BLACKROCK MUNIYIELD INVESTMENT FUND

Date of reporting period: 04/30/2014

Form N-Q June 25, 2014
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 811-06502
Name of Fund: BlackRock MuniYield Investment Fund (MYF)
Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809
Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniYield Investment Fund, 55 East 52 nd Street, New York, NY 10055
Registrant's telephone number, including area code: (800) 882-0052, Option 4
Date of fiscal year end: 07/31/2014

Item 1 – Schedule of Investments

Schedule of Investments April 30, 2014 (Unaudited) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
Alabama — 0.8% City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International		
Paper Co. Project, Series A, 5.38%, 12/01/35	\$545	\$578,032
Courtland IDB, Refunding RB, International Paper Co. Projects, Series A, AMT, 5.20%, 6/01/25	1,000	1,011,740
		1,589,772
Alaska — 0.8% Alaska Municipal Bond Bank Authority, RB, Series 1, 5.75%, 9/01/33	1,000	1,137,570
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A, 5.00%, 6/01/46	690	500,912
		1,638,482
California — 12.9%		
California Educational Facilities Authority, RB, University of Southern California, Series A, 5.25%, 10/01/38	2,740	3,099,022
California Health Facilities Financing Authority, RB, Sutter Health, Series B, 6.00%, 8/15/42	1,645	1,948,634
California Health Facilities Financing Authority, Refunding RB, Catholic Healthcare West, Series A, 6.00%, 7/01/39 California State Public Works Board, LRB:	710	788,625
Department of Corrections & Rehabilitation, Series F, 5.25%, 9/01/33 Various Capital Projects, Series I, 5.50%, 11/01/31 City & County of San Francisco California Airports Commission,	835 1,000	934,248 1,164,900
Refunding ARB, 2nd Series A, AMT: 5.50%, 5/01/28 5.25%, 5/01/33	1,065 830	1,221,182 917,706
City of San Jose California, Refunding ARB, Series A-1, AMT, 5.50%, 3/01/30	1,500	1,655,025
Kern Community College District, GO, Safety, Repair & Improvement, Election of 2002, Series C, 5.50%, 11/01/33	1,620	1,888,564
Municipal Bonds	Par (000)	Value
California (concluded)	\$3,600	\$4,045,068

Los Angeles Department of Water & Power, RB, Power System, Sub-Series A-1, 5.25%, 7/01/38		
San Diego Regional Building Authority, RB, County Operations Center & Annex, Series A, 5.38%, 2/01/36	1,310	1,491,003
State of California, GO, Various Purposes, 6.00%, 3/01/33	2,535	3,038,299
Township of Washington California Health Care District, GO, Election of 2004, Series B, 5.50%, 8/01/40	625	717,925
University of California, Refunding RB, The Regents of Medical Center, Series J, 5.25%, 5/15/38	3,730	4,113,519
		27,023,720
Colorado — 0.9% City & County of Denver Colorado Airport System, ARB, Series A, AMT:		
5.50%, 11/15/28 5.50%, 11/15/30 5.50%, 11/15/31	1,000 330 400	1,125,600 367,551 441,520
		1,934,671
Delaware — 0.3% County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	500	535,075
Florida — 8.4%		
City of Jacksonville Florida, Refunding RB, Series A, 5.25%, 10/01/33 County of Escambia Florida, Refunding RB, International Paper Co.	675	751,869
Project, Series B, AMT, 5.00%, 8/01/26	600	600,264
County of Hillsborough Florida Aviation Authority, Refunding ARB, Tampa International Airport, Series A, AMT, 5.50%, 10/01/29	1,995	2,231,188
County of Hillsborough Florida IDA, RB, National Gypsum Co., AMT: Series A, 7.13%, 4/01/30 Series B, 7.13%, 4/01/30 County of Lee Florida, Refunding ABB, Series A, AMT, 5.38%	2,500 2,290	2,511,250 2,291,809
County of Lee Florida, Refunding ARB, Series A, AMT, 5.38%, 10/01/32	2,000	2,144,220

BlackRock MuniYield Investment Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
Florida (concluded) County of Manatee Florida Housing Finance Authority, RB, S/F Housing, Series A, AMT (Ginnie Mae, Fannie Mae & Freddie Mac), 5.90%, 9/01/40 County of Miami-Dade Florida, RB, Seaport:	\$325	\$331,578
Series A, 5.38%, 10/01/33 Series B, AMT, 6.25%, 10/01/38 Series B, AMT, 6.00%, 10/01/42	1,170 525 700	1,282,203 597,476 782,145
County of Miami-Dade Florida Aviation, Refunding ARB, Series A, AMT, 5.00%, 10/01/31	2,440	2,602,114
Reedy Creek Improvement District, GO, Series A, 5.25%, 6/01/32	1,200	1,339,440
		17,465,556
Georgia — 0.5% Municipal Electric Authority of Georgia, Refunding RB, Project One, Sub-Series D, 6.00%, 1/01/23	880	1,042,571
Hawaii — 0.5% State of Hawaii, Department of Transportation, COP, AMT: 5.25%, 8/01/25 5.25%, 8/01/26	485 525	537,705 576,476 1,114,181
Illinois — 16.0%		
City of Chicago Illinois, GARB, O'Hare International Airpor 3rd Lien, Series C, 6.50%, 1/01/41 City of Chicago Illinois, GO, Refunding, Series A:	t, 6,065	7,036,856
5.25%, 1/01/29 5.25%, 1/01/33 City of Chicago Illinois, Refunding RB, Series A:	1,000 980	1,055,000 1,012,193
Sales Tax, 5.25%, 1/01/38 Waterworks, Second Lien (AMBAC), 5.00%, 11/01/36 City of Chicago Illinois Transit Authority, RB, Sales Tax	765 1,015	811,489 1,054,138
Receipts: 5.25%, 12/01/36 5.25%, 12/01/40 County of Cook Illinois Community College District No.	1,000 1,000	1,074,290 1,067,570
508, GO, City College of Chicago: 5.50%, 12/01/38	1,000	1,102,510
Municipal Bonds	Par (000)	Value

Illinois (concluded) County of Cook Illinois Community College District No. 508, GO, City College of Chicago (concluded):		
5.25%, 12/01/43	\$1,500	\$1,596,375
Illinois Finance Authority, RB, Carle Foundation, Series A, 6.00%, 8/15/41	4,000	4,496,000
Illinois Finance Authority, Refunding RB: Central DuPage Health, Series B, 5.38%, 11/01/39	1,200	1,272,264
Northwestern Memorial Hospital, Series A, 6.00%, 8/15/39 Railsplitter Tobacco Settlement Authority, RB:	4,160	4,806,256
5.50%, 6/01/23 6.00%, 6/01/28	1,370 390	1,596,598 452,564
State of Illinois, GO:	370	152,501
5.25%, 2/01/31 5.25%, 2/01/32	1,005 2,200	1,091,179 2,374,020
5.50%, 7/01/33 5.50%, 7/01/38	1,000 415	1,095,640 452,711
		33,447,653
Indiana — 3.4%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT, 6.75%, 1/01/34	1,350	1,447,889
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT, 5.00%, 7/01/44	555	560,411
Indiana Municipal Power Agency, RB, Series B, 6.00%, 1/01/39	4,525	5,080,715
		7,089,015
Kansas — 1.8% Kansas Development Finance Authority, Refunding RB, Adventist Health System/Sunbelt Obligated Group, Series C, 5.50%, 11/15/29	3,275	3,691,875
Kentucky — 0.7% County of Louisville & Jefferson Kentucky Metropolitan Government Parking Authority, RB, Series A, 5.75%, 12/01/34	1,200	1,410,960

BlackRock MuniYield Investment Fund, Inc.
April 30, 2014 2

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

		(Percentages shown are based of
Municipal Bonds	Par (000)	Value
Louisiana — 2.2% Lake Charles Harbor & Terminal District, RB, Series B, AMT, 5.50%, 1/01/29 Louisiana Local	\$1,500	\$1,672,500
Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35		1,579,423
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.50%, 5/15/29	1,195	1,299,097
		4,551,020
Maine — 1.4% Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 7.50%, 7/01/32	2,500	2,857,900
Massachusetts — 3.4% Massachusetts HFA, Refunding, HRB, Series B, 5.50%, 6/01/41 Massachusetts HFA, Refunding RB, AMT:	3,000	3,099,960
Series C, 5.35%, 12/01/42 Series F, 5.70%, 6/01/40	2,000 1,980	2,039,400 2,049,181
		7,188,541
Michigan — 2.8% City of Lansing Michigan, RB, Board of Water & Light Utilities System, Series A, 5.50%, 7/01/41 Michigan State Building Authority, Refunding RB,	1,805 1,250	2,045,516 1,430,325
Facilities Program, Series I,		

6.00%, 10/15/38

Royal Oak Hospital Finance

Authority Michigan,

Refunding RB, William

Beaumont Hospital,

1,970 2,416,245

Services V, 8.25%, 9/01/18

(a)

5,892,086

Mississippi — 1.3%

Mississippi Development

Bank, RB, Special

Obligation, Jackson Water

1,785 2,300,597

& Sewer System Project (AGM), 6.88%, 12/01/40

Municipal Bonds

Par

(000) Value

Mississippi (concluded)

Mississippi State University

Educational Building Corp.,

Refunding RB, Mississippi

B, Mississippi \$440 \$493,368

State University
Improvement Project,

5.25%, 8/01/38

2,793,965

Nevada — 3.4%

City of Las Vegas Nevada,

GO, Limited Tax,

2,850 3,293,660

6.00%, 4/01/34

County of Clark Nevada

Performing Arts Center,

Airport System, ARB, 3,375 3,867,142

Series B, 5.75%, 7/01/42

7,160,802

New Jersey — 4.4%

New Jersey EDA, RB, The

Goethals Bridge

Replacement Project, 900 961,110

Private Bond, AMT, 5.00%,

1/01/31

New Jersey EDA, 2,250 2,437,132

Refunding RB, New Jersey American Water Co., Inc.

Project, Series A, AMT,

5.70%, 10/01/39

New Jersey Transportation

Trust Fund Authority, RB,

Transportation System:

Series A, 5.88%, 12/15/38 2,670 3,102,914

Series AA, 5.50%, 6/15/39 2,475 2,762,397

9,263,553

New York — 2.2%

Metropolitan Transportation

Authority, RB, Series B, 2,500 2,730,350

5.25%, 11/15/44

New York Liberty

Development Corp.,

Refunding RB, 2nd Priority, 1,650 1,794,573

Bank of America Tower at One Bryant Park Project,

Class 3, 6.38%, 7/15/49

4,524,923

Ohio — 2.7%

County of Allen Ohio

Hospital Facilities,

Refunding RB, Catholic 3,115 3,330,340

Healthcare Partners, Series

A, 5.25%, 6/01/38

State of Ohio Turnpike

Commission, RB, Junior

Lien, Infrastructure

Projects, Series A-1:

5.25%, 2/15/30 1,000 1,128,170

BlackRock

MuniYield April 30, 2014 3

Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

Municipal Bonds Par (000) Value

Ohio (concluded) State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series

A-1 (concluded):

5.25%, 2/15/31 \$1,000 \$1,121,750

5,580,260

Pennsylvania — 4.6% Pennsylvania Economic Development Financing

Authority DR American Water 1,075 1,224,511

Authority, RB, American Water Co. Project, 6.20%, 4/01/39

Pennsylvania Turnpike

Commission, RB:

 Series A, 5.00%, 12/01/44
 755
 811,512

 Sub-Series A, 5.63%, 12/01/31
 2,455
 2,722,865

 Sub-Series A, 6.00%, 12/01/41
 3,000
 3,297,120

Township of Bristol

Pennsylvania School District, 1,500 1,644,000

GO, 5.25%, 6/01/37

9,700,008

South Carolina — 2.9%

County of Charleston South Carolina, RB, Special Source,

2,505 2,852,744

5.25%, 12/01/38

County of Charleston South

Carolina Airport District, ARB,

Series A, AMT:

6.00%, 7/01/38 1,955 2,182,543 5.50%, 7/01/41 1,000 1,086,130

6,121,417

Texas — 9.1%

Central Texas Regional

Mobility Authority, Refunding

RB, Senior Lien:

5.75%, 1/01/31 1,000 1,092,320 6.00%, 1/01/41 2,600 2,868,164 City of Beaumont Texas, GO, 1,555 1,748,893

Certificates of Obligation,

o o		
5.25%, 3/01/37 Conroe Texas ISD, GO, School Building, Series A, 5.75%,	1,800	2,056,860
2/15/35 County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Scott & White Healthcare, 6.00%,	3,795	4,493,622
8/15/45 Municipal Bonds	Par (000)	Value
Texas (concluded) Dallas-Fort Worth International Airport, ARB, Joint		
Improvement, AMT:	Ф1 265	4.1.
Series A, 5.00%, 11/01/38	-	\$1,408,543
Series H, 5.00%, 11/01/37	1,535	1,589,339
North Texas Tollway Authority, Refunding RB, 1st Tier, Series K-1 (AGC), 5.75%, 1/01/38	1,000	1,134,330
Red River Education Financing Corp., RB, Texas Christian University Project, 5.25%, 3/15/38	710	797,720
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien, NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	1,700	1,940,414
		19,130,205
Virginia — 2.0% City of Lexington Virginia IDA, RB, Washington & Lee University, 5.00%, 1/01/43	560	610,148
Virginia Public School Authority, RB, Fluvanna County School Financing, 6.50%, 12/01/18 (a)	800	993,272
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings LLC Project, AMT, 6.00%, 1/01/37		2,646,058
Authority, RB, Fluvanna County School Financing, 6.50%, 12/01/18 (a) Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings LLC Project, AMT, 6.00%,		·

4,249,478

Wisconsin — 1.8%
Wisconsin Health &
Educational Facilities Authority,
Refunding RB, Froedtert & 3,470 3,690,519
Community Health, Inc., Series
C, 5.25%, 4/01/39

Total Municipal Bonds — **91.2**% 190,688,208

Municipal Bonds Transferred to

Tender Option Bond (TOB) Trusts (b)

California — 20.7%
Bay Area Toll Authority,
Refunding RB, San Francisco
Bay Area, Series F-1, 5.63%,
4/01/44
California Educational Facilities
Authority, RB, University of
Southern California, Series B,
5.25%, 10/01/39 (c)

2,680
2,933,174
4,200
4,761,708

BlackRock MuniYield Investment April 30, 2014 4 Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

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Municipal Bonds Transferred to	Par	Value
Tender Option Bond (TOB) Trusts (b)	(000)	
California (concluded) Grossmont Union High School District, GO, Election of 2008, Series B, 5.00%, 8/01/40		\$6,424,620
Los Angeles Community College District California, GO, Election of 2008, Series C, 5.25%, 8/01/39 (c)	5,250	5,969,565
Los Angeles Community College District California, GO, Refunding, Election of 2008, Series A, 6.00%, 8/01/33	7,697	9,142,218
Los Angeles Unified School District California, GO, Series I, 5.00%, 1/01/34	790	879,633
San Diego Public Facilities Financing Authority Water, RB, Series B, 5.50%, 8/01/39	8,412	9,725,836
University of California, RB, Series O, 5.75%, 5/15/34	3,000	3,496,240
		43,332,994
Colorado — 1.2% Colorado Health Facilities Authority, Refunding RB, Catholic Health Initiatives, Series A, 5.50%, 7/01/34 (c)	-	2,437,465
District of Columbia — 3.5% District of Columbia, RB, Series A, 5.50%, 12/01/30 (c) District of Columbia Water & Sewer	2,805	3,291,452
Authority, Refunding RB, Senior Lien, Series A, 5.50%, 10/01/39	3,507	3,948,619
		7,240,071
Florida — 2.3% County of Hillsborough Florida Aviation Authority, ARB, Tempa International Airport, Series A, AMT (AGC), 5.50%, 10/01/38	3,869	4,244,040
County of Lee Florida Housing Finance Authority, RB, S/F Housing, Multi-County Program, Series A-2,	540	560,590

AMT (Ginnie Mae), 6.00%, 9/01/40

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		4,804,630
Illinois — 3.8% State of Illinois Finance Authority, RB, University of Chicago, Series B, 6.25%, 7/01/38	5,300	6,117,472
Municipal Bonds Transferred to	Par	Value
Tender Option Bond (TOB) Trusts (b)	(000)	
Illinois (concluded) State of Illinois Toll Highway Authority, RB, Senior Priority, Series B, 5.50%, 1/01/33	S1,750 S	\$1,944,961
		8,062,433
Nevada — 9.2% County of Clark Nevada Water Reclamation District, GO:		
Limited Tax, 6.00%, 7/01/38	5,000	5,799,450
Series B, 5.50%, 7/01/29 Las Vegas Valley Water District, GO,	5,668	6,644,301
Refunding, Series C, 5.00%, 6/01/28	6,070	6,761,737
		19,205,488
New Hampshire — 1.2% New Hampshire Health & Education Facilities Authority, RB, Dartmouth College, 5.25%, 6/01/39 (c)	2,159	2,450,160
New Jersey — 3.8% New Jersey Housing & Mortgage Finance Agency, RB, S/F Housing,	2,251	2,394,654

7,886,575

4,000 4,406,520

1,000 1,085,401

New York — 14.3% City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, 2nd General Resolution:

Series CC, 5.25%, 10/01/29

Series B, 5.25%, 6/15/36 (c)

New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A (AMBAC), 5.00%, 12/15/32

Series BB, 5.25%, 6/15/44	4,408	4,803,328	
Series FF, 5.00%, 6/15/45	3,859	4,124,041	
Series FF-2, 5.50%, 6/15/40	2,505	2,836,920	
City of New York New York			
Transitional Finance Authority, BARB,	2,499	2,773,168	
Fiscal 2009, Series S-3, 5.25%, 1/15/39			
Hudson Yards Infrastructure Corp.,			
RB, Fiscal 2012, Series A, 5.75%,	1,290	1,432,393	
2/15/47 (c)			
New York Liberty Development Corp.,			
RB, 1 World Trade Center Port	1 265	4,711,407	
Authority Consolidated Bonds, 5.25%,	4,303	4,/11,40/	
12/15/43			

BlackRock MuniYield Investment April 30, 2014 5 Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF) (Percentages shown are based on Net Assets)

Bonds Transferred Tender (000) Option Value Bond (TOB) **Trusts** (b) New York (concluded) New York Liberty Development Corp., Refunding RB, 4 \$ 2,560 \$2,831,590 World Trade Center Project, 5.75%, 11/15/51 (c) New York State Dormitory Authority, ERB, Per507000 6,490,248 Income Tax, Series В, 5.25%, 3/15/38

Municipal

30,003,095

South Carolina — 1.7% State;240 3,639,913 of

South

Carolina

Public

Service

Authority,

Refunding

RB,

Santee

Cooper,

Series

A,

5.50%,

1/01/38

(c)

Texas — 7.0%

City

of

San

Antonio

Texas

Public

Service

Boar, 989 4,517,914

Refunding

RB,

Series

A,

5.25%,

2/01/31

(c)

County

of

Harris

Texas

Cultural

Education

Facilities

Finance 5,400 Corp., 6,159,618

RB,

Texas

Children's

Hospital

Project,

5.50%,

10/01/39

Nort1480 3,919,524

Texas

Tollway

Authority,

RB, Special **Projects** System, Series A, 5.50%, 9/01/41 14,597,056 Utah — 1.0% City of Riverton Utah, RB, IHC,994 2,103,460 Health Services, Inc., 5.00%, 8/15/41 Municipal Bonds Transferred to Par Tender (000) Option Value Bond (TOB) **Trusts** (b) Virginia — 0.9% C8un749 \$1,920,172 of Fairfax Virginia IDA, Refunding RB, Health Care,

Inova Health System, Series

A, 5.50%, 5/15/35

Total Municipal **Bonds**

Transferred

to Tender 147,683,512

Option Bond (TOB) Trusts — 70.6%

Total Long-Term **Investments**

338,371,720 (Cost —

\$308,115,501) **— 161.8%**

Short-Term

Securities Shares — 1.1%

FFI

Institutional

Tax-Exempt 2,164,092 2,164,092 Fund, 0.03%

(d)(e)

Total Short-Term

Securities 2,164,092

(Cost — \$2,164,092) —

1.1%

Total

Investments

(Cost — 340,535,812

\$310,279,593*) **— 162.9%**

Other

Assets Less 3,846,841

Liabilities — 1.8%

Liability for (75,881,863)

TOB Trust

Certificates,
Including
Interest
Expense
and Fees
Payable —
(36.3%)
VRDP
Shares, at
Liquidation (59,400,000)
Value —
(28.4%)

Net Assets Applicable to Common \$209,100,790 Shares — 100.0%

As of April 30, 2014, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost \$235,357,130 Gross unrealized \$30,437,402 appreciation Gross unrealized (1,124,134) depreciation Net unrealized appreciation

Notes to Schedule of Investments

- (a) U.S. government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (b) Represent bonds transferred to a TOB. In exchange for which the Fund acquired residual interest certificates. These bonds serve as collateral in a financing transaction.
- (c) All or a portion of security is subject to a recourse agreement, which may require the Fund to pay the liquidity provider in the event there is a shortfall between the TOB trust certificates and proceeds received from the sale of

the security contributed to the TOB trust. In the case of a shortfall, the aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expire from October 1, 2016 to November 15, 2019 is \$18,095,745.

(d) Represents the current yield as of report date.

BlackRock MuniYield Investment April 30, 2014 6 Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF)

Investments in issuers considered to be an affiliate of the Fund during the period ended April 30, 2014, (e) for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Shares

Held at Net Shares

Affiliate July 31, Activity Held at Income

2013 April 30, 2014

FFI

Institutional Tax-Exempt 7,703,960 (5,539,868) 2,164,092 \$ 516

Fund

Portfolio Abbreviations

Assured

AGC Guarantee

Corp.

AGM Assured

Guaranty Municipal

Corp. American Municipal **AMBAC** Bond Assurance Corp. Alternative **AMT** Minimum Tax (subject to) Airport **ARB** Revenue Bonds **Building Aid BARB** Revenue Bonds Certificates of COP Participation Economic **EDA** Development Authority Education **ERB** Revenue Bonds General Airport **GARB** Revenue Bonds General GO Obligation Bonds Housing **HFA** Finance Agency Housing HRB Revenue Bonds Industrial **IDA** Development Authority Industrial **IDB** Development Board Independent **ISD** School District Lease LRB Revenue Bonds Revenue RB

Bonds

Single-Family

S/F

•Financial futures contracts outstanding as of April 30, 2014 were as follows:

Contract Sold	^S Issue	Exchange	Expiration	Notional Value	Unrealized Depreciation
(183)	10-Year U.S. Treasury Note	Chicago Board of Trade	June 2014	\$22,769,203	\$(20,960)

BlackRock MuniYield Investment Fund, Inc.

Schedule of Investments (continued) BlackRock MuniYield Investment Fund, Inc. (MYF)

Fair Value Measurements – Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a disclosure hierarchy consisting of three broad levels for financial reporting purposes as follows:

Level 1 – unadjusted price quotations in active markets/exchanges for identical assets or liabilities that the Fund has the ability to access

Level 2 – other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market-corroborated inputs)

Level 3 – unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including the Fund's own assumptions used in determining the fair value of investments and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Changes in valuation techniques may result in transfers into or out of an assigned level within the disclosure hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value disclosure hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investment and derivative financial instrument and is not necessarily an indication of the risks associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and derivative financial instruments, please refer to the Fund's most recent financial statements as contained in its semi-annual report.

The following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy as of April 30, 2014:

Level 1 Level 2 Level 3 Total

Assets:

Investments:

Long-Term Investments¹ — \$ 338,371,720 — \$338,371,720

- \$340,535,812

Short-Term Securities \$ 2,164,092 — — 2,164,092

1 See above Schedule of Investments for values in each state or political subdivision.

\$ 2,164,092\$ 338,371,720

Level 1 Level Level 2 Total

Derivative Financial Instruments²

Liabilities:

Total

Interest rate contracts \$ (20,960) — — \$(20,960)

Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument.

BlackRock MuniYield Investment April 30, 2014 8 Fund, Inc.

Schedule of Investments (concluded) BlackRock MuniYield Investment Fund, Inc. (MYF)

The carrying amount for certain of the Fund's assets and/or liabilities approximates fair value for financial reporting purposes. As of April 30, 2014, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	L	evel 1	Level 2	Lev 3	rel Total
Assets: Cash pledged for financial futures contracts Liabilities: TOB trust certificates VRDP Shares	\$		5 (75,865,414)	_	- \$281,000 - (75,865,414) - (59,400,000)
Total	\$	281,000\$	6 (135,265,414)	_	- \$(134,984,414)

There were no transfers between levels during the period ended April 30, 2014.

BlackRock MuniYield Investment Fund, Inc.

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Item 2 -Controls and Procedures

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

2(a) – Investment Company Act of 1940, as amended (the 1940 Act)) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.

There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under

2(b) – the 1940 Act) 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

Certifications – Attached hereto

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.

BlackRock MuniYield Investment Fund

By:/s/ John M. Perlowski

John M. Perlowski

Chief Executive Officer (principal executive officer) of BlackRock MuniYield Investment Fund

Date: June 23, 2014

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:/s/ John M. Perlowski

John M. Perlowski Chief Executive Officer (principal executive officer) of BlackRock MuniYield Investment Fund

Date: June 23, 2014

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of BlackRock MuniYield Investment Fund

Date: June 23, 2014