

BLACKROCK APEX MUNICIPAL FUND INC
Form N-CSR
July 02, 2009

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM N-CSR

**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: 04/30/2009

Date of reporting period: 04/30/2009

Item 1 – Report to Stockholders

EQUITIES FIXED INCOME REAL ESTATE LIQUIDITY ALTERNATIVES BLACKROCK SOLUTIONS

Annual Report

APRIL 30, 2009

BlackRock Apex Municipal Fund, Inc. (APX)

BlackRock MuniAssets Fund, Inc. (MUA)

BlackRock MuniEnhanced Fund, Inc. (MEN)

BlackRock MuniHoldings Fund, Inc. (MHD)

BlackRock MuniHoldings Fund II, Inc. (MUH)

BlackRock MuniHoldings Insured Fund, Inc. (MUS)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

BlackRock MuniVest Fund II, Inc. (MVT)

NOT FDIC INSURED

MAY LOSE VALUE

NO BANK GUARANTEE

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Dear Shareholder

The past 12 months reveal a tale of two markets – one of investor pessimism and decided weakness, and another of optimism and some early signs of recovery. The majority of the past year was characterized by the former as the global financial crisis erupted into the worst recession in decades. Economic data were uniformly poor and daily headlines recounted the downfalls of storied financial firms, volatile swings in global financial markets, and monumental government actions that included widespread (and globally coordinated) monetary and quantitative easing by central banks and large-scale fiscal stimuli. Sentiment improved noticeably in March 2009, however, on the back of new program announcements by the Treasury and Federal Reserve Board, as well as signs of improved economic performance, such as in retail sales, consumer confidence and select areas of the housing market.

Against this backdrop, US equities contended with unprecedented levels of volatility, posting steep declines early, and then pared some of those losses in March and April. The experience in international markets was similar to that in the United States, though there was a marked divergence in regional performance. Notably, emerging economies, which lagged most developed regions through the downturn, were among the market leaders during the late-period rally.

In fixed income markets, while risk aversion remained a dominant theme overall, relatively attractive yields and distressed valuations, alongside a more favorable macro environment, eventually captured investor attention, leading to a modest recovery in non-Treasury assets. A notable example from the opposite end of the credit spectrum was the high yield sector, which generally outperformed in the first four months of 2009 after extraordinary challenges and severe underperformance last year. At the same time, the new year ushered in a return to normalcy for the tax-exempt market, which had registered one of its worst years on record in 2008.

All told, the major benchmark indexes posted mixed results for the current reporting period, reflective of a bifurcated market.

Total Returns as of April 30, 2009	6-month	12-month
US equities (S&P 500 Index)	(8.53)%	(35.31)%
Small cap US equities (Russell 2000 Index)	(8.40)	(30.74)
International equities (MSCI Europe, Australasia, Far East Index)	(2.64)	(42.76)
US Treasury securities (Merrill Lynch 10-Year US Treasury Index)	8.98	9.30
Taxable fixed income (Barclays Capital US Aggregate Bond Index)	7.74	3.84
Tax-exempt fixed income (Barclays Capital Municipal Bond Index)	8.20	3.11
High yield bonds (Barclays Capital US Corporate High Yield 2% Issuer Capped Index)	16.39	(12.55)

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

On June 16, 2009, BlackRock, Inc. announced that it received written notice from Barclays PLC (Barclays) in which Barclays Board of Directors had accepted BlackRock's offer to acquire Barclays Global Investors (BGI). Barclays also notified BlackRock that its Board will recommend the transaction to Barclays' shareholders for approval at a special meeting to be held in early August 2009. The combination of BlackRock and BGI will bring together market leaders in active and index strategies to create the preeminent asset management firm. The transaction is expected to close in the fourth quarter 2009 following approval by Barclays' shareholders, the receipt of client consents and regulatory approvals, and satisfaction of customary closing conditions.

Through periods of market turbulence, as ever, BlackRock's full resources are dedicated to the management of our clients' assets. We thank you for entrusting BlackRock with your investments and look forward to continuing to serve you in the months and years ahead.

Sincerely,

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Rob Kapito
President, BlackRock Advisors, LLC

THIS PAGE NOT PART OF YOUR FUND REPORT

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Fund Summary as of April 30, 2009

BlackRock Apex Municipal Fund, Inc.

Investment Objective

BlackRock Apex Municipal Fund, Inc. (APX) (the Fund) 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. No assurance can be given that the Fund's investment objective will be achieved.

The Fund's year end was changed to April 30.

Performance

For the 10 months ended April 30, 2009, the Fund returned (11.58)% based on market price and (10.81)% based on net asset value (NAV). For the same period, the closed-end Lipper High Yield Municipal Debt Funds category posted an average return of (17.67)% on a market price basis and (16.21)% on a NAV basis. All returns reflect reinvestment of dividends. The Fund's premium to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV. Factors that contributed to the Fund's outperformance included an up-in-quality bias and a below-market duration stance, offset somewhat by a moderately below-average distribution yield. Recent efforts to lengthen duration and increase credit risk exposure have proven to be beneficial, given the sharp recovery in credit spreads and overall improved market tone.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Fund Information

Symbol on New York Stock Exchange	APX
Initial Offering Date	July 25, 1989
Yield on Closing Market Price as of April 30, 2009 (\$7.72) ¹	7.23%
Tax Equivalent Yield ²	11.12%
Current Monthly Distribution per Common Share ³	\$0.0465
Current Annualized Distribution per Common Share ³	\$0.5580
Leverage as of April 30, 2009 ⁴	5%

¹ 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.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ Represents tender option bond trusts (TOBs) as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques utilized

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by the Fund, please see The Benefits and Risks of Leveraging on page 12.

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

	4/30/09	6/30/08	Change	High	Low
Market Price	\$ 7.72	\$ 9.28	(16.81)%	\$ 9.70	\$ 5.55
Net Asset Value	\$ 7.67	\$ 9.14	(16.08)%	\$ 9.21	\$ 6.91

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

Sector Allocations

	4/30/09	6/30/08
Corporate	24%	21%
Health	22	26
County/City/Special District/School District	20	23
Transportation	11	9
Education	6	5
Housing	6	7
Utilities	6	4
Tobacco	3	2
State	2	3

Credit Quality Allocations⁵

	4/30/09	6/30/08
AAA/Aaa	7%	7%
AA/Aa	5	7
A/A	12	4
BBB/Baa	23	18
BB/Ba	10	11
B/B	5	5
CCC/Caa	3	4
CC/Ca		1
Not Rated ⁶	35	43

⁵ Using the higher of Standard & Poor's (S&P's) or Moody's Investors Service (Moody's) ratings.

⁶ The investment advisor has deemed certain of these securities to be of investment grade quality. As of April 30, 2009 and June 30, 2008, the market value of these securities was \$8,923,111 representing 6% and \$8,940,500, representing 5%, respectively, of the Fund's long-term investments.

Fund Summary as of April 30, 2009

BlackRock MuniAssets Fund, Inc.

Investment Objective

BlackRock MuniAssets Fund, Inc. (MUA) (the Fund) seeks to provide shareholders with 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, in the opinion of bond counsel to the issuer, is exempt from federal income taxes. No assurance can be given that the Fund's investment objective will be achieved.

The Fund's year end was changed to April 30.

Performance

For the 11 months ended April 30, 2009, the Fund returned (12.45)% based on market price and (11.29)% based on NAV. For the same period, the closed-end Lipper High Yield Municipal Debt Funds category posted an average return of (18.93)% on a market price basis and (17.73)% on a NAV basis. All returns reflect reinvestment of dividends. The Fund's premium to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV. Factors contributing to the Fund's outperformance include an up-in-quality bias and a below-market duration stance, offset somewhat by a moderately below-average distribution yield. Recent efforts to lengthen duration and increase credit risk exposure have proven to be beneficial, given the sharp recovery in credit spreads and overall improved market tone.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Fund Information

Symbol on New York Stock Exchange	MUA
Initial Offering Date	June 25, 1993
Yield on Closing Market Price as of April 30, 2009 (\$10.91) ¹	7.42%
Tax Equivalent Yield ²	11.42%
Current Monthly Distribution per Common Share ³	\$0.0675
Current Annualized Distribution per Common Share ³	\$0.8100
Leverage as of April 30, 2009 ⁴	5%

¹ 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.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ Represents TOBs as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques used by the Fund, please see The Benefits and Risks of Leveraging on page 12.

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

	4/30/09	5/31/08	Change	High	Low
Market Price	\$ 10.91	\$ 13.35	(18.28)%	\$ 13.55	\$ 7.28
Net Asset Value	\$ 10.59	\$ 12.79	(17.20)%	\$ 12.84	\$ 9.54

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

Sector Allocations

	4/30/09	5/31/08
Corporate	26%	27%
Health	25	26
County/City/Special District/School District	18	19
Transportation	12	6
Utilities	7	7
Education	4	9
Housing	4	1
State	2	3
Tobacco	2	2

Credit Quality Allocations⁵

	4/30/09	5/31/08
AAA/Aaa	9%	12%
AA/Aa	3	4
A/A	19	7
BBB/Baa	19	15
BB/Ba	9	10
B/B	5	5
CCC/Caa	3	4
CC/Ca	1	
Not Rated ⁶	32	43

⁵ Using the higher of S&P's or Moody's ratings.

⁶ The investment advisor has deemed certain of these securities to be of investment grade quality. As of April 30, 2009 and May 31, 2008 the market value of these securities was \$12,884,659 representing 6% and \$12,388,252 representing 5%, respectively, of the Fund's long-term investments.

Fund Summary as of April 30, 2009

BlackRock MuniEnhanced Fund, Inc.

Investment Objective

BlackRock MuniEnhanced Fund, Inc. (MEN) (the Fund) seeks to provide shareholders with as high a level of current income exempt from federal income taxes as is consistent with its investment policies by investing primarily in a portfolio of long-term, investment grade municipal obligations, the interest on which is exempt from federal income taxes in the opinion of the bond counsel to the issuer. No assurance can be given that the Fund's investment objective will be achieved.

The Fund's year end was changed to April 30.

Performance

For the three months ended April 30, 2009, the Fund returned 8.48% based on market price and 8.40% based on NAV. For the same period, the closed-end Lipper Insured Municipal Debt Funds (Leveraged) category posted an average return of 6.96% on a market price basis and 5.92% on a NAV basis. All returns reflect reinvestment of dividends. The Fund's discount to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV. During the period, the Fund benefited from its above-average yield. Performance also was aided by our constructive market positioning during a period of declining yields, a higher-than-average exposure to the longer end of the yield curve (as it flattened) and, finally, the stabilization of credit spreads, which began to tighten toward the end of the period. The Fund is more sensitive to credit spreads, in general, since the downgrades of the monoline insurers and, in particular, because of greater-than-average exposure to weaker underlying insured bonds. The municipal market generally returned to more typical functioning after an extended period of volatility, which allowed us to continue upgrading the Fund's overall credit quality.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Fund Information

Symbol on New York Stock Exchange	MEN
Initial Offering Date	March 2, 1989
Yield on Closing Market Price as of April 30, 2009 (\$8.88) ¹	5.81%
Tax Equivalent Yield ²	8.94%
Current Monthly Distribution per Common Share ³	\$0.043
Current Annualized Distribution per Common Share ³	\$0.516
Leverage as of April 30, 2009 ⁴	42%

¹ 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.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The Monthly Distribution per Share, declared on June 1, 2009, was increased to \$0.0505. The Yield on Closing Market Price, Current Monthly Distribution per Common Share and Current Annualized Distribution per Common Share do not reflect the new distribution rate. The new distribution rate is not constant and is subject to further change in the future.

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⁴ Represents Auction Market Preferred Shares (Preferred Shares) and TOBs as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to Preferred Shares and TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques used by the Fund, please see The Benefits and Risks of Leveraging on page 12.

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

	4/30/09	1/31/09	Change	High	Low
Market Price	\$ 8.88	\$ 8.31	6.86%	\$ 8.99	\$ 7.59
Net Asset Value	\$ 9.77	\$ 9.15	6.78%	\$ 9.94	\$ 9.14

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

Sector Allocations

	4/30/09	1/31/09
County/City/Special District/School District	29%	26%
Transportation	23	24
State	21	22
Utilities	12	14
Corporate	4	4
Health	4	5
Housing	4	3
Education	2	1
Tobacco	1	1

Credit Quality Allocations⁵

	4/30/09	1/31/09
AAA/Aaa	45%	47%
AA/Aa	33	30