BLACKROCK APEX MUNICIPAL FUND INC Form N-CSR July 07, 2010 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: Anne F. Ackerley, Chief Executive Officer, BlackRock Apex Municipal Fund, Inc., 55 East 52 nd Street New York, NY 10055.
Registrant's telephone number, including area code: (800) 882-0052, Option 4
Date of fiscal year end: 04/30/2010
Date of reporting period: 04/30/2010
Item 1 – Report to Stockholders

Annual Report

APRIL 30, 2010

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

Although overall global economic and financial conditions have generally improved over the past year, the period ended with high levels of market volatility and diminishing investor confidence sparked by the sovereign debt crisis in Europe, concerns over the strength of the economic recovery and uncertainty surrounding the future of interest rate policies. Additionally, as the period drew to a close, the increasing likelihood of more stringent financial market regulations added to the overall sense of investment uncertainty. Despite the uneven nature of recent market conditions, we continue to believe that the Great Recession likely ended at some point last summer, thanks primarily to massive fiscal and monetary stimulus, and that the global economy remains in recovery mode.

Global equity markets bottomed in early 2009 and since that time have moved unevenly higher as investors were lured back into the markets by depressed valuations, desire for higher yields and improvements in corporate earnings prospects. There have been several corrections along the way and volatility levels have remained elevated reflections of mixed economic data, lingering deflation issues (especially in Europe) and uncertainty surrounding financial regulations. On balance, however, improving corporate revenues and profits and a positive macro backdrop helped push stock prices higher over the last twelve and six months. From a geographic perspective, US equities have outpaced their international counterparts in recent months, as the domestic economic recovery has been more pronounced and as credit-related issues have held European markets down.

Within fixed income markets, yields have been moving unevenly as improving economic conditions have been acting to push Treasury yields higher (and prices correspondingly lower), while concerns over ongoing deflation threats have acted as a counterweight. As the period drew to a close, Treasury yields were falling as investors flocked to the safe haven asset class in the face of escalating uncertainty. Over the course of the last twelve and six months, however, Treasuries underperformed other areas of the bond market, particularly the high yield sector, which has been benefiting from increased investor demand. Meanwhile, municipal bonds slightly outperformed taxable sectors over both the six- and twelve-month periods thanks to continued high demand levels, but have continued to face the headwinds of ongoing state and local budget problems. As in the taxable arena, high yield municipals have been outperforming the rest of the market.

Regarding cash investments, yields on money market securities remain near all-time lows (producing returns only marginally above zero percent), with the Federal Open Market Committee reiterating that economic circumstances are likely to necessitate an accommodative interest rate stance for an extended period.

Against this backdrop, the major market averages posted the following returns:

6-month	12-month
15.66%	38.84%
28.17	48.95
2.48	34.43
0.04	0.15
(0.54)	(1.32)
2.54	8.30
3.68	8.85
11.60	42.53
	28.17 2.48 0.04 (0.54) 2.54 3.68

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

Global financial markets continue to show signs of improvement, but questions about the strength and sustainability of the recovery abound. Through periods of uncertainty, as ever, BlackRock s full resources are dedicated to the management of our clients assets. For additional market perspective and investment insight, visit www.blackrock.com/shareholdermagazine, where you ll find the most recent issue of our award-winning *Shareholder®* magazine, as well as its quarterly companion newsletter, *Shareholder Perspectives*. As always, we thank you for entrusting BlackRock with your investments, and we look forward to your continued partnership in the months and years ahead.

Sincerely, Rob Kapito President, BlackRock Advisors, LLC

THIS PAGE NOT PART OF YOUR FUND REPORT

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Fund Summary as of April 30, 2010

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, 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.

Performance

For the 12 months ended April 30, 2010, the Fund returned 22.73% based on market price and 27.99% 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 34.42% on a market price basis and 31.62% on a NAV basis. All returns reflect reinvestment of dividends. The Fund moved from a premium to NAV to a discount by period end, which accounts for the difference between performance based on price and performance based on NAV. Positive performance was derived primarily from sector allocation decisions and included concentrations in transportation, health care and corporate-related debt, which continue to benefit from the relative outperformance of these sectors. In light of positive returns in the municipal market, portfolio duration positioning has also proven beneficial, reflecting recent moves to modestly increase the portfolio s sensitivity to interest rate fluctuations. Negative factors included underweight positioning in the tax-backed, public utility and the county/city/special district/school district sectors, which staged a modest rebound late in the reporting period. In addition, the ongoing compression in credit spreads remains pronounced with respect to non-rated bonds, in which the Fund maintains below market weight exposure. More significantly, a majority of peers within the Lipper category employ a higher degree of leverage, which can enhance both returns and distribution yields.

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 (NYSE)	APX
Initial Offering Date	July 25, 1989
Yield on Closing Market Price as of April 30, 2010 (\$8.87) ¹	5.95%
Tax Equivalent Yield ²	9.15%
Current Monthly Distribution per Common Share ³	\$0.044
Current Annualized Distribution per Common Share ³	\$0.528
Leverage as of April 30, 2010 ⁴	4%

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.
- 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 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:

	4/30/10	4/30/09	Change	High	Low
Market Price Net Asset Value		\$ 7.72 \$ 7.67			\$ 7.46 \$ 7.67

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

Sector Allocations

	4/30/10	4/30/09
T M	200	2201
Health	29%	22%
Corporate	20	24
County/City/Special District/School District	16	20
Transportation	11	11
Education	7	6
Tobacco	5	3
State	4	2
Utilities	4	6
Housing	4	6

Credit Quality Allocations⁵

	4/30/10	4/30/09
AAA/Aaa	7%	7%
AA/Aa	2	5
A	11	12
BBB/Baa	26	23
BB/Ba	8	10
В	7	5
CCC/Caa	4	3
CCC/Caa Not Rated ⁶	35	35

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

The investment advisor has deemed certain of these securities to be of investment grade quality. As of April 30, 2010 and April 30, 2009, the market value of these securities was \$14,523,630 representing 8% and \$8,923,111 representing 6%, respectively, of the Fund s long-term investments.

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Fund Summary as of April 30, 2010

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.

Performance

For the 12 months ended April 30, 2010, the Fund returned 24.17% based on market price and 27.72% based on NAV. For the same period, the closed-end Lipper High Yield Municipal Debt Funds category posted an average return of 34.42% on a market price basis and 31.62% 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. Positive performance was derived primarily from sector allocation decisions and included concentrations in transportation, health care and corporate-related debt, which continue to benefit from the relative outperformance of these sectors. In light of positive returns in the municipal market, portfolio duration positioning has also proven beneficial, reflecting recent moves to modestly increase the portfolio s sensitivity to interest rate fluctuations. Negative factors included underweight positioning in the tax-backed, public utility and the county/city/special district/school district sectors, which staged a modest rebound late in the reporting period. In addition, the ongoing compression in credit spreads remains pronounced with respect to non-rated bonds, in which the Fund maintains below market weight exposure. More significantly, a majority of peers within the Lipper category employ a higher degree of leverage, which can enhance both returns and distribution yields.

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 NYSE	MUA
Initial Offering Date	June 25, 1993
Yield on Closing Market Price as of April 30, 2010 (\$12.65) ¹	5.93%
Tax Equivalent Yield ²	9.12%
Current Monthly Distribution per Common Share ³	\$0.0625
Current Annualized Distribution per Common Share ³	\$0.7500
Leverage as of April 30, 2010 ⁴	4%

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.
- 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.

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

	4/30/10	4/30/09	Change	High	Low
Market Price	\$ 12.65	\$ 10.91		\$ 12.78	\$ 10.64
Net Asset Value	\$ 12.63	\$ 10.59		\$ 12.63	\$ 10.59

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

Sector Allocations

	4/30/10	4/30/09
II M	200	2504
Health	29%	25%
Corporate	24	26
County/City/Special District/School District	13	18
Transportation	11	12
Education	6	4
Tobacco	5	2
State	4	2
Utilities	4	7
Housing	4	4

Credit Quality Allocations⁵

	4/30/10	4/30/09
AAA/Aaa	6%	9%
AA/Aa	3	3
A	14	19
BBB/Baa	26	19
BB/Ba	8	9
В	7	5
CCC/Caa	4	3
CC/Ca		1
Not Rated ⁶	32	32

- Using the higher of S&P s or Moody s ratings.
- The investment advisor has deemed certain of these securities to be of investment grade quality. As of April 30, 2010 and April 30, 2009, the market value of these securities was \$15,867,930 representing 6% and \$12,884,659 representing 6%, respectively, of the Fund s long-term investments.

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Fund Summary as of April 30, 2010

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, 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.

Performance

For the 12 months ended April 30, 2010, the Fund returned 29.59% based on market price and 18.76% based on NAV. For the same period, the closed-end Lipper Insured Municipal Debt Funds (Leveraged) category posted an average return of 24.79% on a market price basis and 15.40% 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. Among the factors that contributed to Fund performance during the reporting period were the Fund s constructive position toward the market during a period of declining yields; exposure to the long end of the yield curve during a period of curve flattening; a general tightening of credit spreads, which drove performance in the Fund s holdings of insured bonds with weaker underlying credits; and the Fund s concentration in the transportation and housing sectors, which outperformed during the period. Conversely, lower relative exposure to the public utility and education sectors detracted from Fund performance as both segments performed well. The Fund s holdings of zero-coupon bonds also detracted from performance as spreads in this sector generally underperformed relative to spreads on coupon bonds.

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 NYSE	MEN
Initial Offering Date	March 2, 1989
Yield on Closing Market Price as of April 30, 2010 (\$10.81) ¹	6.33%
Tax Equivalent Yield ²	9.74%
Current Monthly Distribution per Common Share ³	\$0.057
Current Annualized Distribution per Common Share ³	\$0.684
Leverage as of April 30, 2010 ⁴	39%

- 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.
- 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:

	4/30/10	4/30/09	Change	High	Low
Market Price	\$ 10.81	\$ 8.88		\$ 10.85	\$ 8.59
Net Asset Value	\$ 10.90	\$ 9.77		\$ 11.16	\$ 9.62

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

Sector Allocations

	4/30/10	4/30/09
County/City/Special District/School District	28%	29%
Transportation	24	23
State	19	21
Utilities	14	12
Health	7	4
Housing		

Housing