commercial & Professional Services - 4.4% Commercial Printing - 1.2% Cenveo Corp., Delayed Draw Term Loan, 5.109%, 6 Cenveo Corp., Term C Facility, 5.109%, 6/21/13 World Color Press, Inc. and World Color (USA) C	2,452,803
975,000 6,718,750	Diversified Commercial & Professional Services - Aramark Canada, Ltd., Canadian Term Loan, 2.473 Cydcor, Inc., First Lien Tranche B Term Loan, 9	909,187
425,000	Environmental & Support Services - 0.2% Casella Waste Systems, Inc., Term Loan B, 7.0%,	428,187
793 , 763	Diversified Support Services - 0.3% Allied Security Holdings LLC, Term Loan, 6.75%, Total Commercial & Professional Services	800,708 1,728,863
980,000 475,152	Transportation - 3.4% Airlines - 2.3% Delta Airlines, Inc., Credit-Linked Deposit Loa Delta Airlines, Inc., Second Lien Term Loan, 3.	

3,650,000 US	orthwest Airlines, Inc., Term Loan, 2.28%, 12/ Airways Group, Inc., Term Loan, 2.763%, 3/21	
1,611,960(c)(d)Gai 497,593 SIF 2,319,481 SIF 1,021,191 SIF	Tucking - 0.5% Tiney Corp., Term Loan, 12.5%, 4/20/12 RVA Worldwide, Inc., Revolving Credit Loan, 9 RVA Worldwide, Inc., Second Lien Term Loan, 1 RVA Worldwide, Inc., Term Loan, 9.5%, 5/12/12	
1,905,738 AWA	rport Services - 0.6% MAS Capital, Inc., First Lien Term Loan, 2.375 Stal Transportation	1,705,635 8,971,638
Aut 2,537,391 All 270,885 Cod 676,659 Cod 9,075,710 Del 924,290 Del	tomobiles & Components - 7.3% to Parts & Equipment - 4.1% lison Transmission, Inc., Term Loan, 3.03%, 8 poper-Standard Automotive Canada, Ltd., Tranch poper-Standard Automotive, Inc., Tranche C Ter elphi Corp., Initial Tranche C Term Loan, 8.5% elphi Corp., Subsequent Tranche C Term Loan, 8 by Safety Systems, Inc., First Lien Term Loan, 1	220,546 550,914 5,073,322 516,678
9,761,809 For	ntomobile Manufacturers - 3.2% ord Motor Co., Term Loan, 3.28% - 3.51%, 12/15 otal Automobiles & Components 1	8,522,059 9,380,764
Hom 2,369,368(c)(d)Gir 5,077,235(c)(d)Gir 1,888,387(a)(c)Rho 1,000,000 WAI	onsumer Durables & Apparel - 1.6% mebuilding - 0.7% nn LA Conduit Lender, Inc., First Lien Tranch nn LA Conduit Lender, Inc., First Lien Tranch dodes Companies LLC, First Lien Term Loan, 9.7 NICCS Las Vegas 3 LLC, First Lien Term Loan, 7 NICCS Las Vegas 3 LLC, Second Lien Term Loan,	
824,026 Jan	ousewares & Specialties - 0.5% arden Corp., Term Loan B-3, 3.098%, 1/24/12 ankee Candle Co., Inc., Term Loan, 2.27%, 2/6/	816,606
1,000,000 Har	pparel, Accessories & Luxury Goods - 0.4% nesbrands, Inc., Term Loan B, 5.023% - 5.254% tal Consumer Durables & Apparel	
Cas 5,000,000(a) For 666,667 (c) For 1,333,333 For	onsumer Services - 2.9% sinos & Gaming - 1.5% ontainebleau Florida Hotel LLC, Tranche C Term ontainebleau Las Vegas LLC, Delayed Draw Term ontainebleau Las Vegas LLC, Initial Term Loan, enn National Gaming, Inc., Term Loan B, 2.01%	143,333 286,667
	otels, Resorts & Cruise Lines - 0.3% Ellowstone Mountain Club LLC, Senior First Lie	892,833
587,649 (a)(c)Lak 1,765,105 Lak 5,887,933(a)(c)Lak	eisure Facilities - 0.6% ke at Las Vegas Joint Venture, Revolving Cred ke at Las Vegas Joint Venture, Term Loan, 14. ke at Las Vegas Joint Venture, Term Loan, 14.	1,235,573
1,250,000 Ade 166,000 Tra	Decialized Consumer Services - 0.5% Nesa, Inc., Initial Term Loan, 2.52%, 10/21/13 Cavelport LLC, Incremental Term Loan C, 10.5%, Notal Consumer Services	

Media - 27.3% Broadcasting - 9.0% Discovery Communications Holding, LLC, Term Loa 759,659 748,125 AUD 19,476,857 SMG H5 Pty, Ltd., Facility Term Loan A, 5.365% 12,643,365 11,115,966 Univision Communications, Inc., Initial Term Lo 8,785,582 3,769,895(a) (c) Young Broadcasting, Inc., Term Loan, 4.75%, 11/ 1,903,797 24,092,403 Cable & Satellite - 12.7% 19,611,47(a) (c) Broadstripe LLC, First Lien Term Loan, 9.25%, 611,315,821 1,428,203(a)(c)Broadstripe LLC, Revolver Credit Loan, 8.87% - 824,073 Cequel Communications LLC, Term Loan, 2.275% - 10,672,142 11,244,925 Charter Communications Operating LLC, New Term 4,624,166 4,962,217 Knology, Inc., Term Loan, 2.511%, 6/30/12 6,759,192 6,455,028 33,891,230 Movies & Entertainment - 4.6% 2,380,607 Alpha Topco, Ltd., Facility Term Loan B-1, 2.51 2,028,617 Alpha Topco, Ltd., Facility Term Loan B-2, 2.51 1,370,273 1,608,032 7,774,221 Metro-Goldwyn-Mayer, Inc., Tranche B Term Loan, 4,394,868 4,887,750 WideOpenWest Finance LLC, First Lien Term Loan, 4,365,372 12,159,130 Publishing - 1.0% EURO 935,574 Mediannuaire Holding, Term Loan B-2, 2.772%, 10 886,113 EURO 935,574 Mediannuaire Holding, Term Loan C, 3.272%, 10/9 886,113 3,500,000 Penton Media Holdings, Inc., Second Lien Term L 805,000 2,577,226 Total Media 72,719,989 Retailing - 8.5% Distributors - 1.0% 15,510,80(a) (c) Home Interiors & Gifts, Inc., Proof of Claims, 2,714,390 Catalog Retail - 0.2% QVC, Inc., Tranche 2-W Term Loan, 3.5%, 10/4/11 549,069 554,615 General Merchandise Stores - 3.1% 3,328,042 Dollar General Corp., Tranche B-1 Term Loan, 3. 3,254,087 Dollar General Corp., Tranche B-2 Term Loan, 3. 4,833,335 5,000,000 8,087,422 Specialty Stores - 4.2% 7,399,482 Blockbuster, Inc., Tranche B Term Loan, 4.56% - 6,234,064 989,356 Sally Holdings LLC, Term Loan B, 2.511% - 2.622 946,249 4,180,099 Toys R Us - Delaware, Inc., Tranche B Term Loan 4,017,372 11,197,685 Total Retailing 22,548,566 Food & Staples Retailing - 1.9% Drug Retail - 0.2% Rite Aid Corp., Tranche 4 Term Loan, 9.5%, 6/10 416,000 400,000 Food Retail - 1.7% 4,900,000 Pinnacle Foods Finance LLC, Term Loan, 3.031%, 4,546,793 Total Food & Staples Retailing 4,962,793 Food, Beverage & Tobacco - 5.8% Distillers & Vintners - 0.4% Constellation Brands, Inc., New Tranche B Term 1,084,678 1,100,000 Packaged Foods & Meats - 5.4% 997,449 Dean Foods Co., Tranche B Term Loan, 1.645% - 1 957,730 Dole Food Co., Inc., Credit-Linked Deposit, 0.5 263,010 260,245 Dole Food Co., Inc., Tranche B Term Loan, 8.0%, 314,015 310,714

1,075,460 2,540,730 9,262,500	Dole, Ltd., Tranche C Term Loan, 8.0%, 4/12/13 1,086,887 Sturm Foods, Inc., Initial First Lien Term Loan 2,334,295 Wm. Wrigley Jr. Co., Tranche B Term Loan, 6.5%, 9,392,471 14,348,408 Total Food, Beverage & Tobacco 15,433,086
2,500,000 3,974,269 201,369	Household & Personal Products - 2.9% Household Products - 2.4% Central Garden & Pet Co., Tranche B Term Loan, 2,366,668 Spectrum Brands, Inc., Dollar Term Loan B, 6.25 3,730,845 Spectrum Brands, Inc., LC Loan, 0.131% - 6.25%, 189,035 6,286,548
982,456 (a) 1,000,000	Personal Products - 0.5% Appleseed's Intermediate Holdings, Inc., First 564,912 Brickman Group Holdings, Inc., Tranche B Term L 935,000
	1,499,912Total Household & Personal Products7,786,460
714,286 4,189,286 9,750,000	Health Care Equipment & Services - 14.4% Health Care Equipment & Services - 5.1% Fenwal, Inc., First Lien Delayed Draw Term Loan 623,214 Fenwal, Inc., Initial First Lien Term Loan, 2.6 3,655,152 Talecris Biotherapeutics Holdings Corp., First 9,408,750 13,687,116
403,226 1,588,710 1,196,954 5,163,713(c) 150,564 (e)	Health Care Supplies - 2.1% Bausch & Lomb, Inc., Delayed Draw Term Loan, 3. 383,254 Bausch & Lomb, Inc., Parent Term Loan, 3.848%, 1,510,019 Biomet, Inc., Dollar Term Loan, 3.261% - 3.608% 1,153,876 CCS Medical, Inc., First Lien Term Loan, 4.35%, 2,446,309 CCS Medical, Inc., Term Loan, 11.0%, 11/16/09 150,564 5,644,022
1,290,040 2,938,931 1,006,111(d)	Health Care Services - 1.6% Fresenius SE, Tranche B-1 Term Loan, 6.75%, 9/1 1,302,618 LifeCare Holdings, Term Loan, 4.74%, 8/10/12 2,174,809 Medical Staffing Network, Inc., Second Lien Ter 679,125 4,156,552
11,413,450 1,622,486	Health Care Facilities - 4.6% HCA, Inc., Tranche B-1 Term Loan, 2.848%, 11/1810,767,483 Triumph Healthcare Second Holdings LLC, First L 1,444,012 12,211,495
1,326,933 197,122 355,205 1,087,452	Managed Health Care - 1.0% Aveta, Inc., MMM Original Term Loan, 5.52%, 8/2 1,200,874 Aveta, Inc., NAMM New Term Loan, 5.52%, 8/22/11 186,280 Aveta, Inc., NAMM Original Term Loan, 5.52%, 8/ 321,460 Aveta, Inc., PHMC Acquisition Term Loan, 5.52%, 1,027,642 2,736,256 Total Health Care Equipment & Services 38,435,441
694,960 2,000,000 16,978,348 3,170,000	<pre>Pharmaceuticals & Biotechnology & Life Sciences - 7.9% Pharmaceuticals - 6.7% Fresenius SE, Tranche B-2 Term Loan, 6.75%, 9/1 701,735 Graceway Pharmaceuticals LLC, Mezzanine Loan, 8 500,000 Mylan, Inc., U.S. Tranche B Term Loan, 3.563% -16,526,877</pre>
1,994,709	Diversified Financials - 0.7% Specialized Finance - 0.7% Collect Acquisition Corp., Advance Term Loan B, 1,831,807

Total Diversified Financials 1,831,807 Insurance - 1.4% Insurance Brokers - 1.3% 835,011 HUB International, Ltd., Delayed Draw Term Loan 767,166 3,002,451 HUB International, Ltd., Initial Term Loan, 2.7 2,758,502 3,525,668 Multi-Line Insurance - 0.1% AMWINS Group, Inc., Initial Term Loan, 2.88% - 102,489 149,618 Total Insurance 3,628,157 Real Estate - 0.9% Diversified Real Estate Investment Trust - 0.9% 5,000,000 Spirit Finance Corp., Term Loan, 3.483%, 8/1/13 2,316,665 Total Real Estate 2,316,665 Software & Services - 16.8% Internet Software & Services - 1.3% 3,427,287 Web Service Co., LLC, Term Loan, 7.0%%, 8/28/14 3,410,151 IT Consulting & Other Services - 6.1% 1,000,000 Activant Solutions, Inc., Term Loan, 2.313% - 2 920,000 4,558,140 Keane International, Inc., Closing Date Term Lo 3,840,233 Keane International, Inc., Synthetic LC Loan, 2 293,895 348,837 4,962,500 SunGard Data Systems, Inc., Incremental Term Lo 4,959,840 SunGard Data Systems, Inc., Tranche A U.S. Term 6,334,721 6,717,626 16,348,689 Data Processing & Outsourced Services - 1.7% 2,463,182 DTN, Inc., Tranche C Term Loan, 5.273% - 5.633% 2,376,971 997,462 First Data Corp., Initial Tranche B-2 Term Loan 836,205 Lender Processing Services, Inc., Term Loan B, 1,192,722 1,194,962 4,405,898 Application Software - 2.1% Nuance Communications, Inc., Term Loan, 2.27%, 1,548,676 1,610,582 3,531,739 Serena Software, Inc., Term Loan, 2.629%, 3/11/ 3,290,405 Verint Systems, Inc., Term Loan, 3.523%, 5/25/1 847,694 932,172 5,686,775 Systems Software - 5.6% Applied Systems, Inc., Term Loan, 2.761%, 9/26/ 2,269,926 2,445,164 Infor Enterprise Solutions Holdings, Inc., Dela 1,974,359 2,336,520 2,940,000 Infor Enterprise Solutions Holdings, Inc., Doll 2,462,250 4,478,329 Infor Enterprise Solutions Holdings, Inc., Init 3,784,188 Infor Enterprise Solutions Holdings, Inc., Seco 828,667 1,466,667(a) Infor Enterprise Solutions Holdings, Inc., Seco 1,409,960 2,533,333 1,088,444 Macrovision Solutions Corp., Term Loan, 6.0%, 5 1,091,166 1,000,000 Vangent, Inc., Term Loan, 2.65%, 2/14/13 937,500 14,758,016 44,609,529 Total Software & Services Technology Hardware & Equipment - 2.8% Communications Equipment - 0.3% 870,114 Commscope, Inc., Term Loan B, 3.098%, 12/26/14 852,440 Electronic Equipment & Instruments - 0.9% 1,000,000 H3C Holdings, Ltd., Tranche B Term Loan, 4.794% 891,667 1,543,513 Scitor Corp., Term Loan, 4.51%, 9/26/14 1,366,009 2,257,676 Electronic Components - 0.4% Flextronics International, Ltd., A-1-B Delayed 32,896 36,470 1,160,492 Flextronics International, Ltd., A-3 Delayed Dr 1,056,048 1,088,944 Electronic Manufacturing Services - 1.2%

	1,851,128 992,202 992,202	Baldor Electric Co., Term Loan, 5.25%, 1/31/14 FCI USA, Inc., Facility Term Loan B-1, 3.406%, FCI USA, Inc., Facility Term Loan B-5-B, 3.406% Total Technology Hardware & Equipment	1,835,262 704,463 704,463 3,244,188 7,443,248
	6 500 000	Telecommunication Services - 12.0% Alternative Carriers - 2.1%	5 600 766
	6,500,000	Level 3 Financing, Inc., Tranche A Term Loan, 2	5,602,766
EURO EURO EURO	752,152 390,705 1,142,857 857,143 857,143 1,000,000 435,138 (e) 3,930,000 2,618,570	Integrated Telecommunication Services - 7.3% Amsterdamse Beheer-EN Consultingmaatschappij B. Amsterdamse Beheer-EN Consultingmaatschappij B. Amsterdamse Beheer-EN Consultingmaatschappij B. Amsterdamse Beheer-EN Consultingmaatschappij B. Amsterdamse Beheer-EN Consultingmaatschappij B. Hargray Acquisition Co., Second Lien Term Loan, Inovis International, Inc., Term Loan, 9.5%%, 1 Integra Telecom Holdings, Inc., First Lien Term Telesat Canada, U.S. Term I Loan, 3.27%, 10/31/	537,769 1,573,036 1,179,777 1,179,777 475,000 424,260 3,884,149 2,514,285
	224,907 1,296,684	Telesat Canada, U.S. Term II Loan, 3.27%, 10/31 West Corp., Term Loan B-2, 2.636% - 2.651%, 10/	
	1,500,000	Wind Telecomunicazione S.p.A., Facility Term Lo	2,056,208
EURO	1,500,000 1,183,859	Wind Telecomunicazione S.p.A., Facility Term Lo Windstream Corp., Tranche B-1 Term Loan, 1.78%	
	1,103,000	-	L9,519,278
	7,318,320	Wireless Telecommunication Services - 2.6% MetroPCS Wireless, Inc., Tranche B Term Loan, 2 Total Telecommunication Services	6,907,806 32,029,850
	3,696,435 2,982,124 1,754,777 3,552,599 4,850,000 881,057 (e) 266,142 (e) 2,744,924	Utilities - 7.3% Electric Utilities - 6.3% ANP Funding I LLC, Tranche A Term Loan, 3.776%, Bosque Power Co. LLC, Term Loan, 5.848%, 1/16/1 Coleto Creek Power, L.P., First Lien Synthetic Coleto Creek Power, L.P., First Lien Term Loan, Coleto Creek Power, L.P., Second Lien Term Loan GBGH LLC, First Lien Term Loan, 4.0%, 6/9/13 GBGH, LLC, Second Lien Term Loan, 12.0%, 6/9/14 Texas Competitive Electric Holdings Co. LLC, In	2,445,342 1,590,267 3,219,543 3,164,625 411,013 2,661
	1,989,899 275,941 273,514 510,919	Independent Power Producers & Energy Traders - 1 Calpine Corp., First Priority Term Loan, 3.475% Mach Gen LLC, First Lien Synthetic LC Loan, 0.3 NRG Energy, Inc., Credit-Linked Deposit, 0.498% NRG Energy, Inc., Term Loan, 2.011% - 2.035%, 2 Total Utilities TOTAL SENIOR SECURED FLOATING RATE LOAN INTERES	1,834,128 258,004 259,030 483,863 2,835,025 19,458,486 STS
		(Cost \$495,029,575)	102,955,005
	2,500,000(a)(e 2,500,000(a)(e 2,130,600(a)(e 1,500,000(a)(e 1,264,500(a)(e	CLAIMS - 0.0% of Net Assets Capital Goods - 0.0% Aerospace & Defense - 0.0% Northwest Airlines, Inc., ALPA Claim-Escrow, 2. Northwest Airlines, Inc., Bell Atlantic Claim-E Northwest Airlines, Inc., EDC Claim-Escrow, 5.3 Northwest Airlines, Inc., Flight Attendant Clai Northwest Airlines, Inc., GE Claim-Escrow, 2.5% Northwest Airlines, Inc., IAM Claim-Escrow, 2.5 Northwest Airlines, Inc., Retiree Claim-Escrow, Total Capital Goods	826 1,720 1,720 1,466 1,032 870 966 8,600

	TOTAL CLAIMS (Cost \$0)	8,600
	CORPORATE NOTES - 14.7% of Net Assets Materials - 0.4%	
350,000	Diversified Metals & Mining - 0.2% Rio Tinto Finance USA, Ltd., 8.95%, 5/1/14	407,917
600,000	Paper Products – 0.2% Cellu Tissue Holdings, Inc., 11.5%, 6/1/14 (144 Total Materials	627,000 1,034,917
550,000	Capital Goods - 0.2% Aerospace & Defense - 0.2% DigitalGlobe, Inc., 10.5%, 5/1/14 (144A) Total Capital Goods	575,438 575,438
3,000,000(b)	Automobiles & Components - 0.9% Tires & Rubber - 0.9% American Tire Distributors, Inc., 6.847%, 4/1/1 Total Automobiles & Components	2,280,000 2,280,000
1,000,000	Consumer Durables & Apparel - 0.4% Housewares & Specialties - 0.4% Jarden Corp., 8.0%, 5/1/16 Total Consumer Durables & Apparel	1,025,000 1,025,000
1,000,000(c)(d	Media - 0.1% Broadcasting - 0.1%)CCH I LLC, 11.0%, 10/1/15 (144A) Total Media	140,000 140,000
	Pharmaceuticals & Biotechnology & Life Sciences Biotechnology - 2.3%	- 11.3%
	Fosamprenavir Pharma, 15.5%, 6/15/18 (144A))Molecular Insight Pharmaceuticals, Inc., 9.23%,	
10,592,20(a)(d 1,560,000(a) 770,858 (a)(b 1,120,812(a)	Pharmaceuticals - 9.0% Azithromycin Royalty Sub LLC, 16.0%, 5/15/19 (1)Celtic Pharma Phinco B.V., 17.0%, 6/15/12 (144A Pharma V, 13.0%, 10/15/13 (144A))Pharma VI, 5.598%, 10/15/14 (144A) Pharma X, 15.5%, 3/30/17 (144A) .)TCD Pharma, 16.0%, 4/15/24 (144A) Total Pharmaceuticals & Biotechnology & Life Sc	6,884,931 1,466,400 616,686 930,274 1,290,000 23,938,291
	Diversified Financials - 0.5%	
600,000 (a) 200,000	Consumer Finance - 0.3% American Honda Finance Corp., 5.125%, 12/15/10 Capital One Financial Corp., 7.375%, 5/23/14	618,025 218,169 836,194
530,000	Asset Management & Custody Banks - 0.2% Janus Capital Group, Inc., 6.25%, 6/15/12 Total Diversified Financials	525,193 1,361,387
250,000 (b) 500,000 (b) 600,000 (b)	Insurance - 0.5% Reinsurance - 0.5% Muteki, Ltd., 4.84%, 5/24/11 (144A) Mystic Re, Ltd., 10.668%, 6/7/11 (144A) Residential Reinsurance 2008, Ltd., 7.418, 6/6/ Total Insurance	238,425 479,100 564,900 1,282,425

750 , 000	Real Estate - 0.3% Specialized Real Estate Investment Trusts - 0.2 Hospitality Properties Trust, 7.875%, 8/15/14	
150,000	Diversified Real Estate Activities - 0.1% WEA Finance LLC, 7.5%, 6/2/14 (144A) Total Real Estate	161,137 900,200
300,000	Telecommunication Services - 0.1% Integrated Telecommunication Services - 0.1% Frontier Communications Corp., 8.25%, 5/1/14 Total Telecommunication Services TOTAL CORPORATE NOTES (Cost \$46,410,916)	297,750 297,750 38,985,953
6,203 (e)(f	COMMON STOCK - 0.1% of Net Assets Materials - 0.1% Commodity Chemicals - 0.0%)Georgia Gulf Corp.	75,247
	Diversified Chemicals - 0.1% Panda Herford Ethanol LP Total Materials	206,500 281,747
4,444 (f)	Transportation - 0.0% Airlines - 0.0% Delta Airlines, Inc.	32,086
12,887 (f)	Trucking - 0.0% SIRVA Worldwide, Inc. (144A) Total Transportation	64,435 96,521
1,589 (e)(f	Diversified Financials - 0.0% Other Diversified Financial Services - 0.0%)GBGH, LLC Membership Interest Total Diversified Financials TOTAL COMMON STOCK (Cost \$1,669,888)	16 16 378,284
139,062 (e)(f	CONVERTIBLE PREFERRED STOCK - 0.6% of Net Asset: Materials - 0.6% Commodity Chemicals - 0.6%)Georgia Gulf Corp. TOTAL CONVERTIBLE PREFERRED STOCK (Cost \$1,764,063)	1,686,822 1,686,822
3,377,887(a)(f	LIQUIDATING TRUST - 0.0% of Net Assets Consumer Services - 0.0% Hotels, Resorts & Cruise Lines - 0.0% Yellowstone Mountain Club LLC, Liquidating Trus TOTAL LIQUIDATING TRUST (Cost \$0)	0 0
213,605 (a)(e	WARRANTS - 0.0% of Net Assets Energy - 0.0% Oil & Gas Equipment & Services - 0.0% Value Creation, Inc., Exp. 1/29/14 Total Energy	0 0
	Telecommunication Services - 0.0% Integrated Telecommunication Services - 0.0%	

400,000 (a)		32,000 32,000
		32,000
3,675,000	TOTAL TEMPORARY CASH INVESTMENTS	owing: , RM),
NET AS	OTHER ASSETS AND LIABILITIES - (0.2)% (4 PREFERRED SHARES AT REDEMPTION VALUE, INCLUDING	,768,801 43,864) 472,843) ,852,094
*	Senior secured floating rate loan interests in which the Trust invests generally pay interest at rates are periodically redetermined by reference to a ba- lending rate plus a premium. These base lending is are generally (i) the lending rate offered by one more major European banks, such as LIBOR (London InterBank Offered Rate), (ii) the prime ra- offered by one or more major United States banks, (iii) the certificate of deposit (iv) other base is rates used by commercial lenders. The rate shown the coupon rate accruing at August 31, 2009.	that ase rates or ate lending
(144A)	Security is exempt from registration under Rule 1- of the Securities Act of 1933. Such securities ma resold normally to qualified institutional buyers transaction exempt from registration. At August 31, 2009, the value of these securities amounted or 19.3% of total net assets applicable to common shareowners.	ay be in a
(a)	Indicates a security that has been deemed illiquid The aggregate cost of illiquid securities is \$107,705,961. The aggregate value\$60,549,185 represents 22.8% of the total net assets applicab to common shareowners.	
(b)	Floating Rate Note. The rate shown is the coupon rate at August 31, 2009.	
(c)	Security is in default and is non-income producing	g.

(d) Represents a pay in kind security.

(e) Security i	ls fair	valued.
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- (f) Non-income producing.
- (g) At August 31, 2009, the net unrealized loss on investments based on cost for federal income tax purposes of \$555,907,575 was as follows:

Aggregate gross unrealized gain for all investments in which there is an excess of value over tax cost 7,192,915 Aggregate gross unrealized loss for all investments in which there is an excess of tax cost over value (114,331,689) Net unrealized loss (107,138,774)

For financial reporting purposes net unrealized loss on investments was \$107,001,711 and cost of investments aggregated \$555,770,512.

Glossary of Terms: LC- Letter of Credit

Principal amounts are denominated in U.S. dollars unless otherwise noted. AUD - Australian Dollar EURO - Euro

For the period ended August 31, 2009, the Trust had unfunded loan commitment of \$1,083,998 which would be extended at the option of the borrower, pursuant to the following loan agreements:

Unfunded Loan Borrower Commitment SIRVA Worldwide, Inc., Revolving Credit Loan \$1,018,301

Various inputs are used in determining the value of the Fund's investments. These inputs are summarized in the three broad levels listed below. Highest priority is given to Level 1 inputs and lowest priority is given to Level 3. 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 the Fund's own assumptions in determining fair value of investments)

The following is a summary of the inputs used as of July 31, 2009, in valuing the Fund's assets:

01, 2000, 10 00101	0110 2 4110			
	Level 1	l Level 2	Level 3	Total
Collateralized loan oblig	\$0	\$0	\$1,047,137	\$1,047,137
Senior secured floating	0	389,826,613	13,128,392	402,955,005
Claims	0	0	8,600	8,600
Corporate notes	0	8,897,117	30,088,836	38,985,953
Common stocks	32,086	64,435	281,763	378,284
Convertible preferred	0	0	1,686,822	1,686,822
Warrants	0	32,000	0	32,000
Temporary cash invest	0	3,675,000	0	3,675,000
Total	\$32,086	\$402,495,165	\$46,241,550	\$448,768,801
Other Financial Instruments	s \$0	(\$476,545)	\$0	(\$476 , 545)

*Other financial instruments include foreign exchange contracts

Following is a reconciliation of assets valued using significant unobservable inputs (Level 3):

Senior Secured Collateralized Fltg Rt Corporate Common Convertible Loan Oblig loan int Claims Notes Stock Preferred Total

Beginning balance \$1,514,890\$0\$0\$31,517,31\$0\$0\$33,032,207Total gains/losses (realized/unrealized)included in earnings (or changesin net assets)(515,781)0(938,786)(3,446)(77,241)(1,535,254)Purchases, issuance48,02800(489,695)285,2091,764,0631,607,605Transfers in and out013,128,3928,6000013,136,992Ending Bal.

\$1,047,137 \$13,128,392 \$8,600 \$30,088,836 \$281,763 \$1,686,822\$46,241,550

The amount of total gains or losses for the period included in earnings (or changes in net assets) attributable to the change in unrealized gains or losses relating to assets still held at reporting date (\$515,781) \$0 \$0 (\$938,786)(\$3,446) (\$77,241)(\$1,535,254)

ITEM 2. CONTROLS AND PROCEDURES.

(a) Disclose the conclusions of the registrant's principal executive officer or officers and principal financial officer or officers, or persons performing similar functions, about the effectiveness of the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Act (17 CFR 270.30a-3(c))) as of a date within 90 days of the filing date of the report that includes the disclosure required by this paragraph, based on their evaluation of these controls and procedures required by Rule 30a-3(b) under the Act (17 CFR270.30a-3(b))) and Rule 13a-15(b) or 15d-15(b) under the Exchange Act (17 CFR240.13a-15(b) or 240.15d-15(b)).

The registrant's principal executive officer and principal financial officer have concluded that the registrant's disclosure controls and procedures are effective based on their evaluation of these controls and procedures as of a date within 90 days of the filing date of this report.

(b) Disclose any change in the registrant's internal controls over financial reporting (as defined in Rule 30a-3(d) under the Act (17 CFR270.30a-3(d)) that occurred during the registrant's last fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

There were no significant changes in the registrant's internal control over financial reporting that occurred during the second fiscal quarter of the period covered by this report that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

ITEM 3. EXHIBITS.

(a) A separate certification for each principal executive officer and principal

financial officer of the registrant as required by Rule 30a-2 under the Act (17 CFR 270.30a-2).

Filed herewith.

SIGNATURES

[See General Instruction F]

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) Pioneer Floating Rate Trust

By (Signature and Title)* /s/ John F. Cogan, Jr. John F. Cogan, Jr, President

Date October 29, 2009

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/ John F. Cogan, Jr. John F. Cogan, Jr., President

Date October 29, 2009

By (Signature and Title)* /s/ Mark Bradley Mark Bradley, Treasurer

Date October 29, 2009

* Print the name and title of each signing officer under his or her signature.