Pioneer Diversified High Income Trust Form N-Q September 28, 2016

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

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

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: July 31, 2016

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 30b1-5 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 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.

<PAGE>

ITEM 1. Schedule of Investments.

File the schedules as of the close of the reporting period as set forth in ss. 210.12-12 12-14 of Regulation S-X [17 CFR 210.12-12 12-14]. The

schedules need not be audited.

Pioneer Diversified High Income Trust

NQ | July 31, 2016

Ticker Symbol: HNW

SECURITIES

Principal

Amount USD (\$)	Value
ASSET BACKED SECURITIES	
- 1.2% of Net Assets	
250,000 American Credit Acceptance	
Receivables Trust, Series 2014-2,	
Class D, 4.96%, 5/10/21 (144A)	\$ 253,648
200,000 Ascentium Equipment Receivables	
LLC, Series 2015-1A,	
Class E, 5.92%, 6/12/23 (144A)	198,312
299,996 Axis Equipment Finance Receivables	
III LLC, Series 2015-1A,	
Class E, 5.27%, 5/20/20 (144A)	287,594
80,239 Continental Airlines Pass Through	
Trust, Series 1998-1, Class B, 6.748%,	
3/15/17	82,598
400,000(a)NCF Dealer Floorplan Master Trust,	
Series 2016-1A, Class C, 8.987%,	
3/21/22 (144A)	395,095
500,000 VB-S1 Issuer LLC, Series 2016-1A,	
Class F, 6.901%, 6/15/46 (144A)	507,637
TOTAL ASSET BACKED	

(Cost \$1,711,766)	\$ 1,724,884
COLLATERALIZED MORTGAGE	
OBLIGATIONS - 0.6% of Net Assets	
59,026 Global Mortgage Securitization, Ltd.,	
Series 2004-A, Class B1, 5.25%,	
11/25/32 (144A)	\$ 46,545
117,802 Global Mortgage Securitization, Ltd.,	
Series 2005-A, Class B3, 5.25%,	
4/25/32 (144A)	78,038
290,000(b)GMAT Trust, Series 2013-1A, Class	
M, 5.0%, 11/25/43 (144A)	276,107
347,818(c)GMAT Trust, Series 2015-1A, Class	
A1, 4.25%, 9/25/20 (144A)	346,864
TOTAL COLLATERALIZED	
MORTGAGE OBLIGATIONS	
(Cost \$789,039)	\$ 747,554
COMMERCIAL	
MORTGAGE-BACKED	
SECURITIES - 2.8% of Net Assets	
375,000(a)BAMLL Commercial Mortgage	
Securities Trust, Series 2014-INLD,	
Class F, 2.971%, 12/15/29 (144A)	\$ 336,813
139,379(b)Bear Stearns Commercial Mortgage	,
Securities Trust, Series 2005-PWR7,	
Class B, 5.214%, 2/11/41	139,186
260,000(a)CFCRE Mortgage Trust,	,
Series 2015-RUM, Class E, 5.042%,	
7/15/30 (144A)	252,486
500,000(b)Citigroup Commercial Mortgage	- ,
Trust, Series 2014-GC23, Class E,	
3.208%, 7/10/47 (144A)	310,427
500,000(b)COBALT CMBS Commercial	,
Mortgage Trust, Series 2007-C3,	
Class C, 5.765%, 5/15/46	405,453
300,000(b)COMM Mortgage Trust,	.00,.00
Series 2007-C9, Class H, 5.813%,	
12/10/49 (144A)	285,215
250,000(b)COMM Mortgage Trust,	200,210
Series 2012-CR2, Class E, 4.855%,	
8/15/45 (144A)	243,693
115,766(a)EQTY Mezzanine Trust,	213,075
Series 2014-INMZ, Class M, 5.223%,	
5/8/31 (144A)	107,997
170,000(a)EQTY Mortgage Trust,	101,557
Series 2014-INNS, Class E, 3.923%,	
5/8/31 (144A)	163,396
124,211 Homeowner Assistance Program	100,000
Reverse Mortgage Loan Trust,	
Series 2013-RM1, Class A, 4.0%,	
5/26/53 (144A)	122,969
150,000	144,968
100,000	177,700

JP Morgan Chase Commercial	
Mortgage Securities Trust,	
Series 2006-CB16, Class AJ, 5.623%,	
5/12/45	
550,000(a)JP Morgan Chase Commercial	
Mortgage Securities Trust,	
Series 2014-INN, Class E, 4.081%,	
6/15/29 (144A)	532,062
479,101(b)LB-UBS Commercial Mortgage Trust,	
Series 2006-C1, Class AJ, 5.276%,	
2/15/41	474,343
500,000(b)Morgan Stanley Capital I Trust,	,
Series 2007-T25, Class AJ, 5.574%,	
11/12/49	497,732
TOTAL COMMERCIAL	
MORTGAGE-BACKED	
SECURITIES	
(Cost \$4,105,593)	\$ 4,016,740
SENIOR SECURED FLOATING	
RATE LOAN INTERESTS - 30.6%	
of Net Assets* (a)	
AUTOMOBILES & COMPONENTS	
- 2.1%	
Auto Parts & Equipment - 1.3%	
346,920 Electrical Components International,	
Inc., Term Loan, 5.75%, 5/28/21	\$ 347,137
184,116 Federal-Mogul Corp., Tranche C Term	
Loan, 4.75%, 4/15/21	174,081
152,568 Key Safety Systems, Inc., Initial Term	
Loan, 5.5%, 8/29/21	153,490
251,401 MPG Holdco I, Inc., Initial Term	
Loan, 3.75%, 10/20/21	251,676
178,198 TI Group Automotive Systems LLC,	
Initial US Term Loan, 4.5%, 6/30/22	178,978
786,235 Tower Automotive Holdings USA	
LLC, Refinancing Term Loan, 4.0%,	
4/23/20	783,779
	\$ 1,889,141
Automobile Manufacturers - 0.6%	
839,209 Chrysler Group LLC, Term Loan B,	
3.5%, 5/24/17	\$ 841,681

Principal Amount	
USD (\$)	Value
Tires & Rubber - 0.2%	
287,500 Goodyear Tire & Rubber Co., Second	
Lien Term Loan, 3.75%, 4/30/19	\$ 288,517
Total Automobiles & Components	\$ 3,019,339
CAPITAL GOODS - 4.5%	
Aerospace & Defense - 0.9%	
300,000 DAE Aviation Holdings, Inc., Initial	
Term Loan, 5.25%, 7/7/22	\$ 301,125
525,000 DynCorp International, Inc., Term	
Loan B2, 7.75%, 7/7/20	524,398
118,088 TASC, Inc., First Lien Term Loan,	
7.0%, 5/22/20	118,457
228,422 Vencore, Inc. (fka SI Organization,	
Inc.), Initial First Lien Term Loan,	
5.75%, 11/23/19	228,279
157,600 WP CPP Holdings LLC, Second Lien	
Term Loan B-1, 8.75%, 4/30/21	142,628
	\$ 1,314,887
Building Products - 0.9%	
908,904 Builders FirstSource, Inc., Term Loan	* 0.12 = 52
B, 6.0%, 7/29/22	\$ 913,562
391,885 Unifrax Holding Co., New Term B	
Dollar Loan, 4.25%, 11/28/18	384,415
	\$ 1,297,977
Construction Machinery & Heavy	
Trucks - 0.3%	
388,050 Navistar, Inc., Tranche B Term Loan,	Φ 267 677
6.5%, 8/7/20	\$ 367,677
Electrical Components & Equipment -	
0.7%	
418,585 WireCo WorldGroup, Inc., Term Loan B, 0.0%, 7/21/23	¢ 420 547
504,460 WireCo WorldGroup, Inc., Term	\$ 420,547
Loan, 6.0%, 2/15/17	503,409
Loan, 0.0 %, 2/13/17	\$ 923,956
Industrial Conglomerates - 0.9%	Ψ 723,730
441,558 Doosan Infracore International, Inc.	
(Doosan Holdings Europe, Ltd.),	
Tranche B Term Loan, 4.5%, 5/28/21	\$ 442,662
98,258 Faenza Acquisition GmbH (CeramTec	Ψ 112,002
Acquisition Corp.), Dollar Term B-3	
Loan, 4.25%, 8/30/20	98,474
321,970 Faenza Acquisition GmbH (CeramTec	70,474
Acquisition Corp.), Initial Dollar Term	
B-1 Loan, 4.25%, 8/30/20	322,675
D 1 20mi, 1120 10, 0100120	322,013

34,939	Faenza Acquisition GmbH (CeramTec Acquisition Corp.), Initial Dollar Term	
399,694	B-2 Loan, 4.25%, 8/30/20 Filtration Group Corp., Initial Second	35,016
10,578	Lien Term Loan, 8.25%, 11/22/21 Kleopatra Holdings 2 SCA, Initial	395,364
24.754	German Borrower Dollar Term Loan, 5.0%, 4/28/20	10,653
24,754	Kleopatra Holdings 2 SCA, Initial US Borrower Dollar Term Loan, 5.0%,	24.020
	4/28/20	24,929 \$ 1,329,773
	Industrial Machinery - 0.4%	
	NN, Inc., Initial Term Loan, 5.75%, 10/19/22	\$ 496,663
	Trading Companies & Distributors - 0.4%	
286,828	AWAS Finance Luxembourg 2012	
	SA, Term Loan, 3.5%, 7/16/18	\$ 287,366
260,164	WESCO Distribution, Inc., Tranche	
	B-1 Loan, 5.5%, 12/12/19	260,896
		\$ 548,262
	Total Capital Goods	\$ 6,279,195
	COMMERCIAL & PROFESSIONAL	
	SERVICES - 0.4%	
	Environmental & Facilities Services - 0.3%	
500,000	Granite Acquisition, Inc., Second Lien	
,	Term B Loan, 8.25%, 12/19/22	\$ 472,500
	Security & Alarm Services - 0.1%	+ ··-,- · ·
126,931	Protection One, Inc., 2012 Term Loan,	
,	4.75%, 7/1/21	\$ 128,280
	Total Commercial & Professional	
	Services	\$ 600,780
	CONSUMER DURABLES &	
	APPAREL - 0.1%	
164514	Leisure Products - 0.1%	
	Bombardier Recreational Products,	¢ 164 240
	Inc., Term B Loan, 3.75%, 6/30/23	\$ 164,240 \$ 164,240
	Total Consumer Durables & Apparel CONSUMER SERVICES - 2.2%	\$ 104,240
	Casinos & Gaming - 0.2%	
295 500	Scientific Games International, Inc.,	
	Initial Term B-2 Loan, 6.0%, 10/1/21	\$ 295,338
	Education Services - 0.6%	\$ 2 55,550
316,426	Cengage Learning Acquisitions, Inc.,	
•	Term Loan, 5.25%, 6/7/23	\$ 316,228
600,000	Laureate Education, Inc., Series 2018	
	Extended Term Loan, 5.0%, 6/15/18	587,250
		\$ 903,478
	Leisure Facilities - 0.1%	

128,010 Fitness International LLC, Term B Loan, 5.5%, 7/1/20

\$ 127,903

Principal	
Amount	
USD (\$)	Value
Restaurants - 0.7%	
377,367 Landry's, Inc. (fka Landry's	
Restaurants, Inc.), Term Loan B,	
4.0%, 4/24/18	\$ 378,487
529,800 NPC International, Inc., Term Loan,	
4.75%, 12/28/18	531,125
	\$ 909,612
Specialized Consumer Services - 0.6%	
744,375 KC MergerSub, Inc., First Lien Initial	
Term Loan, 6.0%, 8/12/22	\$ 741,584
120,230 Monitronics International, Inc., 2013	
Term Loan B, 4.25%, 3/23/18	119,503
	\$ 861,087