

BLACKROCK SENIOR HIGH INCOME FUND, INC.

Form N-Q

July 29, 2011

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 811-07456

Name of Fund: BlackRock Senior High Income Fund, Inc. (ARK)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock Senior High Income Fund, Inc., 55 East 52nd Street, New York, NY 10055

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 02/28/2011

Date of reporting period: 05/31/2011

Item 1 Schedule of Investments

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Schedule of Investments May 31, 2011 (Unaudited)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Asset-Backed Securities		
ARES CLO Funds, Series 2005-10A, Class B, 0.70%, 9/18/17 (a)(b)	USD 500	\$ 443,795
Canaras Summit CLO Ltd., Series 2007-1A, Class B, 0.79%, 6/19/21 (a)(b)	635	536,099
CSAM Funding, Series 2A, Class B1, 7.05%, 10/15/16	500	505,000
Franklin CLO Ltd., Series 6A, Class B, 0.72%, 8/09/19 (a)(b)	810	703,485
Gannett Peak CLO Ltd., Series 2006-1X, Class A2, 0.66%, 10/27/20	495	425,700
Greyrock CDO Ltd., Series 2005-1X, Class A2L, 0.68%, 11/15/17	1,025	900,257
Portola CLO Ltd., Series 2007-1X, Class B1, 1.76%, 11/15/21	645	580,500
T2 Income Fund CLO Ltd., Series 2007-1A, Class B, 0.88%, 7/15/19 (a)(b)	560	506,677
Total Asset-Backed Securities 1.9%		4,601,513

	Shares	
Common Stocks (c)		
Capital Markets 0.2%		
E*Trade Financial Corp.	27,100	428,451
Chemicals 0.0%		
GEO Specialty Chemicals, Inc.	142,466	54,692
Wellman Holdings, Inc.	1,557	5,060
Wellman, Inc. (acquired 1/30/09, cost \$822) (d)	3,574	11,616
		71,368
Commercial Banks 0.1%		
CIT Group, Inc.	3,300	146,289
Containers & Packaging 0.1%		
Smurfit Kappa Plc	18,171	225,412
Metals & Mining 0.1%		
Euramax International	935	294,494
Paper & Forest Products 0.8%		
Ainsworth Lumber Co. Ltd. (a)	396,556	1,227,917
Ainsworth Lumber Co. Ltd.	215,634	667,701
		1,895,618
Software 0.1%		
HMH Holdings/EduMedia	75,676	378,380
Total Common Stocks 1.4%		3,440,012

Corporate Bonds	Par (000)	Value
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Aerospace & Defense 0.8%			
Bombardier, Inc., 7.75%, 3/15/20(a)	USD	900	\$ 1,017,000
Kratos Defense & Security Solutions, Inc.:			
10.00%, 6/01/17		520	572,000
10.00%, 6/01/17 (a)		342	376,200
			1,965,200
Airlines 0.7%			
Air Canada, 9.25%, 8/01/15 (a)		590	612,863
Delta Air Lines, Inc., Series B, 9.75%, 12/17/16		451	477,951
United Air Lines, Inc., 12.75%, 7/15/12		589	644,490
			1,735,304
Auto Components 1.4%			
Delphi Corp., 6.13%, 5/15/21 (a)		290	290,000
Icahn Enterprises LP: 7.75%, 1/15/16		160	164,400
8.00%, 1/15/18		2,690	2,770,700
Pittsburgh Glass Works LLC, 8.50%, 4/15/16 (a)		130	134,875
Venture Holdings Co. LLC (c)(e): 12.00%, 6/01/49		700	70
Series B, 9.50%, 7/01/65		3,325	332
			3,360,377
Biotechnology 0.1%			
QHP Pharma, 10.25%, 3/15/15 (a)		193	197,067
Building Products 0.5%			
Associated Materials LLC, 9.13%, 11/01/17 (a)		200	206,750
Building Materials Corp. of America (a): 7.00%, 2/15/20		485	506,825
6.75%, 5/01/21		410	413,075
			1,126,650
Capital Markets 0.4%			
American Capital Ltd., 7.96%, 12/31/13 (f)		600	616,992
E*Trade Financial Corp., 12.50%, 11/30/17 (c)(g)		120	144,300
KKR Group Finance Co., 6.38%, 9/29/20 (a)		280	298,708
			1,060,000
Chemicals 4.4%			
American Pacific Corp., 9.00%, 2/01/15		610	597,800
American Rock Salt Co. LLC, 8.25%, 5/01/18 (a)		116	117,450

Portfolio Abbreviations

To simplify the listings of portfolio holdings in the Schedule of Investments, the names and descriptions of many of the securities have been abbreviated according to the following list:

CAD	Canadian Dollar
FKA	Formerly Known As
USD	US Dollar

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Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Corporate Bonds		
Chemicals (concluded)		
Celanese US Holdings LLC, 5.88%, 6/15/21	USD 300	\$ 306,750
GEO Specialty Chemicals, Inc. (a): 7.50%, 3/31/15 (a)(g)(h)	1,869	1,868,623
10.00%, 3/31/15	1,839	1,700,816
Hexion U.S. Finance Corp., 8.88%, 2/01/18	480	515,400
Huntsman International LLC, 8.63%, 3/15/21	320	358,000
Omnova Solutions, Inc., 7.88%, 11/01/18 (a)	380	384,275
OXEA Finance/Cy SCA, 9.50%, 7/15/17 (a)	240	265,500
Wellman Holdings, Inc., Subordinate Note (h): (Second Lien), 10.00%, 1/29/19	2,383	3,312,370
(Third Lien), 5.00%, 1/29/19 (g)	1,722	1,222,707
		10,649,691
Commercial Banks 2.0%		
CIT Group, Inc.: 7.00%, 5/01/14	144	141,684
7.00%, 5/01/16	640	642,400
7.00%, 5/01/17	3,955	3,969,831
		4,753,915
Commercial Services & Supplies		
1.1%		
AWAS Aviation Capital Ltd., 7.00%, 10/15/16 (a)	556	576,817
Brickman Group Holdings, Inc., 9.13%, 11/01/18 (a)	455	472,062
Mobile Mini, Inc., 7.88%, 12/01/20 (a)	335	354,263
RSC Equipment Rental, Inc., 10.00%, 7/15/17 (a)	550	623,562
The Geo Group, Inc., 7.75%, 10/15/17	450	482,625
West Corp., 8.63%, 10/01/18 (a)	165	173,869
		2,683,198
Communications Equipment		
0.2%		
Avaya, Inc., 7.00%, 4/01/19 (a)	200	195,500
EH Holding Corp., 6.50%, 6/15/19 (a)(e)	320	323,600
		519,100
Consumer Finance 0.9%		
Credit Acceptance Corp., 9.13%, 2/01/17	300	325,500

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Ford Motor Credit Co. LLC:

3.03%, 1/13/12 (b)	1,340	1,348,496
7.00%, 4/15/15	140	152,936
6.63%, 8/15/17	300	326,965
		2,153,897

Corporate Bonds	Par (000)	Value
Containers & Packaging 0.6%		
Ball Corp., 6.75%, 9/15/20	USD 325	\$ 345,719
Berry Plastics Corp., 8.25%, 11/15/15	1,100	1,179,750
		1,525,469
Diversified Financial Services 4.3%		
Ally Financial, Inc.:		
8.30%, 2/12/15	3,670	4,092,050
7.50%, 9/15/20	630	678,037
8.00%, 11/01/31	480	526,699
8.00%, 11/01/31	1,740	1,927,050
Axcan Intermediate Holdings, Inc., 12.75%, 3/01/16	350	385,875
Reynolds Group DL Escrow, Inc., 8.50%, 10/15/16 (a)	850	909,500
Reynolds Group Issuer, Inc. (a):		
7.13%, 4/15/19	105	109,200
6.88%, 2/15/21	480	495,000
8.25%, 2/15/21	1,210	1,231,175
		10,354,586
Diversified Telecommunication Services 0.3%		
ITC Deltacom, Inc., 10.50%, 4/01/16	520	561,600
tw telecom Holdings, Inc., 8.00%, 3/01/18	170	184,663
		746,263
Electric Utilities 0.2%		
IPALLCO Enterprises, Inc., 7.25%, 4/01/16 (a)	405	454,613
Electronic Equipment, Instruments & Components 0.2%		
CDW LLC, 8.00%, 12/15/18 (a)	430	461,175
Energy Equipment & Services 0.8%		
Compagnie Generale de Geophysique-Veritas, 7.50%, 5/15/15	87	89,175
Frac Tech Services LLC, 7.13%, 11/15/18 (a)	625	662,500
Key Energy Services, Inc., 6.75%, 3/01/21	380	384,750
MEG Energy Corp., 6.50%, 3/15/21 (a)	490	493,675
Oil States International, Inc., 6.50%, 6/01/19 (a)(e)	340	342,125
		1,972,225
Food & Staples Retailing 0.5%		
BI-LO LLC, 9.25%, 2/15/19 (a)	210	217,350
Rite Aid Corp., 9.75%, 6/12/16	825	921,937
		1,139,287

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Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Corporate Bonds		
Food Products 0.4%		
Blue Merger Sub, Inc., 7.63%, 2/15/19 (a)	USD 950	\$ 969,594
JBS USA LLC, 7.25%, 6/01/21 (a)	110	107,800
		1,077,394
Gas Utilities 0.1%		
Targa Resources Partners LP, 6.88%, 2/01/21 (a)	250	249,063
Health Care Equipment & Supplies 0.4%		
DJO Finance LLC: 10.88%, 11/15/14	670	723,600
7.75%, 4/15/18 (a)	40	41,100
Hologic, Inc., 2.00%, 12/15/37 (f)(h)	150	146,437
		911,137
Health Care Providers & Services 3.0%		
Aviv Healthcare Properties LP, 7.75%, 2/15/19 (a)	235	240,288
HCA, Inc.: 8.50%, 4/15/19	65	72,719
7.88%, 2/15/20	1,924	2,115,197
7.25%, 9/15/20	525	572,250
inVentiv Health, Inc., 10.00%, 8/15/18 (a)	210	218,663
Omnicare, Inc., 6.88%, 12/15/15	555	570,262
Tenet Healthcare Corp.: 10.00%, 5/01/18	850	973,250
8.88%, 7/01/19	2,230	2,480,875
		7,243,504
Health Care Technology 1.0%		
IMS Health, Inc., 12.50%, 3/01/18 (a)	1,730	2,058,700
MedAssets, Inc., 8.00%, 11/15/18 (a)	325	335,156
		2,393,856
Hotels, Restaurants & Leisure 1.1%		
Diamond Resorts Corp., 12.00%, 8/15/18 (a)	540	581,850
Little Traverse Bay Bands of Odawa Indians, 9.00%, 8/31/20 (a)	282	253,800
MGM Resorts International: 10.38%, 5/15/14	720	831,600
11.13%, 11/15/17	750	870,000
Tropicana Entertainment LLC, Series WI, 9.63%, 12/15/14 (c)(i)	220	22

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					2,537,272
Household Durables	1.3%				
Beazer Homes USA, Inc., 12.00%, 10/15/17			1,000		1,130,000
Corporate Bonds					
			Par (000)		Value
Household Durables (concluded)					
Jarden Corp., 7.50%, 5/01/17		USD	435	\$	463,275
Standard Pacific Corp.:					
8.38%, 5/15/18			345		351,037
8.38%, 1/15/21			1,170		1,172,925
					3,117,237
Independent Power Producers & Energy Traders	2.6%				
AES Corp., 9.75%, 4/15/16			415		480,362
Calpine Corp., 7.50%, 2/15/21 (a)			495		514,800
Energy Future Holdings Corp., 10.00%, 1/15/20 (a)			1,065		1,153,031
Energy Future Intermediate Holding Co. LLC, 10.00%, 12/01/20			2,135		2,322,150
NRG Energy, Inc., 7.63%, 1/15/18 (a)			1,645		1,661,450
					6,131,793
Industrial Conglomerates	1.5%				
Sequa Corp. (a):					
11.75%, 12/01/15			1,430		1,530,100
13.50%, 12/01/15 (g)			1,930		2,065,075
					3,595,175
Insurance	0.6%				
CNO Financial Group, Inc., 9.00%, 1/15/18 (a)			901		973,080
Genworth Financial, Inc., 7.63%, 9/24/21			370		385,998
					1,359,078
IT Services	0.7%				
First Data Corp. (a):					
7.38%, 6/15/19			805		819,087
8.25%, 1/15/21			501		499,747
12.63%, 1/15/21			333		362,138
					1,680,972
Machinery	0.3%				
Navistar International Corp., 8.25%, 11/01/21			220		241,725
Titan International, Inc., 7.88%, 10/01/17 (a)			490		526,750
					768,475
Media	7.1%				
CCH II LLC, 13.50%, 11/30/16			800		952,000
CCO Holdings LLC:					
7.25%, 10/30/17			260		270,400
7.88%, 4/30/18			565		598,900
CSC Holdings, Inc., 8.50%, 4/15/14			390		436,800
Checkout Holding Corp., 10.98%, 11/15/15 (a)(j)			745		489,838
Clear Channel Worldwide Holdings, Inc.:					
9.25%, 12/15/17			340		370,600
Series B, 9.25%, 12/15/17			4,326		4,726,155

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Corporate Bonds		
Media (concluded)		
DISH DBS Corp.:		
7.00%, 10/01/13	USD 850	\$ 915,875
6.63%, 10/01/14	750	798,750
6.75%, 6/01/21 (a)	360	363,600
Interactive Data Corp., 10.25%, 8/01/18 (a)	900	1,001,250
Kabel BW Erste Beteiligungs GmbH, 7.50%, 3/15/19 (a)	540	562,275
NAI Entertainment Holdings LLC, 8.25%, 12/15/17 (a)	530	572,400
Nielsen Finance LLC:		
11.63%, 2/01/14	636	748,890
7.75%, 10/15/18 (a)	640	686,400
ProQuest LLC, 9.00%, 10/15/18 (a)	220	227,975
Regal Entertainment Group, 9.13%, 8/15/18	290	308,125
UPC Germany GmbH, 8.13%, 12/01/17 (a)	1,500	1,593,750
Virgin Media Secured Finance Plc, 6.50%, 1/15/18	1,250	1,376,562
		17,000,545
Metals & Mining 1.8%		
Drummond Co., Inc., 9.00%, 10/15/14 (a)	553	580,650
FMG Resources August 2006 Property Ltd., 7.00%, 11/01/15 (a)	1,080	1,123,200
JMC Steel Group, 8.25%, 3/15/18 (a)	325	335,562
Novelis, Inc., 8.75%, 12/15/20 (a)	2,015	2,226,575
RathGibson, Inc., 11.25%, 2/15/14 (c)(i)	2,175	218
		4,266,205
Multiline Retail 0.5%		
Dollar General Corp., 11.88%, 7/15/17 (g)	948	1,083,090
Oil, Gas & Consumable Fuels 6.6%		
Alpha Natural Resources, Inc. (i):		
6.00%, 6/01/19	305	306,906
6.25%, 6/01/21	380	386,650
Arch Coal, Inc., 7.25%, 10/01/20	863	910,465
Chesapeake Energy Corp.:		
6.63%, 8/15/20	1,122	1,179,503
6.13%, 2/15/21	690	702,075
Coffeyville Resources LLC, 9.00%, 4/01/15 (a)	240	260,400
Consol Energy, Inc.:		

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8.25%, 4/01/20	900	999,000
6.38%, 3/01/21 (a)	425	429,250
Crosstex Energy LP, 8.88%, 2/15/18	55	59,675

	Par (000)	Value
Corporate Bonds		
Oil, Gas & Consumable Fuels (concluded)		
Denbury Resources, Inc.:		
9.75%, 3/01/16	USD 520	\$ 585,000
8.25%, 2/15/20	351	387,855
6.38%, 8/15/21 (a)	295	298,688
El Paso Corp., 7.00%, 6/15/17	825	956,496
Energy Transfer Equity LP, 7.50%, 10/15/20	125	136,250
Energy XXI Gulf Coast, Inc., 7.75%, 6/15/19 (a)	665	668,325
Forest Oil Corp., 8.50%, 2/15/14	280	310,100
Hilcorp Energy I LP, 7.63%, 4/15/21 (a)	1,140	1,202,700
Linn Energy LLC:		
8.63%, 4/15/20 (a)	580	635,100
7.75%, 2/01/21	1,125	1,186,875
Niska Gas Storage US LLC, 8.88%, 3/15/18 (a)	815	876,125
OGX Petroleo e Gas Participacoes SA, 8.50%, 6/01/18 (a)(i)	1,595	1,632,482
Oasis Petroleum, Inc., 7.25%, 2/01/19 (a)	190	191,425
Petrohawk Energy Corp., 6.25%, 6/01/19 (a)	480	474,000
Range Resources Corp., 5.75%, 6/01/21	645	642,581
SandRidge Energy, Inc., 7.50%, 3/15/21 (a)	435	450,225
		15,868,151
Paper & Forest Products 1.8%		
Ainsworth Lumber Co. Ltd., 11.00%, 7/29/15 (a)(g)		
	1,390	1,376,177
Clearwater Paper Corp., 10.63%, 6/15/16	365	413,363
Georgia-Pacific LLC, 8.25%, 5/01/16 (a)	1,630	1,850,050
Verso Paper Holdings LLC:		
11.50%, 7/01/14	289	313,565
Series B, 4.02%, 8/01/14 (b)	485	466,812
		4,419,967
Pharmaceuticals 0.4%		
Valeant Pharmaceuticals International (a):		
6.50%, 7/15/16	705	701,475
6.75%, 10/01/17	90	89,100
7.00%, 10/01/20	85	83,300
		873,875
Professional Services 0.1%		
FTI Consulting, Inc., 6.75%, 10/01/20 (a)		
	295	300,900
Real Estate Investment Trusts (REITs) 0.8%		
FelCor Lodging LP, 6.75%, 6/01/19 (a)		
	950	945,250

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
 (Percentages shown are based on Net Assets)

		Par (000)		Value
Corporate Bonds				
Real Estate Investment Trusts (REITs) (concluded)				
Longview Fibre Paper & Packaging, Inc., 8.00%, 6/01/16 (a)	USD	145	\$	147,175
Omega Healthcare Investors, Inc.: 7.50%, 2/15/20		530		564,450
6.75%, 10/15/22 (a)		235		234,412
				1,891,287
Real Estate Management & Development 0.1%				
Shea Homes LP, 8.63%, 5/15/19 (a)		320		323,600
Road & Rail 1.5%				
Avis Budget Car Rental LLC, 8.25%, 1/15/19		975		1,010,344
Florida East Coast Railway Corp., 8.13%, 2/01/17 (a)		200		208,500
The Hertz Corp. (a): 7.50%, 10/15/18		915		960,750
6.75%, 4/15/19		375		378,750
7.38%, 1/15/21		925		957,375
				3,515,719
Specialty Retail 0.4%				
United Auto Group, Inc., 7.75%, 12/15/16		845		870,350
Textiles, Apparel & Luxury Goods 0.1%				
Phillips-Van Heusen Corp., 7.75%, 11/15/23		215		240,623
Transportation Infrastructure 0.1%				
Aguila 3 SA, 7.88%, 1/31/18 (a)		176		179,960
Wireless Telecommunication Services 2.8%				
Cricket Communications, Inc.: 10.00%, 7/15/15		90		97,988
7.75%, 5/15/16		1,770		1,880,625
Digicel Group Ltd. (a): 12.00%, 4/01/14		800		930,000
8.25%, 9/01/17		270		283,500
Intelsat Jackson Holdings SA, 7.25%, 10/15/20 (a)		505		506,262
Nextel Communications, Inc., Series E, 6.88%, 10/31/13		415		418,631
Sprint Capital Corp.: 8.38%, 3/15/12		325		340,438
6.88%, 11/15/28		2,310		2,240,700
				6,698,144
Total Corporate Bonds 56.5%				135,455,389

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	Par (000)	Value
Floating Rate Loan Interests (b)		
Aerospace & Defense 0.5%		
Hawker Beechcraft Acquisition Co., LLC:		
Letter of Credit Linked		
Deposit, 2.31%, 3/26/14	USD 28	\$ 24,955
Term Loan, 2.19%, 3/26/14	462	405,578
TransDigm, Inc., Term Loan (First Lien), 4.00%, 2/14/17	748	750,930
		1,181,463
Airlines 0.7%		
Delta Air Lines, Inc. Credit-New Term Loan B, 5.50%, 4/20/17	1,600	1,583,000
Auto Components 0.9%		
Allison Transmission, Inc., Term Loan, 2.96%, 8/07/14	1,199	1,190,417
Armored Auto Group, Inc. (FKA Viking Acquisition, Inc.), Term Loan B, 6.00%, 11/04/16	943	942,638
		2,133,055
Automobiles 0.4%		
Ford Motor Co.:		
Tranche B-1 Term Loan, 2.95%, 12/15/13	906	906,316
Tranche B-2 Term Loan, 2.95%, 12/15/13	102	101,875
		1,008,191
Biotechnology 0.2%		
Grifols SA, Term Loan B, 6.00%, 11/23/16	455	458,507
Building Products 1.2%		
CPG International I, Inc., Term Loan B, 6.00%, 2/18/17	599	599,622
Goodman Global, Inc.:		
Initial Term Loan (First Lien), 5.75%, 10/28/16	1,741	1,751,882
Term Loan (Second Lien), 9.00%, 10/30/17	600	617,850
		2,969,354
Capital Markets 1.0%		
HarbourVest Partners, Term Loan (First Lien), 6.25%, 12/14/16	948	952,552
Nuveen Investments, Inc.:		
Extended Term Loan (First Lien), 3.27%, 11/13/14	646	634,863
Non-Extended Term Loan (First Lien), 5.76%, 5/13/17	754	757,362
		2,344,777
Chemicals 4.7%		
AZ Chemical Inc., Term Loan B, 4.75%, 11/21/16	532	534,672
American Rock Salt Holdings LLC, Term Loan, 5.50%, 4/19/17	1,195	1,201,722

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
 (Percentages shown are based on Net Assets)

	Par (000)	Value
Floating Rate Loan Interests (b)		
Chemicals (concluded)		
Chemtura Corp., Exit term LoanTerm Facility, 5.50%, 8/27/16	USD 800	\$ 804,000
Gentek, Inc., Tranche B Term Loan, 6.75%, 3/03/17	1,393	1,394,160
Nexeo Solutions, LLC, Term Loan B, 5.00%, 9/08/17	875	874,727
PQ Corp. (FKA Niagara Acquisition, Inc.), Original Term Loan (First Lien), 3.53%, 7/30/14	1,295	1,262,955
Styron Sarl, Term Loan B, 6.00%, 8/02/17	1,596	1,604,550
Tronox Worldwide LLC, Exit Term Loan, 7.00%, 10/15/15	2,324	2,340,637
Univar, Inc., Term Loan B, 5.00%, 6/30/17	1,297	1,296,055
		11,313,478
Commercial Banks 0.5%		
CIT Group Inc., Tranche 3 Term Loan, 6.25%, 8/11/15	1,213	1,224,056
Commercial Services & Supplies 2.8%		
ARAMARK Corp.:		
Letter of Credit - 1 Facility, 2.12%, 1/27/14	17	16,301
Letter of Credit - 2 Facility, 3.49%, 7/26/16	19	18,628
US Term Loan, 2.18%, 1/27/14	205	202,362
US Term Loan B, 3.56%, 7/26/16	284	283,250
AWAS Finance Luxembourg Sarl, Term Loan B, 7.75%, 6/10/16	419	426,802
Adesa, Inc. (KAR Holdings, Inc.), Initial Term Loan B, 5.00%, 5/19/17	1,250	1,253,750
Altegrity, Inc. (FKA US Investigations Services, Inc.), Tranche D Term Loan, 7.75%, 2/21/15	1,489	1,500,846
Delos Aircraft, Inc., Term Loan 2, 7.00%, 3/17/16	1,075	1,076,920
Quad/Graphics, Inc., Term Loan, 5.50%, 4/14/16	496	495,837
Synagro Technologies, Inc., Term Loan (First Lien), 2.20%, 4/02/14	496	467,382
Volume Services America, Inc. (Centerplate), Term Loan B, 10.50%, 9/16/16	995	1,001,219

			6,743,297
Communications Equipment			
1.3%			
Avaya, Inc.:			
Term Loan B, 3.01%, 10/24/14	964		930,155
		Par (000)	Value
Floating Rate Loan Interests (b)			
Communications Equipment (concluded)			
Avaya, Inc. (concluded):			
Term Loan B-3, 4.76%, 10/26/17	USD 1,546	\$	1,504,164
CommScope, Inc., Term Loan B, 5.00%, 1/14/18	750		753,750
			3,188,069
Construction & Engineering 1.1%			
BakerCorp., Inc., Term Loan B, 5.00%, 6/08/17	600		601,500
Brand Energy & Infrastructure Services, Inc. (FR Brand Acquisition Corp.), Synthetic Letter of Credit, Term Loan (First Lien), 2.56%, 2/20/14	500		476,250
Safway Services, LLC, First Out Tranche Loan, 9.00%, 12/16/17	1,500		1,500,000
			2,577,750
Consumer Finance 0.9%			
Springleaf Financial Funding Co. (FKA AGFS Funding Co.), Term Loan, 5.50%, 5/05/17	2,200		2,196,564
Containers & Packaging 0.6%			
Anchor Glass Container Corp., Term Loan (First Lien), 6.00%, 3/02/16	134		134,378
Berry Plastics Holding Corp., Term Loan C, 2.23%, 4/03/15	492		472,985
Graham Packaging Co., LP, Term Loan D, 6.00%, 9/23/16	896		897,982
			1,505,345
Diversified Consumer Services			
2.8%			
Coinmach Service Corp., Term Loan, 3.26%, 11/20/14	2,182		2,100,494
Laureate Education: Closing Date Term Loan, 3.52%, 8/17/14	737		731,183
Delayed Draw Term Loan, 3.55%, 8/17/14	110		109,477
Series A New Term Loan, 7.00%, 8/17/14	2,240		2,245,659
ServiceMaster Co.: Closing Date Term Loan, 2.81%, 7/24/14	1,395		1,360,615
Delayed Draw Term Loan, 2.75%, 7/24/14	139		135,497
			6,682,925
Diversified Financial Services			
0.7%			
Reynolds Group Holdings, Inc., Term Loan E, 4.25%, 2/09/18	1,550		1,549,031

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Floating Rate Loan Interests (b)		
Diversified Telecommunication Services 1.4%		
Hawaiian Telcom Communications, Inc., Term Loan, 9.00%, 11/01/15	USD 1,350	\$ 1,384,714
Integra Telecom Holdings, Inc., Term Loan, 9.25%, 4/15/15	918	920,165
Level 3 Financing, Inc., Tranche A Incremental Term Loan, 2.53%, 3/13/14	1,100	1,075,421
		3,380,300
Electronic Equipment, Instruments & Components 1.2%		
Aeroflex Inc., Term Loan B, 4.25%, 5/09/18	950	950,000
CDW LLC (FKA CDW Corp.): Extended Term Loan B, 4.50%, 7/14/17	944	940,450
Non-Extended Term Loan, 3.95%, 10/10/14	1,101	1,097,075
		2,987,525
Energy Equipment & Services 0.6%		
MEG Energy Corp., Tranche D Term Loan, 4.00%, 3/16/18	1,400	1,402,843
Food & Staples Retailing 1.1%		
Pilot Travel Centers LLC, Initial Tranche B Term Loan, 4.25%, 3/30/18	800	802,751
U.S. Foodservice, Inc.: New Term Loan B, 5.75%, 5/25/17	400	393,333
Term Loan B, 2.70%, 7/03/14	1,528	1,446,356
		2,642,440
Food Products 3.4%		
Advance Pierre Foods, Term Loan, (Second Lien), 7.00%, 9/30/16	2,353	2,365,922
Del Monte Corp., Term Loan B, 4.50%, 3/08/18	2,650	2,649,155
Green Mountain Coffee Roasters, Inc., Term B Facility, 5.50%, 12/16/16	253	252,953
Michaels Foods Group, Inc. (FKA M-Foods Holdings, Inc.), (Second Lien) Term Loan B, 4.25%, 2/23/18	587	589,394
Pinnacle Foods Finance LLC, Tranche D Term Loan, 6.00%, 4/02/14	800	807,703
Solvest, Ltd. (Dole): Tranche B-1 Term Loan, 5.00%, 3/02/17	425	426,650
	1,052	1,056,699

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Tranche C-1 Term Loan,
5.00%, 3/02/17

8,148,476

	Par (000)	Value
Floating Rate Loan Interests (b)		
Health Care Equipment & Supplies 0.9%		
DJO Finance LLC (FKA ReAble Therapeutics Finance LLC), Term Loan, 3.19%, 5/20/14	USD 798	\$ 791,942
Iasis Healthcare LLC, Term Loan, 5.00%, 5/03/18	1,300	1,300,975
		2,092,917
Health Care Providers & Services 3.8%		
CHS/Community Health Systems, Inc.:		
Non-Extended Delayed Draw Term Loan, 2.50%, 7/25/14		
	36	35,194
Non-Extended Term Loan, 2.50%, 7/25/14		
	679	656,115
ConvaTec, Inc., Dollar Term Loan, 5.75%, 12/22/16		
	698	699,996
DaVita, Inc., Term Loan B, 4.50%, 10/20/16		
	1,097	1,103,422
Emergency Medical Services, Term Loan, 5.25%, 5/02/18		
	1,100	1,097,447
HCA, Inc.:		
Tranche A-1 Term Loan, 1.56%, 11/19/12		
	731	727,369
Tranche B-1 Term Loan, 2.56%, 11/18/13		
	125	124,270
Harden Healthcare, Inc.:		
Tranche A Additional Term Loan, 7.75%, 3/02/15		
	1,299	1,273,078
Tranche A Term Loan, 8.50%, 3/02/15		
	352	344,680
inVentiv Health, Inc. (FKA Ventive Health, Inc.), Term Loan B, 4.75%, 8/04/16		
	1,574	1,576,861
Renal Advantage Holdings, Inc., Tranche B Term Loan, 5.75%, 12/16/16		
	698	702,178
Vanguard Health Holding Co. II, LLC (Vanguard Health Systems, Inc.), Initial Term Loan, 5.00%, 1/29/16		
	735	734,554
		9,075,164
Health Care Technology 0.7%		
IMS Health, Inc., Tranche B Dollar Term Loan, 4.50%, 8/25/17		
	1,134	1,136,172
MedAssets, Inc., Term Loan B, 5.25%, 11/16/16		
	577	580,444
		1,716,616
Hotels, Restaurants & Leisure 5.5%		
Blackstone UTP Capital LLC, Loan, 7.75%, 11/06/14		
	1,150	1,166,894
Dunkin Brands, Inc.:		
New Term Loan B, 4.25%, 11/23/17		
	240	240,150

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Floating Rate Loan Interests (b)		
Hotels, Restaurants & Leisure (concluded)		
Dunkin' Brands, Inc.:		
Term Loan B, 4.25%, 11/23/17	USD 1,297	\$ 1,297,560
Golden Living, Term Loan, 5.00%, 5/04/18	1,100	1,082,400
Harrah's Operating Co., Inc.:		
Term Loan B-2, 3.19%, 1/28/15	265	246,583
Term Loan B-3, 3.30%, 1/28/15	3,725	3,466,337
Term Loan B-4, 9.50%, 10/31/16	636	674,044
Seaworld Parks & Entertainment, Inc. (FKA SW Acquisitions Co., Inc.), Term Loan B, 4.00%, 8/17/17	1,357	1,362,082
Six Flags Theme Parks, Inc., Tranche B Term Loan (First Lien), 5.25%, 6/30/16	1,838	1,851,180
VML US Finance LLC (FKA Venetian Macau):		
New Project Term Loan, 4.70%, 5/27/13	817	814,615
Term B Delayed Draw Project Loan, 4.70%, 5/25/12	538	537,326
Term B Funded Project Loan, 4.70%, 5/27/13	577	577,010
		13,316,181
Household Durables 0.3%		
Visant Corp. (FKA Jostens), Term Loan B, 5.25%, 12/22/16	783	782,140
IT Services 3.7%		
Ceridian Corp., US Term Loan, 3.19%, 11/10/14	1,556	\$ 1,512,500
First Data Corp.:		
Extended Term Loan B, 4.19%, 3/23/18	3,711	3,461,225
Initial Tranche B-1 Term Loan, 2.94%, 9/24/14	98	91,566
Initial Tranche B-2 Term Loan, 2.94%, 9/24/14	221	206,464
Initial Tranche B-3 Term Loan, 2.94%, 9/24/14	141	131,935
infoGROUP, Inc., Term Loan, 5.75%, 5/22/18	535	530,987
iPayment, Inc., Term Loan B, 5.75%, 5/08/17	650	652,979
SunGard Data Systems, Inc. (Solar Capital Corp.), Tranche B US	402	401,789

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Term Loan, 3.89%, 2/26/16		
TransUnion LLC, Replacement		
Term Loan, 4.75%, 2/12/18	1,964	1,971,193
		8,960,638

	Par (000)	Value
Floating Rate Loan Interests (b)		
Independent Power Producers & Energy Traders 1.8%		
AES Corp., Term Loan B, 4.25%, 5/17/18	USD 950	\$ 949,110
Calpine Corp., Term Loan B, 4.50%, 4/02/18	1,600	1,603,200
Texas Competitive Electric Holdings Co., LLC (TXU):		
Initial Tranche B-2 Term Loan, 3.73%, 10/10/14	478	406,699
Initial Tranche B-3 Term Loan, 3.76%, 10/10/14	1,472	1,253,624
		4,212,633
Industrial Conglomerates 0.7%		
Sequa Corp., Term Loan, 3.50%, 12/03/14	475	468,777
Tomkins Plc, Term Loan A, 4.25%, 9/29/16	1,230	1,233,013
		1,701,790
Internet & Catalog Retail 0.2%		
FTD Group, Inc., Tranche B Term Loan, 6.75%, 8/26/14	536	535,221
Media 10.7%		
Acosta, Inc., Term Loan, 4.75%, 3/01/18	900	900,900
Affinion Group, Inc., Tranche B Term Loan, 5.00%, 10/09/16	743	741,946
Cengage Learning Acquisitions, Inc. (Thomson Learning):		
Term Loan, 2.44%, 7/03/14	2,736	2,547,310
Tranche 1 Incremental Term Loan, 7.50%, 7/03/14	673	673,234
Charter Communications Operating, LLC:		
Term Loan B, 7.25%, 3/06/14	24	24,298
Term Loan C, 3.56%, 9/06/16	2,226	2,227,519
Ellis Communications KDOC, LLC, Loan, 10.00%, 12/30/11	3,879	1,454,482
Getty Images, Inc., Initial Term Loan, 5.25%, 11/07/16	1,727	1,736,625
HMH Publishing Co., Ltd., Tranche A Term Loan, 6.03%, 6/12/14	1,360	1,281,583
Hubbard Broadcasting, Second Lien Term Loan B, 5.25%, 4/28/17	600	603,750
Intelsat Jackson Holdings S. A. (FKA Intelsat Jackson Holdings, Ltd.), Tranche B Term Loan, 5.25%, 4/02/18	4,250	4,274,199
Interactive Data Corp., Term Loan, 4.75%, 2/12/18	900	902,245
Mediacom Illinois, LLC (FKA Mediacom Communications, LLC), Tranche D Term Loan, 5.50%, 3/31/17	493	493,731

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Floating Rate Loan Interests (b)		
Media (concluded)		
Newsday LLC, Fixed Rate Term Loan, 10.50%, 8/01/13	USD \$ 3,250	\$ 3,453,125
Sinclair Television Group, Inc., New Tranche B Term Loan, 4.00%, 10/28/16	840	839,527
Sunshine Acquisition Ltd. (FKA HIT Entertainment), Term Facility, 5.52%, 6/01/12	965	953,057
UPC Financing Partnership, Facility Term Loan T, 3.71%, 12/30/16	425	425,351
Univision Communications, Inc., Extended First Lien Term Loan, 4.44%, 3/31/17	1,398	1,349,713
Weather Channel, Term Loan B, 4.25%, 2/13/17	898	902,613
		25,785,210
Metals & Mining 1.8%		
Novelis Inc., Term Loan, 4.00%, 3/10/17	1,646	1,652,562
Walter Energy, Inc., Term Loan B, 4.00%, 4/02/18	2,600	2,605,317
		4,257,879
Multi-Utilities 0.2%		
FirstLight Power Resources, Inc. (FKA NE Energy, Inc.), Term B Advance (First Lien), 2.81%, 11/01/13	354	349,630
Multiline Retail 0.3%		
Dollar General Corp., Tranche B-2 Term Loan, 2.94%, 7/07/14	598	596,109
Oil, Gas & Consumable Fuels 0.8%		
Obsidian Natural Gas Trust, Term Loan, 7.00%, 11/02/15	2,000	2,030,000
Personal Products 0.1%		
NBTY, Inc., Term Loan B, 4.25%, 10/02/17	203	202,685
Pharmaceuticals 1.2%		
Axcan Pharma, Inc., Term Loan, 5.50%, 2/10/17	948	942,887
Quintiles Transnational Corp., Term Loan, 5.00%, 6/08/18	900	893,813
Warner Chilcott Co. LLC: Term Loan B-1, 4.25%, 3/15/18	503	503,797
Term Loan B-3, 4.25%, 3/15/18	346	346,360
Warner Chilcott Corp., Term Loan B-2, 4.25%, 3/15/18	251	251,898
		2,938,755

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	Par (000)	Value
Floating Rate Loan Interests (b)		
Professional Services 0.8%		
Booz Allen Hamilton, Inc., Tranche B Term Loan, 4.00%, 8/03/17	USD 850	\$ 853,794
Fifth Third Processing Solutions, LLC, Term Loan B (First Lien), 4.75%, 11/03/16	1,097	1,097,799
		1,951,593
Real Estate Investment Trusts (REITs) 1.0%		
iStar Financial, Inc., Term Loan (Second Lien), 5.00%, 6/28/13	2,284	2,272,517
Real Estate Management & Development 2.0%		
Realogy Corp.: Extended Synthetic Letter of Credit Loan, 4.64%, 10/10/16	1,581	1,469,381
Extended Term Loan B, 4.52%, 10/10/16	3,653	3,395,023
		4,864,404
Semiconductors & Semiconductor Equipment 0.5%		
Freescale Semiconductor, Inc., Extended Maturity Term Loan, 4.46%, 12/01/16	586	583,762
Microsemi Corp., Term Loan B, 4.00%, 11/02/17	698	700,577
		1,284,339
Software 0.1%		
Telcordia Technologies, Inc., Term Loan, 6.75%, 4/09/16	226	225,372
Specialty Retail 3.4%		
Burlington Coat Factory Warehouse Corp., Term Loan B, 6.25%, 2/18/17	798	797,601
General Nutrition Centers, Inc., Term Loan B, 4.25%, 3/03/18	1,125	1,125,844
J. Crew Group, Inc., Term Loan B, 4.75%, 3/07/18	340	333,306
Jo-Ann Stores, Inc., Term Loan B, 4.75%, 3/16/18	400	395,700
Michaels Stores, Inc.: Term Loan B-1, 2.56%, 10/31/13	239	235,897
Term Loan B-2, 4.81%, 7/31/16	739	740,335
Petco Animal Supplies, Inc., Term Loan B, 4.50%, 11/24/17	1,520	1,518,293
Sensata Technologies Finance Company, LLC, New Term Loan, 4.00%, 5/11/18	1,440	1,442,100

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Floating Rate Loan Interests (b)		
Specialty Retail (concluded)		
Toys R Us Delaware, Inc.:		
Initial Loan, 6.00%, 9/01/16	USD 1,117	\$ 1,118,107
Term Loan B, 5.25%, 6/14/18	400	396,596
		8,103,779
Wireless Telecommunication Services 1.9%		
Digicel International Finance Ltd., US Term Loan (Non-Rollover), 2.81%, 3/30/12	876	860,681
MetroPCS Wireless, Inc., Term Loan B, 4.25%, 3/16/18	748	744,696
Vodafone Americas Finance 2 Inc., Initial Loan, 6.88%, 8/11/15	2,847	2,932,572
		4,537,949
Total Floating Rate Loan Interests 70.4%		169,013,967

	Beneficial Interest (000)	
Other Interests (k)		
Auto Components 0.0%		
Intermet Liquidating Trust Class A	320	3
Diversified Financial Services 0.4%		
J.G.Wentworth LLC Preferred Equity Interests (l)		1,054,539
Media 0.0%		
Adelphia Preferred Escrow	3	0
Adelphia Recovery Trust, Series ACC-6B INT	250	25
		25
Metals & Mining 0.5%		
RathGibson Acquisition Corp., LLC (l)	137	1,196,677
Total Other Interests 0.9%		2,251,244

Preferred Securities

	Par (000)	
Trust Preferred		
Diversified Financial Services 0.5%		
GMAC Capital Trust I (b)	USD 1,182,000	1,242,046
Total Preferred Securities 0.5%		1,242,046

	Shares	Value
Warrants (m)		
Media 0.0%		
Charter Communications, Inc. (Expires 11/30/14)	6,862	\$ 89,206
Total Warrants 0.0%		89,206
Total Long-Term Investments (Cost \$325,113,086) 131.6%		316,093,377

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Short-Term Securities

BlackRock Liquidity Funds, TempFund, Institutional Class, 0.10% (n)(o)	1,906,377	\$	1,906,377
Total Short-Term Securities (Cost \$1,906,377) 0.8%			1,906,377
Total Investments (Cost \$327,019,463*) 132.4%			317,999,754
Liabilities in Excess of Other Assets (32.4)%			(77,781,892)
Net Assets 100.0%		\$	240,217,862

* The cost and unrealized appreciation (depreciation) of investments as of May 31, 2011, as computed for federal income tax purposes, were as follows:

Aggregate cost	\$	327,019,463
Gross unrealized appreciation	\$	13,399,000
Gross unrealized depreciation		(22,418,709)
Net unrealized depreciation	\$	(9,019,709)

- (a) Security exempt from registration under Rule 144A of the Securities Act of 1933. These securities may be resold in transactions exempt from registration to qualified institutional investors.
- (b) Variable rate security. Rate shown is as of report date.
- (c) Non-income producing security.
- (d) Retriected security as to resale. As of report date the Fund held less than 0.1% of its net assets, with a current market value of \$11,616 and original cost of \$822, in this security.
- (e) When-issued security. Unsettled when-issued transactions were as follows:

Counterparty	Value	Unrealized Appreciation
Morgan Stanley Co.	\$ 693,556	\$ 8,556
Deutsche Bank	\$ 323,600	\$ 3,600
AG Credit Suisse International	\$ 342,125	\$ 2,125

- (f) Represents a step-down bond that pays an initial coupon rate for the first period and then a lower coupon rate for the following periods. Rate shown is as of report date.
- (g) Represents a payment-in-kind security which may pay interest/dividends in additional par/shares.
- (h) Convertible security.
- (i) Issuer filed for bankruptcy and/or is in default of interest payments.
- (j) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.

Schedule of Investments (continued)

BlackRock Senior High Income Fund, Inc. (ARK)

- (k) Other interests represent beneficial interest in liquidation trusts and other reorganization entities and are non-income producing.
- (l) The investment is held by a wholly-owned taxable subsidiary of the Fund.
- (m) Warrants entitle the Fund to purchase a predetermined number of shares of common stock and are non-income producing. The purchase price and number of shares are subject to adjustment under certain conditions until the expiration date, if any.
- (n) Represents the current yield as of report date.
- (o) Investments in companies considered to be an affiliate of the Fund during the period, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at February 28, 2011	Net Activity	Shares Held at May 31, 2011	Income
BlackRock Liquidity Fund, Temp Fund, Institutional Class	270,650	1,635,727	1,906,377	\$ 596

Foreign currency exchange contracts as of May 31, 2011 were as follows:

Currency Purchased	Currency Sold	Counterparty	Settlement Date	Unrealized Appreciation
USD 487,472	CAD 471,000	Citibank NA	7/07/11	\$ 1,753

Credit default swaps on single-name issues buy protection outstanding as of May 31, 2011 were as follows:

Issuer	Pay Fixed Rate	Counterparty	Expiration	National Amount (000)	Unrealized Depreciation
K. Hovnanian Enterprises, Inc.	5.00%	Goldman Sachs International	9/20/13	\$ 200	\$ (400)

Fair Value Measurements Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs are summarized in three broad levels for financial reporting purposes as follows

Level 1 price quotations in active markets/exchanges for identical assets and liabilities

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)

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The inputs or methodologies used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and derivative financial instruments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its annual report.

The following tables summarize the inputs used as of May 31, 2011 in determining the fair valuation of the Fund's investments and derivative financial instruments:

Valuation Inputs	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long Term				
Investments:				
Asset-Backed				
Securities		\$ 1,486,571	\$ 3,114,942	\$ 4,601,513
Common Stocks	\$ 1,467,852	1,522,412	449,748	3,440,012
Corporate Bonds		127,096,649	8,358,740	135,455,389
Floating Rate				
Loan Interests		147,517,255	21,496,712	169,013,967
Other Interests	25		2,251,219	2,251,244
Preferred				
Securities	1,242,046			1,242,046
Warrants	89,206			89,206
Short- Term				
Securities	1,906,377			1,906,377
Liabilities:				
Unfunded Loan				
Commitments			(1,500)	(1,500)
Total	\$ 4,705,506	\$ 277,622,887	\$ 35,669,861	\$ 317,998,254

Valuation Inputs	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments¹				
Assets:				
Foreign currency				
exchange				
contracts		\$ 1,753		\$ 1,753
Liabilities:				
Credit Contracts		(400)		(400)
Total		\$ 1,353		\$ 1,353

¹ Derivative financial instruments are swaps and foreign currency exchange contracts. Swaps and foreign currency are valued at the unrealized appreciation/depreciation on the instrument.

Schedule of Investments (concluded)

BlackRock Senior High Income Fund, Inc. (ARK)

The following is a reconciliation of Level 3 investments for which significant unobservable inputs were used in determining fair value:

	Asset-Backed Securities	Common Stocks	Corporate Bonds	Floating Rate Loan Interests	Other Interests	Unfunded Loan Commitments (Liabilities)	Total
Assets/Liabilities:							
Balance, as of February 28, 2011	\$ 3,467,413	\$ 433,333	\$ 6,609,156	\$ 18,685,436	\$ 2,125,823		\$ 31,321,161
Accrued discounts/premiums	4,553		45,016	40,101			89,670
Net realized gain (loss)	50,449		5,282	11,760			67,491
Net change in unrealized appreciation/depreciation ²	(82,986)	16,415	1,766,786	696,114	125,396	\$ (1,500)	2,520,225
Purchases	1,586,263			2,573,950			4,160,213
Sales	(1,470,750)		(67,500)	(2,641,129)			(4,179,379)
Transfers in ³				5,086,433			5,086,433
Transfers out ³	(440,000)			(2,955,953)			(3,395,953)
Balance, as of May 31, 2011	\$ 3,114,942	\$ 449,748	\$ 8,358,740	\$ 21,496,712	\$ 2,251,219	\$ (1,500)	\$ 35,669,861

² The net change in unrealized appreciation/depreciation on the securities still held at May 31, 2011 was \$2,627,561.

³ The Fund's policy is to recognize transfers in and transfers out as of the beginning of the period of the event or the change in circumstances that caused the transfer.

A reconciliation of Level 3 investments and derivatives is presented when the Fund had a significant amount of Level 3 investments and derivatives at the beginning and/or end of the period in relation to net assets.

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Item 2 Controls and Procedures

2(a) 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 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.

2(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under 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 Senior High Income Fund, Inc.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of
BlackRock Senior High Income Fund, Inc.

Date: July 26, 2011

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 Senior High Income Fund, Inc.

Date: July 26, 2011

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock Senior High Income Fund, Inc.

Date: July 26, 2011