Pioneer Diversified High Income Trust Form N-Q April 01, 2011

OMB APPROVAL

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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 811-22014

Pioneer Diversified High Income Trust (Exact name of registrant as specified in charter)

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

Terrence J Cullen, 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: April 30

Date of reporting period: January 31, 2011

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 $44~\mathrm{U.S.C.}$ ss. 3507.

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ITEM 1. Schedule of Investments.

Pioneer Diversified High Income Trust SCHEDULE OF INVESTMENTS 1/31/11 (unaudited)

Principal Amount USD (\$)	S&P/Moody's Ratings (unaudited)		Value	
		ASSET BACKED SECURITIES - 1.3% of Net Assets Banks - 0.7% Thrifts & Mortgage Finance - 0.7%		
246,741(a)	AA+/Aa1	0.7% Ace Securities Corp., 1.16%, 12/25/34	\$	192,734
699,000(a)	BBB+/Caa2	Carrington Mortgage Loan Trust, 0.46, 2/25/37		468,517
497,092(a)	CCC/NR	Countrywide Asset-Backed Certificates, 0.711%, 3/25/47 (144A)		248,908
203,463(a)	B-/B3	GSAMP Trust, 0.391%, 1/25/37		184,492
570,986(a)	CC/Ca	Lehman XS Trust, 0.613%, 12/25/35		191,867
		Total Banks	\$	1,286,518
		Diversified Financials - 0.5% Other Diversified Financial Services - 0.4%		
1,137,467(a)	B-/Caa1	Aircraft Finance Trust, 0.741%, 5/15/24 (144A)	\$	659,731
70,017(a)	B-/Ba3	Aircraft Finance Trust, 0.761%, 5/15/24 (144A)		65,115
		Specialized Finance - 0.1%	\$	724,846
150,000	BBB-/Baa3	Dominos Pizza Master Issuer LLC, 5.261%, 4/25/37 (144A)	\$	153,750
		Total Diversified Financials	\$	878,596
		Real Estate - 0.1% Mortgage Real Estate Investment Trust - 0.1%		

97,965	NR/NR	Real Estate Asset Trust, 10.0%, 9/25/40 (144A)	\$	97,965
		Total Real Estate TOTAL ASSET BACKED SECURITIES (Cost \$2,237,017)	\$ \$	97,965 2,263,079
		COLLATERALIZED MORTGAGE OBLIGATIONS - 0.9% of Net Assets Banks - 0.9% Thrifts & Mortgage Finance -		
242,599(a)	CCC/C	0.9% Countrywide Home Loans,	\$	68,134
504,258(a)	CC/C	0.611%, 3/25/35 Downey Savings and Loan Association Mortgage Loan Trust, 0.631%, 10/19/45		236,364
239,579(a)	D/C	Downey Savings and Loan Association Mortgage Loan Trust, 0.681%, 10/19/45		33,080
1,104,563(a)	AAA/A3	Impac CMB Trust, 1.021%, 1/25/35		890,018
83,133(a)	D/B3	Impac Secured Assets CMN Owner Trust, 0.35%, 11/25/36		78,488
355,326(a)	D/C	Luminent Mortgage Trust, 0.521%, 7/25/36		21,063
373,069(a)	AAA/Caa1	WaMu Mortgage Pass-Through Certificates, 0.491%, 4/25/45		315,865
		Total Banks TOTAL COLLATERALIZED MORTGAGE OBLIGATIONS	\$	1,643,012
		(Cost \$2,060,787)	\$	1,643,012
		CORPORATE BONDS & NOTES - 94.8% of Net Assets Energy - 8.3% Coal & Consumable Fuels - 1.0%		
850,000(c)	BB/Ba3	Bumi Capital Pte, Ltd., 12.0%, 11/10/16 (144A)	\$	966,875
738,000	BB-/B1	Drummond Co., Inc., 9.0%, 10/15/14 (144A)		793,350
		Oil & Gas Drilling - 0.9%	\$	1,760,225
500,000(a)	NR/NR	Aker Drilling ASA,1.0%, 2/24/16	\$	88,730
500,000	NR/NR	Aker Drilling ASA,11.0%, 2/24/16		86,566
670,000	B-/B3	Offshore Group Investments, Ltd., 11.5%, 8/1/15(144A)		745,375
500,000	B/NR	Pioneer Drilling Co., 9.875%, 3/15/18		540,625

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				\$ 1,461,296
			Oil & Gas Equipment & Services - 2.3%	
	1,500,000	B+/B1	American Petroleum Tankers LLC, 10.25%, 5/1/15 (144A)	\$ 1,561,875
	730,000	B/B2	Expro Finance Luxembourg SCA, 8.5%, 12/15/16 (144A)	719,050
	65,067(b)	NR/NR	Nexus 1 Pte., Ltd., 10.5%, 3/7/12 (144A)	65
	900,000(a)	NR/NR	Sevan Marine ASA, 3.443\$,5/14/13 (144A)	810,000
NOK	2,560,000(a)	NR/NR	Sevan Marine ASA, 12.59%, 10/24/12 (144A)	463,162
NOK	2,500,000(a)	NR/NR	Sevan Marine ASA, 14.0%, 10/24/14 (144A)	432,829
			10/24/14 (1447)	\$ 3,986,981
			Oil & Gas Exploration & Production - 2.9%	
	505,000	BB-/B2	Berry Petroleum Co., 10.25%, 6/1/14	\$ 582,012
	125,000	BB/Ba3	Chesapeake Energy Corp., 9.5%, 2/15/15	146,250
	970,000	BB-/B2	Hilcorp Energy I LP, 9.0%, 6/1/16 (144A)	1,023,350
	685,000	B/B2	Linn Energy LLC/Linn Energy Finance Corp., 11.75%, 5/15/17	792,888
NOK	2,500,000	NR/NR	Norwegian Energy Co. AS, 12.9%, 11/20/14	452,307
NOK	3,000,000(a)	NR/NR	PA Resources AB, 10.06%, 3/9/11	514,201
	240,000	B-/B3	Quicksilver Resources, Inc., 7.125%, 4/1/16	230,400
	472,000	B-/Caa1	Rosetta Resources, Inc., 9.5%, 4/15/18	520,970
	670,000(d)	B/B3	SandRidge Energy, Inc., 8.625%, 4/1/15	688,425
			Oil & Gas Refining & Marketing	\$ 4,950,803
			- 0.7%	
	1,310,000(c)	B/B2	Petroplus Finance, Ltd., 9.375%, 9/15/19 (144A)	\$ 1,277,250
			Oil & Gas Storage &	
	500,000	B+/B1	Transportation - 0.5% Holly Energy Partners LP, 6.25%,	\$ 495,000
	450,000(a)	BB/Ba1	3/1/15 Southern Union Co., 7.2%,	423,000
			11/1/66	\$ 918,000
			Total Energy	\$ 14,354,555

Materials - 11.2%
Aluminum - 1.0%

1,351,578(a)(d) CCC+/B3 Noranda Aluminum Acquisition \$ 1,260,346
Corp., 5.193%, 5/15/15