BLACKROCK MUNIYIELD PENNSYLVANIA QUALITY FUND

Form N-CSR October 03, 2016

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: 811-07136

Name of Fund: BlackRock MuniYield Pennsylvania Quality Fund (MPA)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniYield

Pennsylvania Quality Fund, 55 East 52nd Street, New York, NY 10055

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

Date of fiscal year end: 07/31/2016

Date of reporting period: 07/31/2016

Item 1 Report to Stockholders

JULY 31, 2016

ANNUAL REPORT

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

BlackRock MuniHoldings New Jersey Quality Fund, Inc. (MUJ)

BlackRock MuniYield Investment Quality Fund (MFT)

BlackRock MuniYield Michigan Quality Fund, Inc. (MIY)

BlackRock MuniYield Pennsylvania Quality Fund (MPA)

Not FDIC Insured May Lose Value No Bank Guarantee

Table of Contents

	Page
The Markets in Review	3
Annual Report:	
Municipal Market Overview	4
The Benefits and Risks of Leveraging	5
<u>Derivative Financial Instruments</u>	5
Fund Summaries	6
Financial Statements:	
Schedules of Investments	16
Statements of Assets and Liabilities	43
Statements of Operations	44
Statements of Changes in Net Assets	45
Statements of Cash Flows	48
Financial Highlights	49
Notes to Financial Statements	54
Report of Independent Registered Public Accounting Firm	68
Disclosure of Investment Advisory Agreements	69
Automatic Dividend Reinvestment Plan	73
Officers and Directors	74
Additional Information	77

The Markets in Review

Dear Shareholder,

Uneven economic outlooks and the divergence of monetary policies across regions have been the overarching themes driving financial markets over the past couple of years. In the latter half of 2015, as U.S. growth outpaced other developed markets, investors were focused largely on the timing of the Federal Reserve s (the Fed) decision to end its near-zero interest rate policy. The Fed ultimately hiked rates in December, whereas the European Central Bank and the Bank of Japan took additional steps to stimulate growth, even introducing negative interest rates. The U.S. dollar had strengthened considerably ahead of these developments, causing profit challenges for U.S. companies that generate revenues overseas, and pressuring emerging market currencies and commodities prices.

Also during this time period, oil prices collapsed due to excess global supply. China, one of the world slargest consumers of oil, was another notable source of stress for financial markets as the country showed signs of slowing economic growth and took measures to devalue its currency. Declining confidence in the country spolicymakers stoked investors worries about the potential impact of China s weakness on the global economy. Global market volatility increased and risk assets (such as equities and high yield bonds) suffered in this environment.

The elevated market volatility spilled over into 2016, but as the first quarter wore on, fears of a global recession began to fade, allowing markets to calm and risk assets to rebound. Central bank stimulus in Europe and Japan, combined with a more tempered outlook for rate hikes in the United States, helped bolster financial markets. A softening in U.S. dollar strength brought relief to U.S. exporters and emerging market economies. Oil prices rebounded as the world s largest producers agreed to reduce supply.

Volatility spiked again in late June when the United Kingdom shocked investors with its vote to leave the European Union. Uncertainty around how the British exit might affect the global economy and political landscape drove investors to high-quality assets, pushing already low global yields to even lower levels. But markets recovered swiftly in July as economic data suggested that the negative impact had thus far been contained to the United Kingdom and investors returned to risk assets.

At BlackRock, we believe investors need to think globally, extend their scope across a broad array of asset classes and be prepared to adjust accordingly as market conditions change over time. We encourage you to talk with your financial advisor and visit blackrock.com for further insight about investing in today s markets.

Sincerely,

Rob Kapito

President, BlackRock Advisors, LLC

Rob Kapito

President, BlackRock Advisors, LLC

Total Returns as of July 31, 2016

• •	6-month	12-month
U.S. large cap equities	13.29%	5.61%
(S&P 500® Index)		
U.S. small cap equities	18.76	0.00
(Russell 2000® Index)		
International equities	8.25	(7.53)
(MSCI Europe, Australasia,		
Far East Index)		
	19.52	(0.75)

Emerging market equities		
(MSCI Emerging Markets Index)		
3-month Treasury bills	0.17	0.22
(BofA Merrill Lynch 3-Month		
U.S. Treasury Bill Index)		
U.S. Treasury securities	5.01	8.53
(BofA Merrill Lynch		
10-Year U.S. Treasury		
Index)		
U.S. investment grade bonds	4.54	5.94
(Barclays U.S.		
Aggregate Bond Index)		
Tax-exempt municipal	3.27	7.06
bonds (S&P Municipal		
Bond Index)		
U.S. high yield bonds	13.84	5.01
(Barclays U.S. Corporate		
High Yield 2% Issuer		
Capped Index)		

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

THIS PAGE NOT PART OF YOUR FUND REPORT

3

Municipal Market Overview

For the Reporting Period Ended July 31, 2016 Municipal Market Conditions

Municipal bonds generated positive performance for the period due to falling interest rates and a favorable supply-and-demand environment. Interest rates were volatile in 2015 (bond prices rise as rates fall) leading up to a long-awaited rate hike from the Fed that ultimately came in December. However, ongoing reassurance from the Fed that rates would be increased gradually and would likely remain low overall resulted in strong demand for fixed income investments. Investors favored the relative yield and stability of municipal bonds amid bouts of volatility resulting from uneven U.S. economic data, volatile oil prices, global growth concerns, geopolitical risks (particularly the U.K. s decision to leave the European Union), and widening central bank divergence i.e., policy easing outside the United States while the Fed was posturing to commence policy tightening. During the 12 months ended July 31, 2016, municipal bond funds garnered net inflows of approximately \$49 billion (based on data from the Investment Company Institute).

For the same 12-month period, total new issuance remained relatively strong from a historical perspective at \$386 billion (though lower than the \$417 billion issued in the prior 12-month period). A noteworthy portion of new supply during this period was attributable to refinancing activity (roughly 59%) as issuers continued to take advantage of low interest rates and a flatter yield curve to reduce their borrowing costs.

S&P Municipal Bond Index Total Returns as of July 31, 2016 6 months: 3.27% 12 months: 7.06%

A Closer Look at Yields

From July 31, 2015 to July 31, 2016, yields on AAA-rated 30-year municipal bonds decreased by 100 basis points (bp) from 3.12% to 2.12%, while 10-year rates fell by 79 bps from 2.19% to 1.40% and 5-year rates decreased 46 bps from 1.30% to 0.84% (as measured by Thomson Municipal Market Data). The municipal yield curve experienced significant flattening over the 12-month period with the

spread between 2- and 30-year maturities flattening by 90 bps and the spread between 2- and 10-year maturities flattening by 69 bps.

During the same time period, on a relative basis, tax-exempt municipal bonds broadly outperformed U.S. Treasuries with the greatest outperformance experienced in longer-term issues. In absolute terms, the positive performance of municipal bonds was driven largely by falling interest rates as well as a supply/demand imbalance within the municipal market as investors sought income and incremental yield in an environment where opportunities became increasingly scarce. More broadly, municipal bonds benefited from the greater appeal of tax-exempt investing in light of the higher tax rates implemented in 2014. The asset class is known for its lower relative volatility and preservation of principal with an emphasis on income as tax rates rise.

Financial Conditions of Municipal Issuers

The majority of municipal credits remain strong, despite well-publicized distress among a few issuers. Four of the five states with the largest amount of debt outstanding California, New York, Texas and Florida have exhibited markedly improved credit fundamentals during the slow national recovery. However, several states with the largest unfunded pension liabilities have seen their bond prices decline noticeably and remain vulnerable to additional price deterioration. On the local level, Chicago s credit quality downgrade is an outlier relative to other cities due to its larger pension liability and inadequate funding remedies. BlackRock maintains the view that municipal bond defaults will remain minimal and in the periphery while the overall market is fundamentally sound. We continue to advocate careful credit research and believe that a thoughtful approach to structure and security selection remains imperative amid uncertainty in a modestly improving economic environment.

The opinions expressed are those of BlackRock as of July 31, 2016, and are subject to change at any time due to changes in market or economic conditions. The comments should not be construed as a recommendation of any individual holdings or market sectors. Investing involves risk including loss of principal. Bond values fluctuate in price so the value of your investment can go down depending on market conditions. Fixed income risks include interest-rate and credit risk.

Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. There may be less information on the financial condition of municipal issuers than for public corporations. The market for municipal bonds may be less liquid than for taxable bonds. Some investors may be subject to Alternative Minimum Tax (AMT). Capital gains distributions, if any, are taxable.

The Standard & Poor s Municipal Bond Index, a broad, market value-weighted index, seeks to measure the performance of the US municipal bond market. All bonds in the index are exempt from US federal income taxes or subject to the alternative minimum tax. Past performance is no guarantee of future results. Index performance is shown for illustrative purposes only. It is not possible to invest directly in an index.

The Benefits and Risks of Leveraging

The Funds may utilize leverage to seek to enhance the distribution rate on, and net asset value (NAV) of, their common shares (Common Shares). However, these objectives cannot be achieved in all interest rate environments.

In general, the concept of leveraging is based on the premise that the financing cost of leverage, which is based on short-term interest rates, is normally lower than the income earned by a Fund on its longer-term portfolio investments purchased with the proceeds from leverage. To the extent that the total assets of the Funds (including the assets obtained from leverage) are invested in higher-yielding portfolio investments, the Funds shareholders benefit from the incremental net income. The interest earned on securities purchased with the proceeds from leverage is paid to shareholders in the form of dividends, and the value of these portfolio holdings is reflected in the per share NAV.

To illustrate these concepts, assume a Fund s Common Shares capitalization is \$100 million and it utilizes leverage for an additional \$30 million, creating a total value of \$130 million available for investment in longer-term income securities. If prevailing short-term interest rates are 3% and longer-term interest rates are 6%, the yield curve has a strongly positive slope. In this case, a Fund s financing costs on the \$30 million of proceeds obtained from leverage are based on the lower short-term interest rates. At the same time, the securities purchased by a Fund with the proceeds from leverage earn income based on longer-term interest rates. In this case, a Fund s financing cost of leverage is significantly lower than the income earned on a Fund s longer-term investments acquired from leverage proceeds, and therefore the holders of Common Shares (Common Shareholders) are the beneficiaries of the incremental net income.

However, in order to benefit Common Shareholders, the return on assets purchased with leverage proceeds must exceed the ongoing costs associated with the leverage. If interest and other costs of leverage exceed the Funds—return on assets purchased with leverage proceeds, income to shareholders is lower than if the Funds had not used leverage. Furthermore, the value of the Funds—portfolio investments generally varies inversely with the direction of long-term interest rates, although other factors can influence the value of portfolio investments. In contrast, the value of the Funds—obligations under their respective leverage arrangements generally does not fluctuate in relation to interest rates. As a result, changes in interest rates can influence the Funds—NAVs positively or

negatively. Changes in the future direction of interest rates are very difficult to predict accurately, and there is no assurance that a Fund s intended leveraging strategy will be successful.

The use of leverage also generally causes greater changes in each Fund s NAV, market price and dividend rates than comparable portfolios without leverage. In a declining market, leverage is likely to cause a greater decline in the NAV and market price of a Fund s Common Shares than if the Fund were not leveraged. In addition, each Fund may be required to sell portfolio securities at inopportune times or at distressed values in order to comply with regulatory requirements applicable to the use of leverage or as required by the terms of leverage instruments, which may cause the Funds to incur losses. The use of leverage may limit a Fund s ability to invest in certain types of securities or use certain types of hedging strategies. Each Fund incurs expenses in connection with the use of leverage, all of which are borne by Common Shareholders and may reduce income to the Common Shares. Moreover, to the extent the calculation of the Funds investment advisory fees includes assets purchased with the proceeds of leverage, the investment advisory fees payable to the Funds investment adviser will be higher than if the Funds did not use leverage.

To obtain leverage, each Fund has issued Variable Rate Demand Preferred Shares (VRDP Shares) or Variable Rate Muni Term Preferred Shares (VMTP Shares), (collectively, Preferred Shares) and/or leveraged its assets through the use of tender option bond trusts (TOB Trusts) as described in the Notes to Financial Statements.

Under the Investment Company Act of 1940, as amended (the 1940 Act), each Fund is permitted to issue debt up to 33 1/3% of its total managed assets or equity securities (e.g., Preferred Shares) up to 50% of its total managed assets. A Fund may voluntarily elect to limit its leverage to less than the maximum amount permitted under the 1940 Act. In addition, a Fund may also be subject to certain asset coverage, leverage or portfolio composition requirements imposed by the Preferred Shares governing instruments or by agencies rating the Preferred Shares, which may be more stringent than those imposed by the 1940 Act.

If a Fund segregates or designates on its books and records cash or liquid assets having a value not less than the value of a Fund s obligations under the TOB Trust (including accrued interest), a TOB Trust is not considered a senior security and is not subject to the foregoing limitations and requirements under the 1940 Act.

Derivative Financial Instruments

The Funds may invest in various derivative financial instruments. These instruments are used to obtain exposure to a security, commodity, index, market, and/or other assets without owning or taking physical custody of securities, commodities and/or other referenced assets or to manage market, equity, credit, interest rate, foreign currency exchange rate, commodity and/or other risks. Derivative financial instruments may give rise to a form of economic leverage and involve risks, including the imperfect correlation between the value of a derivative financial instrument and the underlying asset, possible default of the counterparty to the

transaction or illiquidity of the instrument. The Funds successful use of a derivative financial instrument depends on the investment adviser s ability to predict pertinent market movements accurately, which cannot be assured. The use of these instruments may result in losses greater than if they had not been used, may limit the amount of appreciation a Fund can realize on an investment and/or may result in lower distributions paid to shareholders. The Funds investments in these instruments, if any, are discussed in detail in the Notes to Financial Statements.

ANNUAL REPORT JULY 31, 2016 5

Fund Summary as of July 31, 2016

BlackRock MuniHoldings California Quality Fund, Inc.

Fund Overview

BlackRock MuniHoldings California Quality Fund, Inc. s (MUC) (the Fund) investment objective is to provide shareholders with current income exempt from federal and California income taxes. The Fund seeks to achieve its investment objective by investing primarily in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and California income taxes. Under normal market conditions, the Fund invests at least 80% of its assets in investment grade municipal obligations with remaining maturities of one year or more at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Fund Information	
Symbol on New York Stock Exchange (NYSE)	MUC
Initial Offering Date	February 27, 1998
Yield on Closing Market Price as of July 31, 2016 (\$16.28) ¹	4.53%
Tax Equivalent Yield ²	9.23%
Current Monthly Distribution per Common Share ³	\$0.0615
Current Annualized Distribution per Common Share ³	\$0.7380
Economic Leverage as of July 31, 2016 ⁴	38%

- 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 marginal federal and state tax rate of 50.93%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- The distribution rate is not constant and is subject to change.
- Represents VMTP Shares and TOB Trusts as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VMTP Shares and TOB Trusts, 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 5.

Performance

Returns for the 12 months ended July 31, 2016 were as follows:

	Returns Ba	sed On
	Market Price	NAV
$MUC^{1,2}$	20.08%	10.20%
Lipper California Municipal Debt Funds ³	22.31%	11.51%

¹ All returns reflect reinvestment of dividends and/or distributions.

2	he Fund s discount to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based or	ı
	JAV.	

³ Average return.

The following discussion relates to the Fund s absolute performance based on NAV:

Municipal bonds generated strong performance in the annual period. Municipals were aided by the sharp decline in Treasury yields, which was brought about by the slow global economy and the accommodative policies of the world s central banks. (Bond prices rise as yields fall.) The gains were largely concentrated among intermediate- and longer-term bonds, while shorter-term issues produced much smaller returns. In addition, lower-rated securities generally outpaced their higher-quality counterparts.

California municipal bonds outperformed the broader national tax-exempt market as a result of the state s sound financial condition, robust employment growth and rising personal income. California municipals were also boosted by the favorable balance of supply and demand in the market, as the state s high tax burden fueled investors appetite for tax-exempt investments.

The Fund s yield curve and duration positioning both had a positive impact on performance. (Duration is a measure of interest rate sensitivity.) Positions in the tax-backed (local), school districts, health care and utilities sectors provided the largest sector contribution to returns. Positions in zero-coupon bonds, which were purchased during the course of the period, also contributed to performance due to their longer duration profile and relatively higher yields.

The Fund utilized U.S. Treasury futures contracts to manage exposure to a rise in interest rates, which had a slightly negative impact on performance due to the strength in the Treasury market.

The use of leverage helped augment returns at a time of strong market performance. However, leverage had less of an impact in the second half of the period since the Fed s interest rate increase in December 2015 increased the costs of short-term financing. 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.

BlackRock MuniHoldings California Quality Fund, Inc.

Market Price and Net Asset Value Per Share Summary

	7/31/16	7/31/15	Change	High	Low
Market Price	\$ 16.28	\$ 14.28	14.01%	\$ 16.34	\$ 14.02
Net Asset Value	\$ 16.51	\$ 15.78	4.63%	\$ 16.72	\$ 15.60

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*		
Sector Allocation	7/31/16	7/31/15
County/City/Special District/School District	40%	40%
Utilities	19	24
Transportation	15	12
Health	14	12
Education	5	6
State	5	6
Corporate	2	

For Fund compliance purposes, the Fund s sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Credit Quality Allocation ¹	7/31/16	7/31/15
AAA/Aaa	16%	15%
AA/Aa	73	75
A	8	10
BBB/Baa	1	
N/R	2	

For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either Standard & Poor s (S&P) or Moody s Investors Service (Moody s) if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Ba or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

Call/Maturity Schedule²

Calendar Year Ended December 31,	
2016	1%
2017	10
2018	12
2019	15
2020	5

2	Scheduled maturity	dates and/or bonds	that are subject to	potential calls by	issuers over the next five years.
---	--------------------	--------------------	---------------------	--------------------	-----------------------------------

* Excludes short-term securities.

Fund Summary as of July 31, 2016

BlackRock MuniHoldings New Jersey Quality Fund, Inc.

Fund Overview

BlackRock MuniHoldings New Jersey Quality Fund, Inc. s (MUJ) (the Fund) investment objective is to provide shareholders with current income exempt from federal income tax and New Jersey personal income taxes. The Fund seeks to achieve its investment objective by investing primarily in long-term, investment grade municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and New Jersey personal income taxes. Under normal market conditions, the Fund invests at least 80% of its assets in municipal obligations with remaining maturities of one year or more at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Fund Information	
Symbol on NYSE	MUJ
Initial Offering Date	March 11, 1998
Yield on Closing Market Price as of July 31, 2016 (\$16.12) ¹	5.02%
Tax Equivalent Yield ²	9.74%
Current Monthly Distribution per Common Share ³	\$0.0675
Current Annualized Distribution per Common Share ³	\$0.8100
Economic Leverage as of July 31, 2016 ⁴	37%

- 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 marginal federal and state tax rate of 48.48%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- The distribution rate is not constant and is subject to change.
- Represents VRDP Shares and TOB Trusts as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VRDP Shares and TOB Trusts, 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 5.

Performance

Returns for the 12 months ended July 31, 2016 were as follows:

	Returns Ba	Returns Based On		
	Market Price	NAV		
$MUJ^{1,2}$	26.20%	12.39%		
Lipper New Jersey Municipal Debt Funds ³	21.92%	11.82%		

¹ All returns reflect reinvestment of dividends and/or distributions.

- 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.
- 3 Average return.

The following discussion relates to the Fund s absolute performance based on NAV:

Municipal bonds generated strong performance in the annual period. Municipals were aided by the sharp decline in Treasury yields, which was brought about by the slow global economy and the accommodative policies of the world s central banks. (Bond prices rise as yields fall). The gains were largely concentrated among intermediate- and longer-term bonds, while shorter-term issues produced much smaller returns. New Jersey municipal bonds performed particularly well as a result of the highly favorable supply-and-demand profile in the state s market.

At a time of falling yields, the Fund s positions in longer-duration and longer-dated bonds generally provided the largest absolute returns. (Duration is a measure of interest-rate sensitivity.) The Fund s positions in the tax-backed (state and local), transportation education and health care sectors made positive contributions to performance. The Fund s exposure to lower-coupon and zero-coupon bonds, both of which outperformed, also aided returns.

Lower-rated bonds within the investment grade category outperformed during the period. In addition to offering higher incremental yield, the market segment benefited from a tightening of yield spreads that was fueled in part by investors elevated appetite for risk. In this environment, the Fund s exposure to these higher-yielding bonds was a positive contributor to performance.

Leverage amplifies the effect of interest-rate movements, which was a positive to performance during the past 12 months given that yields declined.

The Fund utilized a mix of U.S. Treasury futures contracts to manage exposure to a rise in interest rates, which had a slightly negative impact on performance at a time in which the Treasury market finished with positive returns.

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.

BlackRock MuniHoldings New Jersey Quality Fund, Inc.

Market Price and Net Asset Value Per Share Summary

	7/31/16	7/31/15	Change	High	Low
Market Price	\$ 16.12	\$ 13.55	18.97%	\$ 16.48	\$ 13.17
Net Asset Value	\$ 16.55	\$ 15.62	5.95%	\$ 16.75	\$ 15.35

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*		
Sector Allocation	7/31/16	7/31/15
Transportation	24%	22%
Education	21	22
State	20	21
County/City/Special District/School District	15	15
Health	11	11
Housing	4	4
Utilities	3	3
Corporate	2	2

For Fund compliance purposes, the Fund s sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Credit Quality Allocation ¹	7/31/16	7/31/15
AAA/Aaa		8%
AA/Aa	57%	50
A	35	35
BBB/Baa	8	7

¹ For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either S&P or Moody s if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Baa or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

Call/Maturity Schedule²

Calendar Year Ended December 31,	
2016	4%
2017	6
2018	8
2019	4
2020	9

2	Scheduled maturity	dates and/or bonds	that are subject to	potential calls by is	ssuers over the next five years.
---	--------------------	--------------------	---------------------	-----------------------	----------------------------------

* Excludes short-term securities.

Fund Summary as of July 31, 2016

BlackRock MuniYield Investment Quality Fund

Fund Overview

BlackRock MuniYield Investment Quality Fund s (MFT) (the Fund) investment objective is to provide shareholders with as high a level of current income exempt from federal income taxes as is consistent with its investment policies and prudent investment management. The Fund seeks to achieve its investment objective by investing at least 80% of its assets in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax). Under normal market conditions, the Fund invests primarily in long-term municipal obligations that are investment grade quality at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Fund Information	
Symbol on NYSE	MFT
Initial Offering Date	October 30, 1992
Yield on Closing Market Price as of July 31, 2016 (\$16.09) ¹	5.30%
Tax Equivalent Yield ²	9.36%
Current Monthly Distribution per Common Share ³	\$0.071
Current Annualized Distribution per Common Share ³	\$0.852
Economic Leverage as of July 31, 2016 ⁴	37%

- 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 marginal federal tax rate of 43.4%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- The distribution rate is not constant and is subject to change.
- 4 Represents VMTP Shares and TOB Trusts as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VMTP Shares and TOB Trusts, 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 5.

Performance

Returns for the 12 months ended July 31, 2016 were as follows:

	Returns Ba	Returns Based On	
	Market Price	NAV	
MFT ^{1, 2}	27.63%	10.31%	
Lipper General & Insured Municipal Debt Funds (Leveraged) ³	21.89%	11.98%	

¹ All returns reflect reinvestment of dividends and/or distributions.

2	The Fund moved from a discount to NAV to a premium during the period, which accounts for the difference between performance based on price and
	performance based on NAV.

3 Average return.

The following discussion relates to the Fund s absolute performance based on NAV:

Municipal bonds generated strong performance in the annual period. Municipals were aided by the sharp decline in Treasury yields, which was brought about by the slow global economy and the accommodative policies of the world s central banks. (Bond prices rise as yields fall.) The gains were largely concentrated among intermediate- and longer-term bonds, while shorter-term issues produced much smaller returns. In addition, lower-rated securities generally outpaced their higher-quality counterparts.

The Fund was helped by its exposure to the long end of the yield curve, where performance was strongest. Leverage helped augment returns in this portion of the portfolio, as well. However, leverage had less of an impact in the second half of the period due to the Fed s interest rate increase in December 2015.

Holdings in AA and A rated securities, including investments in transportation and utilities sectors, aided performance. Positions in the tax-backed (state) and tax-backed (local) sectors were also additive.

The Fund utilized U.S. Treasury futures contracts to manage exposure to a rise in interest rates, which had a slightly negative impact on performance given that the Treasury market finished with positive returns.

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.

BlackRock MuniYield Investment Quality

Market Price and Net Asset Value Per Share Summary

	7/31/16	7/31/15	Change	High	Low
Market Price	\$16.09	\$13.37	20.34%	\$ 16.17	\$ 13.08
Net Asset Value	\$15.55	\$14.95	4.01%	\$ 15.72	\$ 14.77

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*		
Sector Allocation	7/31/16	7/31/15
Transportation	40%	37%
Utilities	19	19
County/City/Special District/School District	15	18
Health	10	11
State	9	9
Education	3	2
Housing	2	2
Tobacco	1	
Corporate	1	2

For Fund compliance purposes, the Fund s sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Credit Quality Allocation ¹	7/31/16	7/31/15
AAA/Aaa	6%	7%
AA/Aa	62	61
A	25	26
BBB/Baa	7	6

¹ For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either S&P or Moody s if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Baa or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

Call/Maturity Schedule²

Calendar Year Ended December 31,	
2016	1%
2017	1
2018	10
2019	25
2020	4

2	Scheduled maturity	y dates and/or bonds	that are subject to 1	potential calls by	issuers over the next five years	s.
---	--------------------	----------------------	-----------------------	--------------------	----------------------------------	----

* Excludes short-term securities.

ANNUAL REPORT JULY 31, 2016 11

Fund Summary as of July 31, 2016

BlackRock MuniYield Michigan Quality Fund, Inc.

Fund Overview

BlackRock MuniYield Michigan Quality Fund, Inc. s (MIY) (the Fund) investment objective is to provide shareholders with as high a level of current income exempt from federal and Michigan income taxes as is consistent with its investment policies and prudent investment management. The Fund seeks to achieve its investment objective by investing at least 80% of its assets in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and Michigan income taxes. Under normal market conditions, the Fund invests primarily in long-term municipal obligations that are investment grade quality at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

On April 30, 2015, the Boards of the Fund and BlackRock MuniYield Michigan Quality Fund II, Inc. (MYM) approved the reorganization of MYM with and into the Fund, with the Fund continuing as the surviving fund after the reorganization. At a special shareholder meeting on August 6, 2015, the requisite shareholders of the Fund and MYM approved the reorganization, which was effective on September 14, 2015.

No assurance can be given that the Fund s investment objective will be achieved.

Fund Information	
Symbol on NYSE	MIY
Initial Offering Date	October 30, 1992
Yield on Closing Market Price as of July 31, 2016 (\$15.38) ¹	4.99%
Tax Equivalent Yield ²	9.21%
Current Monthly Distribution per Common Share ³	\$0.064
Current Annualized Distribution per Common Share ³	\$0.768
Economic Leverage as of July 31, 2016 ⁴	37%

- 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 marginal federal and state tax rate of 45.81%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- ³ The distribution rate is not constant and is subject to change.
- ⁴ Represents VRDP Shares and TOB Trusts as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VRDP Shares and TOB Trusts, 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 5.

Performance

Returns for the 12 months ended July 31, 2016 were as follows:

	Returns Ba	Returns Based On	
	Market Price	NAV	
$MIY^{1,2}$	23.28%	11.99%	
Lipper Other States Municipal Debt Funds ³	20.84%	10.74%	

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.

3 Average return.

The following discussion relates to the Fund s absolute performance based on NAV:

All returns reflect reinvestment of dividends and/or distributions.

Municipal bonds generated strong performance in the annual period. Municipals were aided by the sharp decline in Treasury yields, which was brought about by the slow global economy and the accommodative policies of the world s central banks. (Bond prices rise as yields fall.) The gains were largely concentrated among intermediate- and longer-term bonds, while shorter-term issues produced much smaller returns. In addition, lower-rated securities generally outpaced their higher-quality counterparts.

Michigan s municipal bond market provided a strong total return and performed in line with the major national indices. The state continued to have many areas affected by fiscal stress, highlighted by the Detroit Public School system. Overall, however, Michigan s muni market was well supported by the state s improving economy and the healthy demand for tax-exempt investments.

The Fund s duration exposure made the largest contribution to absolute performance. (Duration is a measure of interest-rate sensitivity.) The municipal yield curve flatted aggressively in the second half of the reporting period, indicating outperformance for longer-term bonds. In this environment, the Fund s exposure to the long end of the curve benefited performance. Additionally, the Fund s return was helped by its allocation to the education and utilities sectors. The use of leverage helped augment returns at a time of strong market performance.

The Fund utilized U.S. Treasury futures contracts to manage exposure to a rise in interest rates, which had a slightly negative impact on performance due to the strength in the Treasury market.

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.

BlackRock MuniYield Michigan Quality Fund, Inc.

Market Price and Net Asset Value Per Share Summary

	7/31/16	7/31/15	Change	High	Low
Market Price	\$15.38	\$13.22	16.34%	\$ 15.65	\$ 12.95
Net Asset Value	\$16.36	\$15.48	5.68%	\$ 16.57	\$ 15.26

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*		
Sector Allocation	7/31/16	7/31/15
Health	25%	21%
Education	23	22
County/City/Special District/School District	19	16
Utilities	10	10
State	9	14
Transportation	7	9
Housing	4	5
Corporate	3	3

For Fund compliance purposes, the Fund s sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Credit Quality Allocation ¹	7/31/16	7/31/15
AAA/Aaa	3%	1%
AA/Aa	69	73
A	26	23
BBB/Baa	1	2
N/R	1	1

¹ For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either S&P or Moody s if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Baa or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

Call/Maturity Schedule²

Calendar Year Ended December 31,	
2016	3%
2017	7
2018	12
2019	5
2020	5

2	Scheduled maturity dates and/or bonds that are subject to potential calls by issuers over the next five years.

* Excludes short-term securities.

ANNUAL REPORT JULY 31, 2016 13

Fund Summary as of July 31, 2016

BlackRock MuniYield Pennsylvania Quality Fund

Fund Overview

BlackRock MuniYield Pennsylvania Quality Fund s (MPA) (the Fund) investment objective is to provide shareholders with as high a level of current income exempt from federal and Pennsylvania income taxes as is consistent with its investment policies and prudent investment management. The Fund seeks to achieve its investment objective by investing at least 80% of its assets in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and Pennsylvania income taxes. Under normal market conditions, the Fund invests primarily in long-term municipal obligations that are investment grade quality at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Fund Information	
Symbol on NYSE	MPA
Initial Offering Date	October 30, 1992
Yield on Closing Market Price as of July 31, 2016 (\$16.07) ¹	4.65%
Tax Equivalent Yield ²	8.48%
Current Monthly Distribution per Common Share ³	\$0.0623
Current Annualized Distribution per Common Share ³	\$0.7476
Economic Leverage as of July 31, 2016 ⁴	37%

- 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 marginal federal and state tax rate of 45.14%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- The distribution rate is not constant and is subject to change.
- Represents VRDP Shares and TOB Trusts as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VRDP Shares and TOB Trusts, 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 5.

Performance

Returns for the 12 months ended July 31, 2016 were as follows:

	Returns Based On		
	Market Price	NAV	
$MPA^{1,2}$	25.87%	12.38%	
Lipper Pennsylvania Municipal Debt Funds ³	24.15%	10.52%	

¹ All returns reflect reinvestment of dividends and/or distributions.

2	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.

3 Average return.

The following discussion relates to the Fund s absolute performance based on NAV:

Municipal bonds generated strong performance in the annual period. Municipals were aided by the sharp decline in Treasury yields, which was brought about by the slow global economy and the accommodative policies of the world s central banks. (Bond prices rise as yields fall). The gains were largely concentrated among intermediate- and longer-term bonds, while shorter-term issues produced much smaller returns. In addition, lower-rated securities generally outpaced their higher-quality counterparts.

Yield spreads widened in Pennsylvania s municipal bond market after the commonwealth went without a budget for nine months into its 2016 fiscal year. However, a further budget battle was avoided when Governor Tom Wolf signed a \$31.5 billion budget for fiscal 2017. The rating agency Standard & Poor s subsequently removed the commonwealth from credit watch status and affirmed its AA-minus rating. These developments led to a recovery in Pennsylvania s bond market in the latter part of the period.

The Fund s allocations to the health care and transportation sectors provided the largest contribution to returns. Positions in zero-coupon bonds also contributed to performance due to their longer duration profile and relatively higher yields. (Duration is a measure of interest-rate sensitivity.)

The use of leverage helped augment returns at a time of strong market performance. However, leverage had less of an impact in the second half of the period since the Fed s interest rate increase in December 2015 increased the costs of short-term financing.

The Fund utilized U.S. Treasury futures contracts to manage exposure to a rise in interest rates, which had a slightly negative impact on performance due to the strength in the Treasury market.

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.

BlackRock MuniYield Pennsylvania Quality Fund

Market Price and Net Asset Value Per Share Summary

	7/31/16	7/31/15	Change	High	Low
Market Price	\$16.07	\$13.50	19.04%	\$ 16.23	\$ 13.33
Net Asset Value	\$16.76	\$15.77	6.28%	\$ 16.97	\$ 15.58

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*		
Sector Allocation	7/31/16	7/31/15
Education	20%	15%
Health	20	20
County/City/Special District/School District	20	19
State	13	14
Transportation	12	12
Housing	7	5
Utilities	6	7
Corporate	2	8

For Fund compliance purposes, the Fund s sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Credit Quality Allocation ¹	7/31/16	7/31/15
AAA/Aaa	1%	1%
AA/Aa	62	65
A	23	23
BBB/Baa	6	9
BB/Ba	2	
N/R ²	6	2

¹ For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either S&P or Moody s if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Baa or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

² The investment adviser evaluates the credit quality of unrated investments based upon certain factors including, but not limited to, credit ratings for similar investments and financial analysis of sectors and individual investments. Using this approach, the investment adviser has deemed certain of these unrated securities as investment grade quality. As of July 31, 2016 and July 31, 2015, the market value of unrated securities deemed by the investment adviser to be investment grade represents 2% and 1%, respectively, of the Fund s total investments.

Calendar Year Ended December 31,

2016	2%
2017	5
2018	10
2019	11
2020	7

³ Scheduled maturity dates and/or bonds that are subject to potential calls by issuers over the next five years.

ANNUAL REPORT JULY 31, 2016 15

^{*} Excludes short-term securities.

Schedule of Investments July 31, 2016

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

(Percentages shown are based on Net Assets)

	Par		
Municipal Bonds	(000)	Value	
California 104.4%			
Corporate 2.6%			
California Pollution Control Financing Authority, Refunding RB, Waste Management, Inc.,			
AMT:	¢ 5,000	¢ 5 449 550	
Series A-1, 3.38%, 7/01/25	\$ 5,000	\$ 5,448,550	
Series B-1, 3.00%, 11/01/25	9,000	9,531,630	
City of Chula Vista California, Refunding RB, San Diego Gas & Electric, Series A, 5.88%, 2/15/34	2,435	2,760,730	
		17.740.010	
S		17,740,910	
County/City/Special District/School District 34.1% Centinela Valley Union High School District, GO, Election of 2010, Series A, 5.75%, 8/01/21			
a)	9,120	11,313,815	
Chabot-Las Positas Community College District, GO, Refunding, 4.00%, 8/01/35	5,000	5,679,250	
County of Kern California, COP, Capital Improvements Projects, Series A (AGC),	3,000	3,077,230	
6.00%, 8/01/35	3,500	3,959,200	
County of Los Angeles Public Works Financing Authority, Refunding RB, Series D:	3,300	3,555,200	
1.00%, 12/01/40	1,000	1,108,390	
5.00%, 12/01/45	1,430	1,744,714	
County of Orange California Sanitation District, COP, Series A, 5.00%, 2/01/19 (a)	2,500	2,773,700	
County of Riverside California Public Financing Authority, RB, Capital Facilities Project,			
5.25%, 11/01/45	10,000	12,361,800	
County of San Joaquin California Transportation Authority, Refunding RB, Limited Tax,			
Measure K, Series A, 6.00%, 3/01/36	2,665	3,250,927	
County of Ventura California Community College District, GO, Election of 2002, Series C,			
5.50%, 8/01/18 (a)	4,000	4,395,920	
Culver City Redevelopment Finance Authority California, Refunding, Tax Allocation Bonds,			
Series A (AGM), 5.60%, 11/01/25	3,750	3,765,600	
Denair CA Unified School District, GO, Election of 2007, 0.00%, 8/01/41 (b)	4,260	1,780,212	
Fremont Union High School District, GO, Refunding, 4.00%, 8/01/40	2,500	2,793,625	
Garden Grove Unified School District, GO, Election of 2010, Series C, 5.25%, 8/01/40	5,500	6,707,250	
Gavilan Joint Community College District, GO, Election of 2004, Series D:	2.170	2.592.061	
5.50%, 8/01/31 7.56%, 8/01/25	2,170	2,582,061	
i.75%, 8/01/35 Golden Empire Schools Financing Authority, Refunding RB, Kern High School District	8,400	10,073,448	
Projects, 0.94%, 5/01/17 (c)	5,000	4,998,600	
Grossmont California Healthcare District, GO, Election of 2006, Series B, 6.13%, 7/15/21 (a)	2,000	2,514,600	
Siossinoin Camorina Teathcare District, GO, Election of 2000, Series B, 0.13 /c, 1/13/21 (a)	Par	2,314,000	
Municipal Bonds California (continued)	(000)	Value	
County/City/Special District/School District (continued)			
mperial Irrigation District, Series A, Electric System Revenue, 5.13%, 11/01/18 (a)	\$ 8,000	\$ 8,814,160	
Kern Community College District, GO, Safety Repair & Improvements, Series C:	Ψ 0,000	Ψ 0,014,100	
.25%, 11/01/32	5,715	7,129,577	
.75%, 11/01/34	12,085	15,518,469	
os Alamitos Unified School District, GO, Refunding, School Facilities Improvement, Series E,	,,,,,,		
2.25%, 8/01/39	3,700	4,514,851	
os Rios Community College District, GO, Election of 2008, Series A, 5.00%, 8/01/35	11,000	12,660,560	
Merced Union High School District, GO, CAB, Refunding (AGM) (b):			
0.00%, 8/01/40	3,800	1,371,002	
.00%, 8/01/42	4,125	1,334,974	
Mount San Jacinto Community College District, GO, Series A, 5.00%, 8/01/35	3,565	4,409,263	
Oxnard Union High School District, GO, Refunding, Election of 2004, Series A (AGM),			
1.00%, 8/01/35	10,000	11,421,000	
Redlands Unified School District California, GO, Election of 2008 (AGM), 5.25%, 7/01/33	5,000	5,441,150	
tio Elementary School District, GO, Series A, 5.25%, 8/01/40	5,865	7,216,824	
Riverside Community College District Foundation, GO, Election of 2004 (a):	0.770	0.150.772	
Series C (AGM), 5.00%, 8/01/17	8,750	9,150,663	

Series C (NPFGC), 5.00%, 8/01/17	8,910	9,317,989	
San Diego Regional Building Authority, RB, County Operations Center & Annex, Series A,			
5.50%, 2/01/19 (a)	905	1,015,075	
San Diego Unified School District, GO, CAB, Series C (b):			
0.00%, 7/01/47	1,000	360,590	
Election of 2008, 0.00%, 7/01/42	3,605	1,555,053	
Election of 2008, 0.00%, 7/01/43	1,310	545,602	
Election of 2008, 0.00%, 7/01/45	1,575	611,163	
San Jose California Financing Authority, LRB, Convention Center Expansion & Renovation			
Project, Series A:			
5.75%, 5/01/36	2,560	2,571,366	
5.75%, 5/01/42	4,500	5,371,515	
San Jose California Financing Authority, Refunding LRB, Civic Center Project, Series A,			
5.00%, 6/01/39	5,800	6,902,754	
San Marcos Redevelopment Agency Successor Agency, Refunding, Tax Allocation Bonds,			
Series A:			
5.00%, 10/01/32	1,700	2,101,319	
5.00%, 10/01/33	1,125	1,386,371	

Portfolio Abbreviations

AGC AGM AMBAC	Assured Guarantee Corp. Assured Guaranty Municipal Corp. American Municipal Bond Assurance Corp.	ERB GAB GARB	Education Revenue Bonds Grant Anticipation Bonds General Airport Revenue Bonds	RB S/F AMT	Revenue Bonds Single-Family Alternative Minimum Tax (subject to)
AMT	Alternative Minimum Tax (subject to)	GO	General Obligation Bonds	ARB	Airport Revenue Bonds
ARB	Airport Revenue Bonds	HDA	Housing Development Authority	BAM	Build America Mutual Assurance Co.
BAM	Build America Mutual Assurance Co.	HFA	Housing Finance Agency	CAB	Capital Appreciation Bonds
BARB	Building Aid Revenue Bonds	IDA	Industrial Development Authority	GO	General Obligation Bonds
BHAC	Berkshire Hathaway Assurance Corp.	IDB	Industrial Development Board	HFA	Housing Finance Agency
CAB	Capital Appreciation Bonds	ISD	Independent School District	IDA	Industrial Development Authority
COP	Certificates of Participation	LRB	Lease Revenue Bonds	M/F	Multi-Family
DFA	Development Finance Agency	M/F	Multi-Family	NPFGC	National Public Finance Guarantee Corp.
EDA	Economic Development Authority	NPFGC	National Public Finance Guarantee Corp.	RB	Revenue Bonds
EDC	Economic Development Corp.	Q-SBLF	Qualified School Bond Loan Fund		

See Notes to Financial Statements.

Schedule of Investments (continued)

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

		Par			
Manadada a Danada		(000)		Value	
Municipal Bonds California (continued)		(000)		vaiue	
County/City/Special District/School District (continued)					
Snowline Joint Unified School District, COP, Refunding, Refining Project (AGC),					
5.75%, 9/01/19 (a)	\$	5,635	\$	6,516,709	
Sweetwater Union High School District, GO, Refunding, 4.00%, 8/01/42		5,000	Ψ	5,568,350	
West Contra Costa California Unified School District, GO:		5,000		3,300,330	
Election of 2010, Series A (AGM), 5.25%, 8/01/41		5,390		6,429,138	
Election of 2010, Series B, 5.50%, 8/01/39		3,195		3,957,934	
Election of 2012, Series A, 5.50%, 8/01/39		2,500		3,096,975	
Yuba Community College District, GO, Election of 2006, Series C, 0.00%, 8/01/38 (b)		5,150		2,622,741	
2		-,		_,=,	
				220 716 240	
Ed.,				230,716,249	
Education 2.6%		2.750		2 210 010	
California Municipal Finance Authority, RB, Emerson College, 6.00%, 1/01/42		2,750		3,318,810	
University of California, Refunding RB:		£ 420		((11 265	
Series AD, 5.00%, 5/15/40		5,430		6,644,365	
Series AR, 5.00%, 5/15/41 Series AR, 5.00%, 5/15/46		2,360		2,941,669	
Series AR, 5.00%, 5/15/46		3,600		4,480,092	
				17,384,936	
Health 13.9%					
ABAG Finance Authority for Nonprofit Corps., Refunding RB, Sharp Healthcare, Series B,					
6.25%, 8/01/39		6,305		7,313,232	
California Health Facilities Financing Authority, RB:					
Children s Hospital, Series A, 5.25%, 11/01/41		8,000		9,351,680	
Providence Health Services, Series B, 5.50%, 10/01/39		4,130		4,717,162	
Sutter Health, Series A, 5.00%, 11/15/41		2,275		2,788,445	
Sutter Health, Series A, 5.25%, 11/15/46		7,500		7,607,550	
Sutter Health, Series B, 6.00%, 8/15/42		9,655		11,551,049	
California Health Facilities Financing Authority, Refunding RB:					
Dignity Health, Series A, 6.00%, 7/01/34		3,700		4,245,306	
Lucile Salter Packard Children s Hospital at Stanford, Series B, 5.00%, 8/15/55		4,500		5,462,100	
Providence Health and Services, Series A, 5.00%, 10/01/38		0,970		13,146,777	
St. Joseph Health System, Series A, 5.00%, 7/01/37	I	0,000		11,887,500	
California Statewide Communities Development Authority, Refunding RB:		550		007.600	
CHF Irvine LLC, 5.00%, 5/15/40		750		907,620	
John Muir Health, Series A, 4.00%, 8/15/51		3,375		3,661,774	
Kaiser Permanente, Series C, 5.25%, 8/01/31		2,500		2,500,675	
Trinity Health Credit Group Composite Issue, 5.00%, 12/01/41 Westington Translation Health Composite Issue, 5.00%, 12/01/41		6,235		7,242,701	
Washington Township Health Care District, GO, Election of 2004, Series B, 5.50%, 8/01/38		1,625		2,026,099	
				94,409,670	
State 7.4%					
State of California, GO:					
Refunding, Veterans Bond, 4.00%, 12/01/40		4,000		4,500,280	
Various Purposes, 6.00%, 3/01/33		5,000		5,900,450	
Various Purposes, 6.00%, 4/01/38	2	7,765		31,524,936	
State of California Public Works Board, LRB:		0.676		1.006.050	
Department of Education, Riverside Campus Project, Series B, 6.50%, 4/01/34		3,670		4,226,959	
Various Capital Projects, Series I, 5.50%, 11/01/33		2,015		2,540,230	
		Par			
Municipal Bonds		(000)		Value	
California (continued)					
State (continued)					
State of California Public Works Board, RB, California State Prisons, Series C, 5.75%,					
10/01/31	\$	1,205	\$	1,482,536	

50,175,391

Transportation 21.2%			
Alameda Corridor Transportation Authority, Refunding RB, Series B:			
2nd Subordinate Lien, 5.00%, 10/01/36	2,035	2,473,074	
2nd Subordinate Lien, 5.00%, 10/01/37	1,395	1,693,907	
4.00%, 10/01/37	1,125	1,245,847	
City & County of San Francisco California Airports Commission, ARB, Series E, 6.00%,			
5/01/39	9,650	11,034,775	
City & County of San Francisco California Airports Commission, Refunding ARB, AMT:			
2nd Series 34E (AGM), 5.75%, 5/01/24	5,000	5,442,500	
2nd Series 34E (AGM), 5.75%, 5/01/22	4,950	5,392,629	
2nd Series A, 5.00%, 5/01/29	6,435	7,622,965	
City of Los Angeles California Department of Airports, ARB:			
AMT, Senior Series A, 5.00%, 5/15/40	3,830	4,551,649	
AMT, Series D, 5.00%, 5/15/35	2,000	2,401,220	
AMT, Series D, 5.00%, 5/15/36	1,500	1,795,665	
Los Angeles International Airport, Senior Series D, 5.25%, 5/15/29	2,590	3,007,249	
City of Los Angeles California Department of Airports, Refunding ARB, Los Angeles			
International Airport, Series A:			
5.25%, 5/15/39	5,845	6,547,920	
Senior, 5.00%, 5/15/40	5,000	5,698,500	
City of San Jose California, Refunding ARB, Series A-1, AMT:			
5.25%, 3/01/23	3,785	4,412,515	
6.25%, 3/01/34	1,400	1,688,526	
City of San Jose California, Refunding RB, Series A (AMBAC), 5.00%, 3/01/37	8,000	8,192,080	
County of Orange California, ARB, Series B, 5.75%, 7/01/34	6,345	6,650,765	
County of Sacramento California, ARB:			
Senior Series A (AGC), 5.50%, 7/01/41	8,200	8,937,836	
Senior Series B, 5.75%, 7/01/39	2,650	2,896,768	
Senior Series B, AMT (AGM), 5.75%, 7/01/28	13,275	14,527,231	
Senior Series B, AMT (AGM), 5.25%, 7/01/33	18,000	19,479,780	
Senior Series B, AMT (AGM), 5.25%, 7/01/39	4,995	5,361,883	
County of San Bernardino California Transportation Authority, RB, Series A, 5.25%, 3/01/40	4,545	5,572,988	
Port of Los Angeles California Harbor Department, RB, Series B, 5.25%, 8/01/34	5,530	6,253,656	
Port of Los Angeles California Harbor Department, Refunding RB, Series A, AMT, 5.00%,			
8/01/44	500	591,775	
		143,473,703	
Utilities 22.6%		110,170,700	
Anaheim Public Financing Authority, RB, Electric System Distribution Facilities, Series A,			
5.38%, 10/01/36	2,200	2,600,708	
City of Los Angeles California Department of Water & Power, RB, Series A:	2,200	2,000,700	
5.38%, 7/01/38	9,375	10,406,625	
5.00%, 7/01/41	1,705	2,110,858	
City of Los Angeles California Department of Water & Power, Refunding RB, Series A:	1,700	2,110,030	
5.25%, 7/01/39	16,000	18,714,880	
5.00%, 7/01/46	2,845	3,508,596	
City of Los Angeles California Wastewater System, Refunding RB, Sub-Series A, 5.00%,	2,043	3,300,370	
6/01/28	2,000	2,305,160	
	2,000	2,505,100	

See Notes to Financial Statements.

ANNUAL REPORT JULY 31, 2016 17

Schedule of Investments (continued)

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

	Par		
Municipal Bonds	(000)	Value	
California (continued)	(000)	, 4140	
Utilities (continued)			
City of San Francisco California Public Utilities Commission Water Revenue, RB:			
Series A, 5.00%, 11/01/39	\$ 5,245	\$ 6,399,267	
Series B, 5.00%, 11/01/30	10,000	11,349,800	
County of Kern California Water Agency Improvement District No. 4, Refunding RB, Series A	,	22,012,000	
(AGM):			
4.00%, 5/01/35	1,460	1,647,158	
4.00%, 5/01/36	1,430	1,605,418	
County of Sacramento California Sanitation Districts Financing Authority, RB (NPFGC),			
5.00%, 12/01/36	1,010	1,013,899	
Dublin-San Ramon Services District Water Revenue, Refunding RB, 6.00%, 8/01/41	4,000	4,786,520	
East Bay California Municipal Utility District Wastewater System Revenue, Refunding RB,			
Sub-Series A (AMBAC), 5.00%, 6/01/17 (a)	17,015	17,665,313	
East Bay California Municipal Utility District Water System Revenue, Refunding RB (a):			
Series A (NPFGC), 5.00%, 6/01/17	6,670	6,924,928	
Sub-Series A (AGM), 5.00%, 6/01/17	10,000	10,382,200	
Eastern Municipal Water District, COP, Series H, 5.00%, 7/01/33	2,505	2,714,067	
El Dorado Irrigation District / El Dorado County Water Agency, Refunding RB, Series A	,	,, ,,,,,	
(AGM), 5.25%, 3/01/39	10,000	12,191,100	
San Diego Public Facilities Financing Authority Sewer, Refunding RB, Senior Series A,	-,	, , , , , ,	
5.25%, 5/15/19 (a)	11,060	12,477,228	
San Diego Public Facilities Financing Authority Water, Refunding RB, Series B,	,	, ,	
5.50%, 8/01/19 (a)	8,000	9,153,360	
San Juan Water District, Refunding RB, San Juan & Citrus Heights, 5.25%, 2/01/33	7,325	8,764,143	
Santa Clara Valley Water District, Refunding RB, Series A, 5.00%, 6/01/46	5,000	6,185,450	
		152,906,678	
Total Municipal Bonds 104.4%		706,807,537	
Municipal Bonds Transferred to			
Tender Option Bond Trusts (d)			
•			
California 57.2% County/City/Special District/School District 31.0%			
County of Alameda California Joint Powers Authority, Refunding LRB (AGM),			
5.00%, 12/01/34	13,180	13,937,586	
	13,160	13,937,360	
County of San Luis Obispo Community College District, GO, Refunding, Election of 2014,	6 505	7 220 026	
Series A, 4.00%, 8/01/40 County of San Mateo California Community College District, GO, Series A, 5.00%, 9/01/45	6,585 17,615	7,320,936 21,674,009	
Desert Community College District California, GO, Series C (AGM), 5.00%, 8/01/17 (a)	16,530	17,285,090	
Foothill-De Anza Community College District, GO, Series C, 5.00%, 8/01/17 (a)	40,000	46,762,000	
Los Angeles Community College District California, GO (a):	40,000	40,702,000	
Election of 2001, Series A (NPFGC), 5.00%, 8/01/17	6 617	6.051.000	
Election of 2001, Series E-1, 5.00%, 8/01/17 Election of 2001, Series E-1, 5.00%, 8/01/18	6,647	6,951,099	
	11,770	12,812,822	
Election of 2003, Series F-1, 5.00%, 8/01/18 Los Angeles Community College District California, GO, Refunding, Election of 2008, Series	10,000	10,886,000	
	0.506	11 129 042	
A, 6.00%, 8/01/33 (a)	9,596	11,128,042	
	Par		
Municipal Bonds Transferred to			
Tender Option Bond Trusts (d)	(000)	Value	
California (continued)			
County/City/Special District/School District (continued)			
Palomar California Community College District, GO, Election of 2006, Series C, 5.00%,			
8/01/44	\$ 15,140	\$ 18,516,826	
Poway Unified School District, GO, Election of 2002, Improvement District 02, Series 1-B			
(AGM), 5.00%, 8/01/30	10,000	10,002,600	
Southwestern Community College District, GO, Election of 2008, Series D, 5.00%, 8/01/44	10,820	13,223,447	
	17,000	19,383,230	

West Valley-Mission Community College District, GO, Election of 2012, Series B, 4.00%, 8/01/40

		209,883,687
Education 5.7%		207,003,007
California State University, Refunding RB, Series A, 5.00%, 11/01/43	6,001	7,383,717
University of California, RB:	0,001	7,303,717
Series AM, 5.25%, 5/15/44	10,210	12,626,809
Series O, 5.75%, 5/15/19 (a)	11,192	12,785,694
University of California, Refunding RB, Series AF, 5.00%, 5/15/39	5,000	6,018,800
om visity of cumorina, refunding res, series in , encover, or rever	2,000	0,010,000
		38,815,020
Health 9.3%		38,813,020
California Health Facilities Financing Authority, RB, Sutter Health, Series A, 5.00%, 8/15/52	14,520	17,097,010
California Health Facilities Financing Authority, Refunding RB, Sutter Health, Series A, 3.00%, 8/13/32	14,320	17,097,010
5.00%, 8/15/43	19,425	23,491,345
California Statewide Communities Development Authority, RB, Kaiser Permanente, Series A,	19,423	23,491,343
5.00%, 4/01/42	19,070	22,256,406
J.00 //, Ħ011+2	17,070	22,230,400
		CO 011 TC1
TD 4.42 2.26		62,844,761
Transportation 3.3%		
City of Los Angeles California Department of Airports, RB, Senior Revenue, Series A, AMT,	5 500	6.526.210
5.00%, 5/15/40	5,500	6,536,310
City of Los Angeles California Department of Airports, Series D, AMT, 5.00%, 5/15/41	13,331	15,843,372
		22,379,682
Utilities 7.9%		
City of Los Angeles California Wastewater System, RB, Green Bonds, Series A,		
5.00%, 6/01/44	13,790	16,913,021
County of San Diego California Water Authority Financing Corp., COP, Refunding, Series A		
(AGM), 5.00%, 5/01/18 (a)	16,740	18,041,535
East Bay California Municipal Utility District Water System Revenue, RB, Series C,		
5.00%, 6/01/44	11,000	13,409,660
Rancho Water District Financing Authority, Refunding RB, Series A (AGM), 5.00%, 8/01/34	5,008	5,443,440
		53,807,656
Total Municipal Bonds Transferred to		
Tender Option Bond Trusts 57.2%		387,730,806
Total Long-Term Investments		
(Cost \$999,853,396) 161.6%		1,094,538,343
Total Investments (Cost \$999,853,396) 161.6%		1,094,538,343
Other Assets Less Liabilities 1.0%		6,518,856
Liability for TOB Trust Certificates, Including Interest		
Expense and Fees Payable (25.1)%		(169,929,470)
VMTP Shares at Liquidation Value (37.5)%		(254,000,000)
Net Assets Applicable to Common Shares 100.0%		\$ 677,127,729

See Notes to Financial Statements.

Schedule of Investments (continued)

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

Notes to Schedule of Investments

- (a) U.S. Government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (b) Zero-coupon bond.
- (c) Variable rate security. Rate as of period end.
- (d) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Fund. These bonds serve as collateral in a secured borrowing. See Note 4 of the Notes to Financial Statements for details.

	Shares Held at July 31,	Net	Shares Held at July 31,	Value at July 31,	
Affiliates	2015	Activity	2016	2016	Income
BlackRock Liquidity Funds, MuniCash, Institutional Class					\$ 2,298
BIF California Municipal Money Fund	505,447	(505,447)			9
Total					\$ 2,307

For Fund compliance purposes, the Fund s sector classifications refer to one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment adviser. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

Contracts			Notional	Unrealized Appreciation
Short	Issue	Expiration	Value	(Depreciation)
(61)	5-Year U.S. Treasury Note	September 2016	\$ 7,442,953	\$ 2,320
(111)	10-Year U.S. Treasury Note	September 2016	\$ 14,768,203	(16,779)
(41)	Long U.S. Treasury Bond	September 2016	\$ 7,151,938	(78,992)
(14)	Ultra U.S. Treasury Bond	September 2016	\$ 2,667,437	(30,675)
Total				\$ (124,126)

Derivative Financial Instruments Categorized by Risk Exposure

As of period end, the fair values of derivative financial instruments located in the Statements of Assets and Liabilities were as follows:

Commodity	Credit	Equity	Foreign	Interest	Other	Total
Contracts	Contracts	Contracts	Currency	Rate	Contracts	

Exchange	Contracts
Contracts	

Assets Derivative Financial Instruments

Futures contracts Net unrealized appreciation 1 \$ 2,320 \$ 2,320

Liabilities Derivative Financial Instruments

Futures contracts Net unrealized depreciation \$ 126,446 \$ 126,446

For the year ended July 31, 2016, the effect of derivative financial instruments in the Statements of Operations was as follows:

	Commodity Contracts	Credit Contracts	Equity Contracts	Foreign Currency Exchange Contracts	Interest Rate Contracts	Other Contracts	Total
Net Realized Gain (Loss) from:							
Futures contracts					\$ (1,364,663)		\$ (1,364,663)
Net Change in Unrealized Appreciation (Depreciation Futures contracts	n) on:				\$ (70,234)		\$ (70,234)
T didies continues					Ψ (/0,25.)		Ψ (/0,25.)

Average Quarterly Balances of Outstanding Derivative Financial Instruments

Futures contracts:

Average notional value of contracts short

\$ 24,534,750

For more information about the Fund s investment risks regarding derivative financial instruments, refer to the Notes to Financial Statements.

See Notes to Financial Statements.

ANNUAL REPORT JULY 31, 2016 19

¹ Includes cumulative appreciation (depreciation) on futures contracts, if any, as reported in the Schedule of Investments. Only current day s variation margin is reported within the Statements of Assets and Liabilities.

Schedule of Investments (concluded)

BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

Fair Value Hierarchy as of Period End

Various inputs are used in determining the fair value of investments and derivative financial instruments. For information about the Fund s policy regarding valuation of investments and derivative financial instruments, refer to the Notes to Financial Statements.

The following tables summarize the Fund s investments and derivative financial instruments categorized in the disclosure hierarchy:

	Level 1	Level 2	Level 3	-	Total
Assets:					
Investments:					
Long Term Investments ¹		\$ 1,094,538,343		\$ 1,09	94,538,343
Derivative Financial Instruments ²					
Assets:					
Interest rate contracts	\$ 2,320			\$	2,320
Liabilities:					
Interest rate contracts	(126,446)				(126,446)
Total	\$ (124,126)			\$	(124,126)

See above Schedule of Investments for values in each sector.

Level 1 Level 2

² Derivative financial instruments are futures contracts. Futures contracts are valued at the unrealized appreciation (depreciation) on the instrument. The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial statement purposes. As of period end, such assets and/or liabilities are categorized within the disclosure hierarchy as follows: