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BLACKROCK APEX MUNICIPAL FUND INC
Form N-CSRS
March 06, 2008

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

FORM N-CSRS

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT
INVESTMENT COMPANIES

Investment Company Act file number 811-05227

Name of Fund: BlackRock Apex Municipal Fund, Inc. (APX)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: Donald C. Burke, Chief Executive Officer,
BlackRock Apex Municipal Fund, Inc., 800 Scudders Mill Road, Plainsboro,
NJ 08536. Mailing address: P.O. Box 9011, Princeton, NJ 08543-9011

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

Date of fiscal year end: 06/30/2008

Date of reporting period: 07/01/2007 - 12/31/2007

Item 1 - Report to Stockholders

EQUITIES FIXED INCOME REAL ESTATE
LIQUIDITY ALTERNATIVES BLACKROCK SOLUTIONS

BlackRock Apex Municipal
Fund, Inc. (APX)

BLACKROCK

SEMI-ANNUAL REPORT
DECEMBER 31, 2007 | (UNAUDITED)

NOT FDIC INSURED
MAY LOSE VALUE
NO BANK GUARANTEE

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A Letter to Shareholders

Dear Shareholder

Financial markets endured heightened volatility during 2007, culminating in mixed results for some of the major benchmark indexes:

Table showing Total Returns as of December 31, 2007 for various equity and fixed income indexes over a 6-month period, including U.S. equities (S&P 500 Index) at -1.37%, Small cap U.S. equities (Russell 2000 Index) at -7.53%, and High yield bonds (Lehman Brothers U.S. Corporate High Yield 2% Issuer Cap Index) at -0.67%.

Past performance is no guarantee of future results. Index performance shown for illustrative purposes only. You cannot invest directly in an index.

Subprime mortgage woes dominated headlines for much of 2007, spawning a widespread liquidity and credit crisis with ramifications across global markets. The Federal Reserve Board (the "Fed") stepped in to inject liquidity into the markets and bolster investor confidence, cutting the federal funds rate by 0.50% in September, 0.25% in October and 0.25% in December, which brought the target short-term interest rate to 4.25%.

Amid the volatility, equity markets displayed surprising resilience. Market fundamentals generally held firm, dividend payouts and share buybacks continued, and valuations remained attractive. To some extent, the credit turmoil dampened corporate merger-and-acquisition (M&A) activity, a key source of strength for equity markets, but 2007 remained a record year for global M&A nonetheless.

In fixed income markets, mixed economic signals and subprime fallout resulted in a flight to quality. Investors shunned bonds associated with the housing and credit markets in favor of higher-quality Treasury issues. The yield on 10-year Treasury issues, which touched 5.30% in June (its highest level in five years), fell to 4.04% by year-end, while prices correspondingly rose.

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worthiness of bond insurers, but set a new-issuance record in 2007. A drop in municipal bond prices created buying opportunities, and the heightened supply was generally well absorbed.

As you navigate the uncertainties inherent in the financial markets, we encourage you to start the year by reviewing your investment goals with your financial professional and making portfolio changes, as needed. For more reflection on 2007 and our 10 predictions for 2008, please ask your financial professional for a copy of "What's Ahead in 2008: An Investment Perspective," or view it online at www.blackrock.com/funds. As always, we thank you for entrusting BlackRock with your investment assets, and we look forward to continuing to serve you in the new year and beyond.

Sincerely,

/s/ Rob Kapito

Rob Kapito
 President, BlackRock Advisors, LLC

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THIS PAGE NOT PART OF YOUR FUND REPORT

Fund Summary as of December 31, 2007

Investment Objective

BlackRock Apex Municipal Fund, Inc. (APX) seeks to provide shareholders with high current income exempt from federal income taxes by investing primarily in a portfolio of medium- to lower-grade or unrated municipal obligations, the interest on which is exempt from federal income taxes in the opinion of bond counsel to the issuer.

Fund Information

Symbol on New York Stock Exchange	APX
Initial Offering Date	July 25, 1989
Yield on Closing Market Price as of December 31, 2007 (\$9.23)* ..	6.37%
Tax Equivalent Yield**	9.80%
Current Monthly Distribution per share of Common Stock***	\$.049
Current Annualized Distribution per share of Common Stock***	\$.588

* Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price.

Past performance does not guarantee future results.

** Tax equivalent yield assumes the maximum federal tax rate of 35%.

*** The distribution is not constant and is subject to change.

The table below summarizes the changes in the Fund's market price and net asset value per share:

	12/31/07	6/30/07	Change	High	Low
Market Price	\$9.23	\$10.23	(9.78%)	\$10.45	\$8.92
Net Asset Value	\$9.54	\$ 9.95	(4.12%)	\$ 9.96	\$9.52

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The following charts show the Fund's portfolio composition and credit quality allocations of the Fund's long-term investments:

Portfolio Composition

Sector	12/31/07	6/30/07
Hospital	28%	31%
Industrial & Pollution Control	26	29
City, County & State	12	11
Tax Revenue	8	9
Housing	7	4
Power	6	3
Education	4	5
Transportation	4	3
Tobacco	3	3
Water & Sewer	1	1
Lease Revenue	1	1

Credit Quality Allocations*

Credit Rating	12/31/07	6/30/07
AAA/Aaa	15%	8%
AA/Aa	6	--
A/A	3	4
BBB/Baa	18	21
BB/Ba	8	9
B/B	4	6
CCC/Caa	5	5
CC/Ca	1	--
NR (Not Rated)**	40	47

* Using the higher of Standard & Poor's or Moody's Investor Services ratings.

** The Advisor has deemed certain of these non-related securities to be of investment grade quality. As of December 31, 2007 and June 30, 2007, the market value of these securities was \$2,566,050 and \$2,689,825, representing 1% and 1% of the Fund's long-term investments, respectively.

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Schedule of Investments as of December 31, 2007 (Unaudited) (in Thousands)

Face Amount	Municipal Bonds	Value
Alabama -- 0.6%		
\$1,255	Tuscaloosa, Alabama, Special Care Facilities Financing Authority, Residential Care Facility Revenue Bonds (Capstone Village, Inc. Project), Series A, 5.875% due 8/01/2036	\$ 1,159
Alaska -- 1.1%		
2,000	Alaska Industrial Development and Export Authority Revenue Bonds (Williams Lynxs Alaska Cargoport),	

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		AMT, 8% due 5/01/2023	2,052
=====			
Arizona -- 5.6%			
900	Maricopa County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project 1), Series A, 6.625% due 7/01/2020		873
	Maricopa County, Arizona, IDA, M/F Housing Revenue Bonds (Sun King Apartments Project), Series A:		
30	5.875% due 11/01/2008		30
20	6% due 11/01/2010		20
1,020	6.75% due 5/01/2031		1,034
2,950	Phoenix, Arizona, IDA, Airport Facility, Revenue Refunding Bonds (America West Airlines Inc. Project), AMT, 6.30% due 4/01/2023		2,808
970	Pima County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project), Series E, 7.25% due 7/01/203		11,024
	Salt Verde Financial Corporation, Arizona, Senior Gas Revenue Bonds:		
1,950	5% due 12/01/2032		1,844
2,730	5% due 12/01/2037		2,553
500	Yavapai County, Arizona, IDA, Hospital Facility Revenue Bonds (Yavapai Regional Medical Center), Series A, 6% due 8/01/2033		512
=====			
California -- 2.2%			
1,300	California State, Various Purpose, GO, 5.25% due 11/01/2025		1,359
1,000	Fontana, California, Special Tax, Refunding (Community Facilities District Number 22 -- Sierra), 6% due 9/01/2034		987
3	San Jose, California, Airport Revenue Bonds, RIB, AMT, Series 102TP, 5.841% due 3/01/2017 (b) (f)		3
1,785	Southern California Public Power Authority, Natural Gas Project Number 1 Revenue Bonds, Series A, 5% due 11/01/2029		1,750
=====			
Colorado -- 4.4%			
450	Colorado Health Facilities Authority, Revenue Refunding Bonds (Christian Living Communities Project), Series A, 5.75% due 1/01/2026		418
2,800	Elk Valley, Colorado, Public Improvement Revenue Bonds (Public Improvement Fee), Series A, 7.30% due 9/01/2022		2,910
1,235	North Range Metropolitan District Number 1, Colorado, GO, 7.25% due 12/15/2011 (a)		1,398
	Plaza Metropolitan District Number 1, Colorado, Tax Allocation Revenue Bonds (Public Improvement Fees):		
2,000	8% due 12/01/2025		2,132
500	8.125% due 12/01/2025		498
830	Southlands Metropolitan District Number 1, Colorado, GO, 7.125% due 12/01/2014 (a)		1,008
=====			
Connecticut -- 0.6%			
490	Connecticut State Development Authority, Airport Facility Revenue Bonds (Learjet Inc. Project), AMT, 7.95% due 4/01/2026		546
640	Connecticut State, HFA, Housing Mortgage Finance Program Revenue Bonds, AMT, Sub-Series A-2, 5.15% due 5/15/2038		625
=====			

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Florida -- 11.1%			
800	Capital Projects Finance Authority, Florida, Continuing Care Retirement Revenue Bonds (Glenridge on Palmer Ranch), Series A, 8% due 6/01/2012 (a)	961	
840	Halifax Hospital Medical Center, Florida, Hospital Revenue Refunding Bonds, Series A, 5% due 6/01/2038	767	
850	Highlands County, Florida, Health Facilities Authority, Hospital Revenue Bonds (Adventist Health System), Series C, 5.25% due 11/15/2036	845	
2,500	Hillsborough County, Florida, IDA, Exempt Facilities Revenue Bonds (National Gypsum Company), AMT, Series A, 7.125% due 4/01/2030	2,566	
1,000	Jacksonville, Florida, Economic Development Commission, Health Care Facilities, Revenue Refunding Bonds (Florida Proton Therapy Institute), Series A, 6% due 9/01/2017	998	
900	Jacksonville, Florida, Economic Development Commission, IDR (Gerdau Ameristeel US, Inc.), AMT, 5.30% due 5/01/2037	770	
750	Lakewood Ranch, Florida, Community Development District Number 5, Special Assessment Revenue Refunding Bonds, Series A, 6.70% due 5/01/2011 (a)	829	
1,810	Lee County, Florida, IDA, IDR (Lee Charter Foundation), Series A, 5.375% due 6/15/2037	1,542	
	Midtown Miami, Florida, Community Development District, Special Assessment Revenue Bonds, Series A:		
1,500	6% due 5/01/2024	1,432	
1,350	6.25% due 5/01/2037	1,306	
1,520	Orlando, Florida, Urban Community Development District, Capital Improvement Special Assessment Bonds, Series A, 6.95% due 5/01/2011 (a)	1,681	
2,140	Santa Rosa Bay Bridge Authority, Florida, Revenue Bonds, 6.25% due 7/01/2028	2,009	

Portfolio Abbreviations

To simplify the listings of BlackRock Apex Municipal Fund, Inc.'s portfolio holdings in the Schedule of Investments, we have abbreviated the names of many of the securities according to the list at right.

AMT	Alternative Minimum Tax (subject to)
EDA	Economic Development Authority
GO	General Obligation Bonds
HDA	Housing Development Authority
HFA	Housing Finance Agency
IDA	Industrial Development Authority
IDR	Industrial Development Revenue Bonds
M/F	Multi-Family
PCR	Pollution Control Revenue Bonds
RIB	Residual Interest Bonds
VRDN	Variable Rate Demand Notes

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Schedule of Investments (continued)

(in Thousands)

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Face Amount	Municipal Bonds	Value
=====		
Florida (concluded)		
	Sarasota County, Florida, Health Facilities Authority, Retirement Facility Revenue Refunding Bonds (Village on the Isle Project):	
\$ 590	5.50% due 1/01/2027	\$ 545
550	5.50% due 1/01/2032	489
2,385	Tampa Palms, Florida, Open Space and Transportation Community Development District Revenue Bonds, Capital Improvement (Richmond Place Project), 7.50% due 5/01/2018	2,399
1,850	Tolomato Community Development District, Florida, Special Assessment Bonds, 6.65% due 5/01/2040	1,790
=====		
Georgia -- 3.8%		
	Atlanta, Georgia, Tax Allocation Bonds: (Atlantic Station Project), 7.90% due 12/01/2011 (a)	2,361
2,000		
495	(Princeton Lakes Project), 5.50% due 1/01/2031	472
	Brunswick and Glynn County, Georgia, Development Authority, First Mortgage Revenue Bonds (Coastal Community Retirement Corporation Project), Series A (j):	
830	7.125% due 1/01/2025	479
1,185	7.25% due 1/01/2035	685
1,580	Fulton County, Georgia, Development Authority, PCR, Refunding (General Motors Corporation), VRDN, 6.50% due 4/01/2010 (e)	1,580
1,680	Rockdale County, Georgia, Development Authority Revenue Bonds (Visy Paper Project), AMT, Series A, 6.125% due 1/01/2034	1,608
=====		
Idaho -- 0.8%		
1,470	Idaho Health Facilities Authority, Revenue Refunding Bonds (Valley Vista Care Corporation), Series A, 7.75% due 11/15/2016	1,613
=====		
Illinois -- 6.2%		
1,845	Caseyville, Illinois, Senior Tax Increment Revenue Bonds (Forest Lakes Project), 7% due 12/30/2022	1,700
2,860	Chicago, Illinois, O'Hare International Airport, Special Facility Revenue Refunding Bonds (American Airlines Inc. Project), 5.50% due 12/01/2030	2,449
	Illinois State Finance Authority Revenue Bonds:	
2,050	(Clare At Water Tower Project), Series A, 6.125% due 5/15/2038	1,933
430	(Landing At Plymouth Place Project), Series A, 6% due 5/15/2037	407
575	(Monarch Landing, Inc. Project), Series A, 7% due 12/01/2037	574
490	(Primary Health Care Centers Program), 6.60% due 7/01/2024	479
755	Lincolnshire, Illinois, Special Service Area Number 1, Special Tax Bonds (Sedgebrook Project), 6.25% due 3/01/2034	766
2,400	Lombard, Illinois, Public Facilities Corporation, First Tier Revenue Bonds (Conference Center and Hotel),	

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		Series A-1, 7.125% due 1/01/2036	2,500
265		Naperville, Illinois, IDR (General Motors Corporation), Refunding, VRDN, 6.50% due 12/01/2012 (e)	265
760		Village of Wheeling, Illinois, Revenue Bonds (North Milwaukee/Lake-Cook Tax Increment Financing Redevelopment Project), 6% due 1/01/2025	732
=====			
Indiana -- 1.9%			
1,985		Indiana Health and Educational Facilities Financing Authority, Hospital Revenue Bonds (Community Foundation of Northwest Indiana), 5.50% due 3/01/2037	1,823
820		Vanderburgh County, Indiana, Redevelopment Commission, Redevelopment District Tax Allocation Bonds, 5.25% due 2/01/2031	775
		Vigo County, Indiana, Hospital Authority Revenue Bonds (Union Hospital, Inc.):	
440		5.70% due 9/01/2037	408
545		5.75% due 9/01/2042	499
=====			
Iowa -- 1.7%			
2,635		Iowa Finance Authority, Health Care Facilities, Revenue Refunding Bonds (Care Initiatives Project), 9.25% due 7/01/2011 (a)	3,184
=====			
Kansas -- 0.6%			
1,230		Wyandotte County, Kansas, Kansas City Unified Government Revenue Refunding Bonds (General Motors Corporation Project), 6% due 6/01/2025	1,160
=====			
Louisiana -- 1.7%			
2,000		Louisiana Local Government Environmental Facilities and Community Development Authority Revenue Bonds (Westlake Chemical Corporation), 6.75% due 11/01/2032	1,983
1,300		Louisiana Public Facilities Authority, Hospital Revenue Bonds (Franciscan Missionaries of Our Lady Health System, Inc.), Series A, 5.25% due 8/15/2036	1,289
=====			
Maryland -- 1.2%			
385		Baltimore, Maryland, Convention Center Hotel Revenue Bonds, Sub-Series B, 5.875% due 9/01/2039	384
1,500		Maryland State Energy Financing Administration, Limited Obligation Revenue Bonds (Cogeneration -- AES Warrior Run), AMT, 7.40% due 9/01/2019	1,503
410		Maryland State Health and Higher Educational Facilities Authority Revenue Bonds (Washington Christian Academy), 5.50% due 7/01/2038	365
=====			
Massachusetts -- 3.4%			
1,845		Massachusetts State Development Finance Agency, First Mortgage Revenue Bonds (Overlook Communities Inc.), Series A, 6.25% due 7/01/2034	1,803
1,245		Massachusetts State Development Finance Agency, Revenue Refunding Bonds (Eastern Nazarene College), 5.625% due 4/01/2019	1,248
850		Massachusetts State Health and Educational Facilities Authority Revenue Bonds (Jordan Hospital), Series E, 6.75% due 10/01/2033	883
1,245		Massachusetts State Health and Educational Facilities Authority, Revenue Refunding Bonds: (Bay Cove Human Services Issue), Series A, 5.90%	

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		due 4/01/2028	1,230
500		(Milton Hospital), Series, 5.50% due 7/01/2016	507
800		Massachusetts State Industrial Finance Agency Revenue Bonds, Sewer Facility (Resource Control Composting), AMT, 9.25% due 6/01/2010	813
=====			
Michigan -- 1.2%			
1,150		Macomb County, Michigan, Hospital Finance Authority, Hospital Revenue Bonds (Mount Clemens General Hospital), Series B, 5.875% due 11/15/2034	1,128

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Schedule of Investments (continued) (in Thousands)

Face Amount	Municipal Bonds	Value
=====		
Michigan (concluded)		
\$1,260	Monroe County, Michigan, Hospital Financing Authority, Hospital Revenue Refunding Bonds (Mercy Memorial Hospital Corporation), 5.50% due 6/01/2035	\$ 1,128
=====		
Missouri -- 1.2%		
1,155	Fenton, Missouri, Tax Increment Revenue Refunding and Improvement Bonds (Gravois Bluffs), 7% due 10/01/2011 (a)	1,314
1,000	Kansas City, Missouri, IDA, First Mortgage Health Facilities Revenue Bonds (Bishop Spencer Place), Series A, 6.50% due 1/01/2035	1,005
=====		
Nevada -- 0.2%		
425	Clark County, Nevada, Improvement District Number 142, Special Assessment Bonds, 6.375% due 8/01/2023	437
=====		
New Hampshire -- 0.4%		
835	New Hampshire Health and Education Facilities Authority, Hospital Revenue Bonds (Catholic Medical Center), 5% due 7/01/2036	756
=====		
New Jersey -- 12.2%		
6,000	Camden County, New Jersey, Pollution Control Financing Authority, Solid Waste Resource Recovery, Revenue Refunding Bonds, AMT, Series A, 7.50% due 12/01/2010	6,015
2,170	New Jersey EDA, Cigarette Tax Revenue Bonds, 5.50% due 6/15/2024	2,099
1,500	New Jersey EDA, IDR, Refunding (Newark Airport Marriott Hotel), 7% due 10/01/2014	1,530
	New Jersey EDA, Retirement Community Revenue Bonds (a):	
1,000	(Cedar Crest Village Inc. Facility), Series A, 7.25% due 11/15/2011	1,150
3,700	(Seabrook Village Inc.), Series A, 8.125% due 11/15/2010	4,226

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		New Jersey EDA, Special Facility Revenue Bonds (Continental Airlines Inc. Project), AMT:	
3,050		6.625% due 9/15/2012	3,034
1,000		6.25% due 9/15/2029	935
1,870		New Jersey Health Care Facilities Financing Authority Revenue Bonds (Pascack Valley Hospital Association), 6.625% due 7/01/2036	1,009
2,760		New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, Series C, 5.05% due 12/15/2035 (b)(d)	694
1,075		Tobacco Settlement Financing Corporation of New Jersey, Asset-Backed Revenue Bonds, 7% due 6/01/2013 (a)	1,262
1,270		Tobacco Settlement Financing Corporation of New Jersey, Asset-Backed Revenue Refunding Bonds, Series 1A, 5% due 6/01/2041	1,059
=====			
		New Mexico -- 2.7%	
5,000		Farmington, New Mexico, PCR, Refunding (Tucson Electric Power Company -- San Juan Project), Series A, 6.95% due 10/01/2020	5,087
=====			
		New York -- 3.2%	
1,000		Dutchess County, New York, IDA, Civic Facility Revenue Bonds (Saint Francis Hospital), Series B, 7.50% due 3/01/2029	1,061
		New York City, New York, City IDA, Civic Facility Revenue Bonds:	
350		Series C, 6.80% due 6/01/2028	368
830		(Special Needs Facility Pooled Program), Series C-1, 6.50% due 7/01/2024	827
1,730		New York City, New York, City IDA, Special Facility Revenue Bonds (British Airways Plc Project), AMT, 7.625% due 12/01/2032	1,817
630		New York Liberty Development Corporation Revenue Bonds (National Sports Museum Project), Series A, 6.125% due 2/15/2019	625
1,180		Westchester County, New York, IDA, Continuing Care Retirement, Mortgage Revenue Bonds (Kendal on Hudson Project), Series A, 6.50% due 1/01/2013 (a)	1,335
=====			
		North Carolina -- 0.6%	
1,000		North Carolina Medical Care Commission, Retirement Facilities, First Mortgage Revenue Bonds (Givens Estates Project), Series A, 6.50% due 7/01/2013 (a)	1,163
=====			
		Ohio -- 0.7%	
1,290		Buckeye Tobacco Settlement Financing Authority, Ohio, Tobacco Settlement Asset-Backed Bonds, Series A-2, 6.50% due 6/01/2047	1,325
=====			
		Pennsylvania -- 7.7%	
1,160		Bucks County, Pennsylvania, IDA, Retirement Community Revenue Bonds (Ann's Choice Inc.), Series A, 6.125% due 1/01/2025	1,163
1,750		Chester County, Pennsylvania, Health and Education Facilities Authority, Senior Living Revenue Refunding Bonds (Jenners Pond Inc. Project), 7.625% due 7/01/2012 (a)	2,078
600		Harrisburg, Pennsylvania, Authority, University Revenue Bonds (Harrisburg University of Science), Series B, 6% due 9/01/2036	593

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	Lancaster County, Pennsylvania, Hospital Authority	
	Revenue Bonds (Brethren Village Project), Series A:	
475	6.25% due 7/01/2026	472
410	6.50% due 7/01/2040	411
1,825	Montgomery County, Pennsylvania, Higher Education and Health Authority Revenue Bonds (Faulkeways at Gwynedd Project), 6.75% due 11/15/2009 (a)	1,965
1,700	Montgomery County, Pennsylvania, IDA, Revenue Bonds (Whitemarsh Continuing Care Project), 6.25% due 2/01/2035	1,669
1,600	Philadelphia, Pennsylvania, Authority for IDR: (Air Cargo), AMT, Series A, 7.50% due 1/01/2025	1,674
4,460	Commercial Development, 7.75% due 12/01/2017	4,466
=====		
Rhode Island -- 1.0%		
1,750	Central Falls, Rhode Island, Detention Facility Corporation, Detention Facility, Revenue Refunding Bonds, 7.25% due 7/15/2035	1,873
=====		
South Carolina -- 3.8%		
	Connector 2000 Association, Inc., South Carolina, Toll Road and Capital Appreciation Revenue Bonds, Senior-Series B (d):	
1,100	6.50% due 1/01/2009	1,025
1,075	7.969% due 1/01/2014	605
5,690	South Carolina Housing Finance and Development Authority, Mortgage Revenue Refunding Bonds, AMT, Series A-2, 5.15% due 7/01/2037 (b)	5,543
=====		

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Schedule of Investments (continued) (in Thousands)

Face Amount	Municipal Bonds	Value
=====		
Tennessee -- 3.1%		
\$5,000	Knox County, Tennessee, Health, Educational and Housing Facilities Board, Hospital Facilities Revenue Refunding Bonds (Covenant Health), Series A, 5.03% due 1/01/2037 (d)	\$ 1,022
	Shelby County, Tennessee, Health, Educational and Housing Facilities Board Revenue Bonds (Germantown Village):	
245	6.25% due 12/01/2034	208
1,800	Series A, 7.25% due 12/01/2034	1,736
2,980	Sullivan County, Tennessee, Health, Educational and Housing Facilities Board, Hospital Revenue Bonds (Wellmont Health System Project), Series C, 5.25% due 9/01/2036	2,812
=====		
Texas -- 4.9%		
1,000	Austin, Texas, Convention Center Revenue Bonds (Convention Enterprises Inc.), First Tier, Series A,	

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	6.70% due 1/01/2011 (a)	1,101
2,530	Brazos River Authority, Texas, PCR, Refunding (TXU Energy Company LLC Project), AMT, Series A, 7.70% due 4/01/2033	2,617
1,220	Brazos River Authority, Texas, Revenue Refunding Bonds (Reliant Energy Inc. Project), Series B, 7.75% due 12/01/2018	1,249
1,000	Houston, Texas, Health Facilities Development Corporation, Retirement Facility Revenue Bonds (Buckingham Senior Living Community), Series A, 7.125% due 2/15/2014 (a)	1,207
875	Kerrville, Texas, Health Facilities Development Corporation, Hospital Revenue Bonds (Sid Peterson Memorial Hospital Project), 5.375% due 8/15/2035	807
2,310	Matagorda County, Texas, Navigation District Number 1, Revenue Refunding Bonds (Reliant Energy Inc.), Series C, 8% due 5/01/2029	2,367
=====		
Utah -- 1.2%		
2,240	Carbon County, Utah, Solid Waste Disposal, Revenue Refunding Bonds (Laidlaw Environmental), AMT, Series A, 7.45% due 7/01/2017	2,276
=====		
Virginia -- 2.1%		
2,450	Dulles Town Center, Virginia, Community Development Authority, Special Assessment Tax (Dulles Town Center Project), 6.25% due 3/01/2026	2,464
310	Farms of New Kent Community Development Authority, Virginia, Special Assessment Bonds, Series C, 5.80% due 3/01/2036	279
1,500	Tobacco Settlement Financing Corporation of Virginia, Revenue Refunding Bonds, Senior Series B-1, 5% due 6/01/2047	1,245
=====		
Washington -- 0.6%		
1,200	Washington State Housing Financing Commission, Nonprofit Revenue Bonds (Skyline at First Hill Project), Series A, 5.625% due 1/01/2038	1,080
=====		
West Virginia -- 0.6%		
1,125	Princeton, West Virginia, Hospital Revenue Refunding Bonds (Community Hospital Association Inc. Project), 6.20% due 5/01/2013	1,122
=====		
Wisconsin -- 0.7%		
1,320	Wisconsin State Health and Educational Facilities Authority Revenue Bonds (New Castle Place Project), Series A, 7% due 12/01/2031	1,342
=====		
U.S. Virgin Islands -- 1.2%		
2,100	Virgin Islands Government Refinery Facilities, Revenue Refunding Bonds (Hovensa Coker Project), AMT, 6.50% due 7/01/2021	2,183
=====		
	Total Municipal Bonds (Cost -- \$180,130) -- 96.2%	181,975
=====		

Municipal Bonds Transferred to Tender
Option Bond Trusts (i)

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=====		
California -- 1.7%		
2,965	San Jose, California, Airport Revenue Refunding Bonds, Series A, 5.50% due 3/01/2032 (b)	3,095
=====		
Virginia -- 3.2%		
6,010	Virginia State, HDA, Commonwealth Mortgage Revenue Bonds, Series H Sub-Series H-1, 5.375% due 7/01/2036 (c)	6,101
=====		
	Total Municipal Bonds Transferred to Tender Option Bond Trusts (Cost -- \$9,174) -- 4.9%	9,196
=====		

Shares		
Held	Short-Term Securities	
=====		
204	Merrill Lynch Institutional Tax-Exempt Fund, 3.35% (g) (h)	204
=====		
	Total Short-Term Securities (Cost -- \$204) -- 0.1%	204
=====		
Total Investments (Cost -- \$189,508*) -- 101.2%		191,375
=====		
Other Assets Less Liabilities -- 1.2%		2,228
=====		
Liability for Trust Certificates, Including Interest Expense Payable -- (2.4%)		(4,507)

Net Assets -- 100.0%		\$189,096
=====		

8 BLACKROCK APEX MUNICIPAL FUND, INC. DECEMBER 31, 2007

Schedule of Investments (concluded) (in Thousands)

* The cost and unrealized appreciation (depreciation) of investments as of December 31, 2007, as computed for federal income tax purposes, were as follows:

Aggregate cost	\$184,654
	=====
Gross unrealized appreciation	\$ 8,071
Gross unrealized depreciation	(5,838)

Net unrealized appreciation	\$ 2,233
	=====

- (a) Prerefunded.
- (b) AMBAC Insured.
- (c) MBIA Insured.
- (d) Represents a zero coupon bond; the interest rate shown reflects the effective yield at the time of purchase.
- (e) Security may have a maturity of more than one year at time of issuance, but has variable rate and demand features that qualify it as a short-term

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security. The rate disclosed is that currently in effect. This rate changes periodically based upon prevailing market rates.

- (f) The rate disclosed is that currently in effect. This rate changes periodically and inversely based upon prevailing market rates.
- (g) Represents the current yield as of December 31, 2007.
- (h) Investments in companies considered to be an affiliate of the Fund, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, were as follows:

Affiliate	Net Activity	Dividend Income
Merrill Lynch Institutional Tax-Exempt Fund	204	\$17

- (i) Securities represent underlying bonds transferred to a separate securitization trust established in a tender option bond transaction in which the Fund may have acquired the residual interest certificates. These securities serve as collateral in a financing transaction. See Note 1 of the Notes to Financial Statements for details of municipal bonds transferred to tender option bond trusts.
- (j) Non-income producing security; issuer filed for bankruptcy or is in default of interest payments.

See Notes to Financial Statements.

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Statement of Assets and Liabilities of Operations

As of December 31, 2007 (Unaudited)

Assets

Investments in unaffiliated securities, at value (identified cost -- \$189,304,530)	\$ 191,171,161
Investments, in affiliated securities, at value (identified cost -- \$203,567)	203,567
Cash	72,489
Receivables:	
Interest receivable	3,229,957
Securities sold	55,000
Prepaid expenses	1,468
Total assets	194,733,642

Liabilities

Trust certificates*	4,487,500
Payables:	
Securities purchased	880,626
Investment advisor	107,625
Dividends to shareholders	94,620
Interest expense	19,154
Other affiliates	1,708
Accrued expenses	46,668

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Total liabilities 5,637,901

=====
Net Assets

Net Assets \$ 189,095,741
=====

=====
Capital

Common Stock, \$.10 par value, 150,000,000 shares authorized;
19,821,674 shares issued and outstanding \$ 1,982,167
Paid-in capital in excess of par 200,873,492
Accumulated distributions in excess of investment
income -- net 1,411,166
Accumulated realized capital losses -- net (17,037,715)
Unrealized appreciation -- net 1,866,631

Total capital -- Equivalent to \$9.54 net asset value per
share of Common Stock (market price -- \$9.23) \$ 189,095,741
=====

* Represents short-term floating rate certificates issued by tender option
bond trusts.

See Notes to Financial Statements.

Statement of Operations

For the Six Months Ended December 31, 2007 (Unaudited)

=====
Investment Income

Interest \$ 6,138,869
Dividends from affiliates 16,508

Total income 6,155,377

=====
Expenses

Investment advisory fees 630,489
Accounting services 38,924
Professional fees 25,729
Interest expense and fees 22,560
Transfer agent fees 21,172
Printing and shareholder reports 19,419
Pricing fees 9,606
Directors' fees and expenses 7,910
Custodian fees 6,285
Listing fees 4,854
Other 16,398

Total expenses before reimbursement 803,346
Reimbursement of expenses (932)

Total expenses 802,414

Investment income -- net 5,352,963

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Realized & Unrealized Gain (Loss) -- Net	
Realized gain (loss) on:	
Investments -- net	(199,292)
Forward interest rate swaps -- net	52,638
Total realized loss -- net	(146,654)
Change in unrealized appreciation/depreciation on:	
Investments -- net	(7,758,509)
Forward interest rate swaps -- net	178,595
Total change in unrealized appreciation/depreciation -- net ..	(7,579,914)
Total realized and unrealized loss -- net	(7,726,568)
Net Decrease in Net Assets Resulting from Operations	\$ (2,373,605)

See Notes to Financial Statements.

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Statements of Changes in Net Assets

Increase (Decrease) in Net Assets:

Operations

Investment income -- net	
Realized loss -- net	
Change in unrealized appreciation/depreciation -- net	
Net increase (decrease) in net assets resulting from operations	

Dividends to Shareholders

Investment income -- net	
--------------------------------	--

Common Stock Transactions

Net increase in net assets derived from Common Stock issued to shareholders in reinvestment of dividends	
--	--

Net Assets

Total increase (decrease) in net assets	
Beginning of period	

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End of period*

* Undistributed investment income -- net

See Notes to Financial Statements.

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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The following per share data and ratios have been derived from information provided in the financial statements.	For the Six Months Ended December 31, 2007 (Unaudited)		For the
	2007	2007	2006
Per Share Operating Performance			
Net asset value, beginning of period	\$ 9.95	\$ 9.90	\$ 9.82
Investment income -- net***27	.58	.58
Realized and unrealized gain (loss) -- net	(.39)	.06	.08
Total from investment operations	(.12)	.64	.66
Less dividends and distributions to Common Stock shareholders:			
Investment income -- net	(.29)	(.59)	(.58)
Realized gain -- net	--	--	--
Total dividends and distributions to Common Stock shareholders	(.29)	(.59)	(.58)
Net asset value, end of period	\$ 9.54	\$ 9.95	\$ 9.90
Market price per share, end of period	\$ 9.23	\$ 10.23	\$ 10.25
Total Investment Return*			
Based on net asset value per share	(1.18%)+	6.48%	7.00%
Based on market price per share	(7.01%)+	5.73%	14.76%
Ratios to Average Net Assets			
Expenses, net of reimbursement and excluding interest expense and fees@80%+	.80%	.80%
Expenses, net of reimbursement82%+	.80%	.80%
Expenses83%+	.80%	.81%
Investment income -- net	5.50%+	5.75%	5.83%

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Supplemental Data

Net assets, end of period (in thousands)	\$189,096	\$196,826	\$194,646
Portfolio turnover	13%	22%	19%

* Total investment returns based on market value, which can be significantly greater or lesser than the net asset value, may result in substantially different returns. Total investment returns exclude the effects of sales charges.

** Amount is less than \$(.01) per share.

*** Based on average shares outstanding.

+ Annualized.

++ Aggregate total investment return.

@ Interest expense and fees relate to tender option bond trusts. See Note 1 of the Notes to Financial Statements for details of municipal bonds transferred to tender option bond trusts.

See Notes to Financial Statements.

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BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

Notes to Financial Statements (Unaudited)

1. Significant Accounting Policies:

BlackRock Apex Municipal Fund, Inc. (the "Fund") is registered under the Investment Company Act of 1940, as amended (the "1940 Act"), as a non-diversified, closed-end management investment company. The Fund's financial statements are prepared in conformity with accounting principles generally accepted in the United States of America, which may require the use of management accruals and estimates. Actual results may differ from these estimates. These unaudited financial statements reflect all adjustments which are, in the opinion of management, necessary to present a fair statement of the results for the interim period. All such adjustments are of a normal, recurring nature. The Fund determines and makes available for publication the net asset value of its Common Stock on a daily basis. The Fund's Common Stock shares are listed on the New York Stock Exchange under the symbol APX.

The following is a summary of significant accounting policies followed by the Fund.

Valuation of Investments: Municipal investments (including commitments to purchase such investments on a "when-issued" basis) are valued on the basis of prices provided by dealers or pricing services selected under the supervision of the Fund's Board of Directors ("Directors" or a "Board"). In determining the value of a particular investment, pricing services may use certain information with respect to transactions in such investments, quotations from bond dealers, market transactions in comparable investments and various relationships between investments. Swap agreements are valued by quoted fair values received daily by the Fund's pricing service. Short-term securities may be valued at amortized cost. Investments in open-end investment companies are valued at net asset value each business day. In the event that application of these methods of valuation results in a price for an investment which is deemed not to be representative of the market value of such investment, the investment will be valued by, under the direction of or in accordance with a method approved by the Board as reflecting fair value ("Fair Value Assets"). When determining the price for Fair Value Assets, the investment advisor and/or sub-advisor shall seek to determine the price that the Fund might reasonably expect to receive from the current sale of

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that asset in an arms-length transaction. Fair value determinations shall be based upon all available factors that the advisor and/or sub-advisor deems relevant. The pricing of all Fair Value Assets shall be subsequently reported to the Board or a committee thereof.

Derivative Financial Instruments: The Fund may engage in various portfolio investment strategies both to increase the return of the Fund and to hedge, or protect, its exposure to interest rate movements and movements in the securities markets. Losses may arise due to changes in the value of the contract or if the counterparty does not perform under the contract. The counterparty, for certain instruments, may pledge cash or securities as collateral.

- o **Forward interest rate swaps:** The Fund may enter into forward interest rate swaps. In a forward interest rate swap, the Fund and the counterparty agree to make periodic net payments on a specified notional contract amount, commencing on a specified future effective date, unless terminated earlier. Changes in the value of the forward interest rate swap are recognized as unrealized gains and losses. When the agreement is closed, the Fund records a realized gain or loss in an amount equal to the value of the agreement. The Fund generally intends to close each forward interest rate swap before the accrual date specified in the agreement and therefore avoid entering into the interest rate swap underlying each forward interest rate swap.

Municipal Bonds Transferred to Tender Option Bond Trusts: The Fund invests in leveraged residual certificates ("TOB Residuals") issued by tender option bond trusts ("TOBs"). A TOB is established by a third party sponsor forming a special purpose entity, into which the Fund, or an agent on behalf of the Fund, transfers municipal securities. A TOB typically issues two classes of beneficial interests: short-term floating rate certificates, which are sold to third party investors, and residual certificates, which are generally issued to the Fund which made the transfer or to affiliates of the Fund. The Fund's transfers of the municipal securities to a TOB do not qualify for sale treatment under Statement of Financial Accounting Standards No. 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities" ("FAS 140"), therefore the municipal securities deposited into a TOB are presented in the Fund's schedule of investments and the proceeds from the transaction are reported as a liability for trust certificates of the Fund. Similarly, proceeds from residual certificates issued to affiliates, if any, from the transaction are included in the liability for trust certificates. Interest income from the underlying security is recorded by the Fund on an accrual basis. Interest expense incurred on the secured borrowing and other expenses related to remarketing, administration and trustee services to a TOB are reported as expenses of the Fund. The floating rate certificates have interest rates that generally reset weekly and their holders have the option to tender certificates to the TOB for redemption at par at each reset date. The residual interests held by the Fund include the right of the Fund (1) to cause the holders of a proportional share of the floating rate certificates to tender their certificates at par, and (2) to transfer a corresponding share of the municipal securities from the TOB to the Fund. At December 31, 2007, the aggregate value of the underlying municipal securities transferred to TOBs was \$9,195,708, the related liability for trust certificates was \$4,487,500 and the range of interest rates on the liability for trust certificates was 3.42% to 3.568%.

Financial transactions executed through TOBs generally will underperform the market for fixed rate municipal bonds in a rising interest rate environment, but tend to outperform the market for fixed rate bonds when interest rates decline or remain relatively stable. Should short-term interest rates rise, the Fund's investments in TOB Residuals likely will adversely affect the Fund's investment income -- net and distributions to shareholders.

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BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Notes to Financial Statements (continued)

Fluctuations in the market value of municipal securities deposited into the TOB may adversely affect the Fund's net asset value per share.

While the Fund's investment policies and restrictions expressly permit investments in inverse floating rate securities such as TOB Residuals, they generally do not allow the Fund to borrow money for purposes of making investments. The Fund's management believes that the Fund's restrictions on borrowings do not apply to the liability for trust certificates reflected as a result of the Fund's investments in TOB Residuals.

Income Taxes: It is the Fund's policy to comply with the requirements of the Internal Revenue Code applicable to regulated investment companies and to distribute substantially all of its taxable income to its shareholders. Therefore, no federal income tax provision is required.

Effective June 29, 2007, the Fund implemented Financial Accounting Standards Board ("FASB") Interpretation No. 48, "Accounting for Uncertainty in Income Taxes -- an interpretation of FASB Statement No. 109" ("FIN 48"). FIN 48 prescribes the minimum recognition threshold a tax position must meet in connection with accounting for uncertainties in income tax positions taken or expected to be taken by an entity, including investment companies, before being measured and recognized in the financial statements. Management has evaluated the application of FIN 48 to the Fund, and has determined that the adoption of FIN 48 does not have a material impact on the Fund's financial statements. The Fund files U.S. federal and various state and local tax returns. No income tax returns are currently under examination. The statute of limitations on the Fund's U.S. federal tax returns remains open for the years ended June 30, 2004 through June 30, 2007. The statute of limitations on the Fund's state and local tax returns may remain open for an additional year depending upon the jurisdiction.

Investment Transactions and Investment Income: Investment transactions are recorded on the dates the transactions are entered into (the trade dates). Realized gains and losses on security transactions are determined on the identified cost basis. Interest income is recognized on the accrual basis. The Fund amortizes all premiums and discounts on debt securities.

Dividends and Distributions: Dividends from net investment income are declared daily and paid monthly. Distributions of capital gains are recorded on the ex-dividend dates.

Recent Accounting Pronouncements: In September 2006, Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("FAS 157"), was issued and is effective for fiscal years beginning after November 15, 2007. FAS 157 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. The impact on the Fund's financial statement disclosures, if any, is currently being assessed.

In addition, in February 2007, FASB issued Statement of Financial Accounting Standards No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("FAS 159"), was issued and is effective for fiscal years beginning after November 15, 2007. Early adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided the entity also elects to apply the provisions of FAS 157. FAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. FAS 159 also establishes presentation and disclosure requirements designed to facilitate

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comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. The impact on the Fund's financial statement disclosures, if any, is currently being assessed.

2. Investment Advisory Agreement and Transactions with Affiliates:

The Fund has entered into an Investment Advisory Agreement with BlackRock Advisors, LLC (the "Advisor"), an indirect, wholly owned subsidiary of BlackRock, Inc. Merrill Lynch & Co., Inc. and The PNC Financial Services Group, Inc. are the principal owners of BlackRock, Inc.

The Advisor is responsible for the management of the Fund's portfolio and provides the necessary personnel, facilities, equipment and certain other services necessary to the operations of the Fund. For such services, the Fund pays a monthly fee at an annual rate of .65% of the Fund's average daily net assets. The Advisor has agreed to reimburse its management fee by the amount of management fees the Fund pays to the Advisor indirectly through its investment in Merrill Lynch Institutional Tax-Exempt Fund. For the six months ended December 31, 2007, the Advisor reimbursed the Fund \$932.

In addition, the Advisor has entered into a sub-advisory agreement with BlackRock Investment Management, LLC, an affiliate of the Advisor, under which the Advisor pays the sub-advisor for services it provides, a monthly fee that is a percentage of the management fee paid by the Fund to the Advisor.

For the six months ended December 31, 2007, the Fund reimbursed the Advisor \$1,705 for certain accounting services.

Certain officers and/or directors of the Fund are officers and/or directors of BlackRock, Inc. or its affiliates.

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Notes to Financial Statements (concluded)

3. Investments:

Purchases and sales of investments, excluding short-term securities, for the six months ended December 31, 2007 were \$27,615,373 and \$25,607,866, respectively.

4. Common Stock Transactions:

At December 31, 2007, the Fund had one class of shares of Common Stock, par value \$.10 per share, of which 150,000,000 shares were authorized.

Shares issued and outstanding for the six months ended December 31, 2007 increased by 47,456 as a result of dividend reinvestment. Shares issued and outstanding for the year ended June 30, 2007 increased by 104,307 as a result of dividend reinvestment.

5. Capital Loss Carryforward:

On June 30, 2007, the Fund had a net capital loss carryforward of \$16,891,061, of which \$2,542,361 expires in 2008, \$5,341,699 expires in 2009, \$2,075,987 expires in 2010, \$2,163,492 expires in 2011, \$1,659,281 expires in 2012, \$35,292 expires in 2013 and \$3,072,949 expires in 2015. This amount will be available to offset like amounts of any future taxable gains.

6. Concentration Risk:

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The Fund concentrates its investments in securities issued by state agencies, other governmental entities and U.S. Territories. The Fund is more susceptible to adverse financial, social, environmental, economic, regulatory and political factors that may affect these state agencies, other governmental entities and U.S. Territories, which could seriously affect the ability of these states and their municipal subdivisions to meet continuing obligations for principal and interest payments and therefore could impact the value of the Fund's investments and net asset value per share, than if the Fund was not concentrated in securities issued by state agencies, other governmental entities and U.S. Territories.

Many municipalities insure repayment of their obligations. Although bond insurance reduces the risk of loss due to default by an issuer, such bonds remain subject to the risk that market value may fluctuate for other reasons and there is no assurance that the insurance company will meet its obligations. These securities have been identified in the Schedule of Investments.

7. Subsequent Event:

The Fund paid a tax-exempt dividend to holders of Common Stock in the amount of \$.049000 per share on February 1, 2008 to shareholders of record on January 15, 2008.

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Officers and Directors

G. Nicholas Beckwith, III, Director
Richard E. Cavanagh, Director
Richard S. Davis, Director
Kent Dixon, Director
Frank J. Fabozzi, Director
Kathleen F. Feldstein, Director
James T. Flynn, Director
Henry Gabbay, Director
Jerrold B. Harris, Director
R. Glenn Hubbard, Director
W. Carl Kester, Director
Karen P. Robards, Director
Robert S. Salomon, Jr., Director
Roscoe S. Suddarth, Advisory Board Member*
Donald C. Burke, Fund President and Chief Executive Officer
Anne F. Ackerley, Vice President
Neal J. Andrews, Chief Financial Officer
Jay M. Fife, Treasurer
Brian P. Kindelan, Chief Compliance Officer
Howard Surloff, Secretary

* Roscoe S. Suddarth resigned from the Advisory Board of the Fund, effective December 31, 2007.

Custodian

The Bank of New York Mellon
New York, NY 10286

Transfer Agent

The Bank of New York Mellon
New York, NY 10286

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Accounting Agent

State Street Bank and Trust Company
Princeton, NJ 08540

Independent Registered Public Accounting Firm

Deloitte & Touche LLP
Princeton, NJ 08540

Legal Counsel

Skadden, Arps, Slate Meagher & Flom LLP
New York, NY 10036

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DECEMBER 31, 2007

Additional Information

Proxy Results

During the six-month period ended December 31, 2007, shareholders of BlackRock Apex Municipal Fund, Inc. voted on the following proposal, which was approved at an annual shareholders' meeting on August 16, 2007. This proposal was part of the reorganization of the Fund's Board of Directors which took effect on November 1, 2007. A description of the proposal and number of shares voted are as follows:

		Shares Voted For	Shares Withhe From Voting
To elect the Fund's Directors:	G. Nicholas Beckwith, III	16,960,625	331,064
	Richard E. Cavanagh	16,967,858	323,831
	Richard S. Davis	16,961,880	329,809
	Kent Dixon	16,966,218	325,471
	Frank J. Fabozzi	16,967,180	324,509
	Kathleen F. Feldstein	16,955,080	336,609
	James T. Flynn	16,965,190	326,499
	Henry Gabbay	16,968,658	323,031
	Jerrold B. Harris	16,960,143	331,546
	R. Glenn Hubbard	16,967,971	323,718
	W. Carl Kester	16,967,180	324,509
	Karen P. Robards	16,964,089	327,600
	Robert S. Salomon, Jr.	16,965,348	326,341

Dividend Policy

The Fund's dividend policy is to distribute all or a portion of its net investment income to its shareholders on a monthly basis. In order to provide shareholders with a more stable level of dividend distributions, the Fund may at times pay out less than the entire amount of net investment income earned in any particular month and may at times in any particular month pay out such accumulated but undistributed income in addition to net investment income earned

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in that month. As a result, the dividends paid by the Fund for any particular month may be more or less than the amount of net investment income earned by the Fund during such month. The Fund's current accumulated but undistributed net investment income, if any, is disclosed in the Statement of Assets and Liabilities, which comprises part of the financial information included in this report.

Swap Agreements

The Fund may invest in swap agreements, which are over-the-counter contracts in which one party agrees to make periodic payments based on the change in market value of a specified bond, basket of bonds, or index in return for periodic payments based on a fixed or variable interest rate or the change in market value of a different bond, basket of bonds or index. Swap agreements may be used to obtain exposure to a bond or market without owning or taking physical custody of securities. Swap agreements involve the risk that the party with whom the Fund has entered into a swap will default on its obligation to pay the Fund and the risk that the Fund will not be able to meet its obligations to pay the other party to the agreement. The swap agreements in which the Fund may invest includes credit default swap agreements.

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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Additional Information (continued)

Availability of Quarterly Schedule of Investments

The Fund files its complete schedule of portfolio holdings with the Securities and Exchange Commission ("SEC") for the first and third quarters of each fiscal year on Form N-Q. The Fund's Forms N-Q are available on the SEC's website at <http://www.sec.gov>. The Fund's Forms N-Q may also be reviewed and copied at the SEC's Public Reference Room in Washington, DC. Information on the operation of the Public Reference Room may be obtained by calling (800) SEC-0330. The Fund's Forms N-Q may also be obtained upon request and without charge by calling (800) 441-7762.

Electronic Delivery

Electronic copies of most financial reports are available on the Fund's website. Shareholders can sign up for e-mail notifications of quarterly statements and annual and semi-annual reports by enrolling in the Fund's electronic delivery program.

Shareholders Who Hold Accounts with Investment Advisors, Banks or Brokerages:

Please contact your financial advisor to enroll. Please note that not all investment advisors, banks or brokerages may offer this service.

General Information

The Fund does not make available copies of its Statements of Additional Information because the Fund's shares are not continuously offered, which means that the Statement of Additional Information of the Fund has not been updated after completion of the Fund's offering and the information contained in the Fund's Statement of Additional Information may have become outdated.

During the period, there were no material changes in the Fund's investment objective or policies or to the Fund's character or by-laws that were not approved by the shareholders or in the principal risk factors associated with investment in the Fund. There have been no changes in the persons who are

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primarily responsible for the day-to-day management of the Fund's portfolio.

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DECEMBER 31, 2007

Additional Information (concluded)

BlackRock Privacy Principles

BlackRock is committed to maintaining the privacy of its current and former fund investors and individual clients (collectively, "Clients") and to safeguarding their non-public personal information. The following information is provided to help you understand what personal information BlackRock collects, how we protect that information and why in certain cases we share such information with select parties.

If you are located in a jurisdiction where specific laws, rules or regulations require BlackRock to provide you with additional or different privacy-related rights beyond what is set forth below, then BlackRock will comply with those specific laws, rules or regulations.

BlackRock obtains or verifies personal non-public information from and about you from different sources, including the following: (i) information we receive from you or, if applicable, your financial intermediary, on applications, forms or other documents; (ii) information about your transactions with us, our affiliates, or others; (iii) information we receive from a consumer reporting agency; and (iv) from visits to our websites.

BlackRock does not sell or disclose to non-affiliated third parties any non-public personal information about its Clients, except as permitted by law or as is necessary to respond to regulatory requests or to service Client accounts. These non-affiliated third parties are required to protect the confidentiality and security of this information and to use it only for its intended purpose.

We may share information with our affiliates to service your account or to provide you with information about other BlackRock products or services that may be of interest to you. In addition, BlackRock restricts access to non-public personal information about its Clients to those BlackRock employees with a legitimate business need for the information. BlackRock maintains physical, electronic and procedural safeguards that are designed to protect the non-public personal information of its Clients, including procedures relating to the proper storage and disposal of such information.

BLACKROCK APEX MUNICIPAL FUND, INC.

DECEMBER 31, 2007

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This report, including the financial information herein, is transmitted to shareholders of BlackRock Apex Municipal Fund, Inc. for their information. It is not a prospectus. Past performance results shown in this report should not be considered a representation of future performance. Statements and other information herein are as dated and are subject to change.

A description of the policies and procedures that the Fund uses to determine how to vote proxies relating to portfolio securities is available (1) without charge, upon request, by calling toll-free (800) 441-7762; (2) at www.blackrock.com; and (3) on the Securities and Exchange Commission's website at <http://www.sec.gov>. Information about how the Fund voted proxies relating to securities held in the Fund's portfolio during the most recent 12-month period ended June 30 is available upon request and without charge (1) at www.blackrock.com or by calling (800) 441-7762 and (2) on the Securities and

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Exchange Commission's website at <http://www.sec.gov>.

BlackRock Apex Municipal Fund, Inc.
100 Bellevue Parkway
Wilmington, DE 19809

BLACKROCK

#10955-12/07

- Item 2 - Code of Ethics - Not Applicable to this semi-annual report
- Item 3 - Audit Committee Financial Expert - Not Applicable to this semi-annual report
- Item 4 - Principal Accountant Fees and Services - Not Applicable to this semi-annual report
- Item 5 - Audit Committee of Listed Registrants - Not Applicable to this semi-annual report
- Item 6 - Schedule of Investments - The registrant's Schedule of Investments is included as part of the Report to Stockholders filed under Item 1 of this form.
- Item 7 - Disclosure of Proxy Voting Policies and Procedures for Closed-End Management Investment Companies - Not Applicable to this semi-annual report
- Item 8 - Portfolio Managers of Closed-End Management Investment Companies - Not Applicable to this semi-annual report
- Item 9 - Purchases of Equity Securities by Closed-End Management Investment Company and Affiliated Purchasers - Not Applicable
- Item 10 - Submission of Matters to a Vote of Security Holders - The registrant's Nominating and Governance Committee will consider nominees to the Board recommended by shareholders when a vacancy becomes available. Shareholders who wish to recommend a nominee should send nominations which include biographical information and set forth the qualifications of the proposed nominee to the registrant's Secretary. There have been no material changes to these procedures.
- Item 11 - Controls and Procedures
 - 11(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.
 - 11(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 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

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financial reporting.

- Item 12 - Exhibits attached hereto
- 12(a) (1) - Code of Ethics - Not Applicable to this semi-annual report
- 12(a) (2) - Certifications - Attached hereto
- 12(a) (3) - Not Applicable
- 12(b) - 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 Apex Municipal Fund, Inc.

By: /s/ Donald C. Burke

Donald C. Burke
Chief Executive Officer of
BlackRock Apex Municipal Fund, Inc.

Date: February 21, 2008

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/ Donald C. Burke

Donald C. Burke
Chief Executive Officer (principal executive officer) of
BlackRock Apex Municipal Fund, Inc.

Date: February 21, 2008

By: /s/ Neal J. Andrews

Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock Apex Municipal Fund, Inc.

Date: February 21, 2008