Amphastar Pharmaceuticals, Inc. Form 10-Q August 09, 2016 Table of Contents
Table of Contents
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2016
or
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission file number 001-36509
AMPHASTAR PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware 33-0702205
(State or other jurisdiction of Identification No.)

incorporation or organization)

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Rancho Cucamonga, CA 91730

(Address of principal executive offices, including zip code)

(909) 980-9484

(Registrant's telephone number, including area code)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the Registrant (1) has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The number of shares outstanding of the Registrant's only class of common stock as of August 2, 2016 was 45,121,158.

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.

TABLE OF CONTENTS

FORM 10-Q FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2016

Special Note About Forward-Looking Statements

Part I. FINANCIAL INFORMATION

	PAGE
Item 1. Financial Statements (unaudited):	
Condensed Consolidated Balance Sheets as of June 30, 2016 and December 31, 2015	1
Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2016 and	2
<u>2015</u>	
Consolidated Statements of Comprehensive Income (Loss) for the Three and Six Months Ended June 30,	3
2016 and 2015	
Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2016 and 2015	4
Notes to Condensed Consolidated Financial Statements	6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	37
Item 3. Quantitative and Qualitative Disclosure about Market Risk	46
Item 4. Controls and Procedures	47
Part II. OTHER INFORMATION	
Item 1. Legal Proceedings	49
Item 1A. Risk Factors	49
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds	51
Item 3. Defaults Upon Senior Securities	51
Item 4. Mine Safety Disclosures	51
Item 5. Other Information	51
Item 6. Exhibits	51
Signatures	52

SPECIAL NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, or Quarterly Report, contains "forward-looking statements" that involve substantial risks and uncertainties. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "grecontinue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements relate to future events or our future financial performance or condition and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. These forward-looking statements include, but are not limited to, statements about:

- · our expectations regarding the sales and marketing of our products, including our enoxaparin product during and following termination of our profit sharing agreement with Actavis;
- · our expectations regarding our manufacturing and production and the integrity of our supply chain for our products, including the risks associated with our single source suppliers;
- the timing and likelihood of FDA approvals and regulatory actions on our product candidates, manufacturing activities and product marketing activities;
- our ability to advance product candidates in our platforms into successful and completed clinical trials and our subsequent ability to successfully commercialize our product candidates;
- · our ability to compete in the development and marketing of our products and product candidates;
- the potential for adverse application of environmental, health and safety and other laws and regulations on our operations;
- · our expectations for market acceptance of our new products and proprietary drug delivery technologies, as well as those of our API customers;
- the potential for our marketed products to be withdrawn due to patient adverse events or deaths, or if we fail to secure FDA approval for products subject to the Prescription Drug Wrap-Up program;
- our expectations in obtaining insurance coverage and adequate reimbursement for our products from third-party payers;

- the amount of price concessions or exclusion of suppliers adversely affecting our business;
- · our ability to establish and maintain intellectual property protection from our products and our ability to successfully defend our intellectual property in cases of alleged infringement;
- the implementation of our business strategies, product development strategies and technology utilization;
- · the potential for exposure to product liability claims;
- · future acquisitions or investments, including the anticipated benefits of such acquisitions or investments;
- · our ability to expand internationally;
- · economic and industry trends and trend analysis;
- our ability to remain in compliance with laws and regulations that currently apply or become applicable to our business both in the United States and internationally;
- · our remediation efforts for a material weakness in our internal control over financial reporting; and
- · our financial performance expectations, including our expectations regarding our revenue, cost of revenue, gross profit or gross margin, operating expenses, including changes in research and development, sales and marketing and general and administrative expenses, and our ability to achieve and maintain future profitability.

You should read this Quarterly Report and the documents that we reference elsewhere in this Quarterly Report completely and with the understanding that our actual results may differ materially from what we expect as expressed or implied by our forward-looking statements. In light of the significant risks and uncertainties to which our forward-looking statements are subject, you should not place undue reliance on or regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all. We discuss many of these risks and uncertainties in greater detail in this Quarterly Report and in our Annual Report on Form 10-K for the year ended December 31, 2015, particularly in Item 1A. "Risk Factors." These forward-looking statements represent our estimates and assumptions only as of the date of this Quarterly Report regardless of the time of delivery of this Quarterly Report. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this Quarterly Report.

Unless expressly indicated or the context requires otherwise, references in this Quarterly Report to "Amphastar," "the Company," "we," "our," and "us" refer to Amphastar Pharmaceuticals, Inc. and our subsidiaries, unless the context indicates otherwise.

PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

AMPHASTAR PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)

ASSETS	June 30, 2016 (unaudited)	December 31, 2015
Current Assets: Cash and cash equivalents Restricted cash and restricted short-term investments Accounts receivable, net Inventories, net Income tax refund and deposits Prepaid expenses and other assets Total current assets Property, plant, and equipment, net Goodwill and intangible assets, net Other assets Deferred tax assets	\$ 66,660 1,390 23,128 88,327 56 1,752 181,313 148,647 43,298 7,884 27,444	\$ 66,074 1,285 33,233 70,665 238 4,439 175,934 142,161 39,901 4,696 27,444
Total assets	\$ 408,586	\$ 390,136
LIABILITIES AND EQUITY Current Liabilities: Accounts payable Accrued liabilities Income taxes payable Accrued payroll and related benefits Current portion of product return accrual Current portion of deferred revenue Current portion of long-term debt and capital leases Total current liabilities	\$ 18,767 11,174 6,652 14,992 1,517 1,661 10,904 65,667	\$ 13,872 16,732 3,076 12,840 1,858 643 10,934 59,955
Long-term product return accrual Long-term reserve for income tax liabilities	1,026 497	763 497

Long-term deferred revenue Long-term debt and capital leases, net of current portion Other long-term liabilities Total liabilities Commitments and Contingencies:	166 31,742 2,024 101,122	1,339 30,165 1,907 94,626
Stockholders' equity:		
Preferred stock: par value \$.0001; authorized shares—20,000,000; no shares issued		
and outstanding		_
Common stock: par value \$.0001; authorized shares—300,000,000; issued and		
outstanding shares—46,515,928 and 45,091,332 at June 30, 2016 and 45,960,206		
and 45,198,491 at December 31, 2015, respectively	5	5
Additional paid-in capital	258,786	247,829
Retained earnings	69,707	60,323
Accumulated other comprehensive loss	(2,690)	(2,475)
Treasury stock	(18,344)	(10,172)
Total stockholders' equity	307,464	295,510
Total liabilities and stockholders' equity	\$ 408,586	\$ 390,136

See Accompanying Notes to Condensed Consolidated Financial Statements.

-1-

AMPHASTAR PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited; in thousands, except per share data)

	Three Mon June 30,	ths Ended	Six Months June 30,	Ended
	2016	2015	2016	2015
Net revenues	\$ 68,033	\$ 53,853	\$ 127,399	\$ 110,739
Cost of revenues	36,319	40,535	70,783	84,141
Gross profit	31,714	13,318	56,616	26,598
Operating expenses:				
Selling, distribution, and marketing	1,332	1,470	2,684	2,992
General and administrative	9,458	11,308	20,328	23,759
Research and development	10,480	10,726	18,868	17,294
Impairment of long-lived assets	114	74	331	74
Total operating expenses	21,384	23,578	42,211	44,119
Income (loss) from operations	10,330	(10,260)	14,405	(17,521)
Non-operating income (expense):				
Interest income	50	65	124	157
Interest expense	(305)	(210)	(689)	(551)
Other income (expense), net	(323)	176	(272)	1,489
Total non-operating income (expense), net	(578)	31	(837)	1,095
Income (loss) before income taxes	9,752	(10,229)	13,568	(16,426)
Income tax expense (benefit)	2,857	(3,582)	4,184	(9,114)
Net income (loss)	\$ 6,895	\$ (6,647)	\$ 9,384	\$ (7,312)
Net income (loss) per share:				
Basic	\$ 0.15	\$ (0.15)	\$ 0.21	\$ (0.16)
Diluted	\$ 0.15	\$ (0.15)	\$ 0.21	\$ (0.16)
Weighted-average shares used to compute net income (loss) per share:				
Basic	44,957	44,849	44,999	44,725
Diluted	45,968	44,849	45,712	44,725

See Accompanying Notes to Condensed Consolidated Financial Statements.

AMPHASTAR PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Unaudited; in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net income (loss)	\$ 6,895	\$ (6,647)	\$ 9,384	\$ (7,312)
Accumulated other comprehensive income (loss)				
Foreign currency translation adjustment	(651)	513	(215)	(2,480)
Total accumulated other comprehensive income (loss)	(651)	513	(215)	(2,480)
Total comprehensive income (loss)	\$ 6,244	\$ (6,134)	\$ 9,169	\$ (9,792)

See Accompanying Notes to Condensed Consolidated Financial Statements.

-3-

AMPHASTAR PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited; in thousands)

	Six Months Ended June 30,	
	2016	2015
Cash Flows From Operating Activities:		
Net income (loss)	\$ 9,384	\$ (7,312)
Reconciliation to net cash provided by operating activities:		
Impairment of long-lived assets	331	74
Loss (gain) on disposal of property, plant, and equipment	598	(9)
Depreciation of property, plant, and equipment	5,995	5,632
Amortization of product rights, trademarks, and patents	1,050	979
Imputed interest accretion	36	56
Employee share-based compensation expense	7,234	5,757
Non-employee share-based compensation expense	815	173
Reserve for income tax liabilities		16
Changes in deferred taxes		(3,547)
Changes in operating assets and liabilities:		
Accounts receivable, net	10,164	2,450
Inventories, net	(17,352)	564
Income tax refund and deposits	185	_
Prepaid expenses and other assets	3,175	(4,989)
Income taxes payable	3,574	(387)
Accounts payable and accrued liabilities	(1,933)	4,384
Net cash provided by operating activities	23,256	3,841
Cash Flows From Investing Activities:		
Acquisition of business	(4,761)	_
Purchases of property, plant, and equipment	(8,457)	(6,740)
Capitalized labor, overhead, and interest on self-constructed assets	(887)	(875)
Proceeds from the sale of property, plant and equipment	_	33
Decrease (increase) in restricted cash	(105)	210
Deposits and other assets, net	(3,216)	(1,392)
Net cash used in investing activities	(17,426)	(8,764)
Cash Flows From Financing Activities:		
Repurchase of common stock	(1,242)	(741)
Net proceeds from equity plans	4,168	10,723
Purchase of treasury stock	(8,190)	(2,715)
Proceeds from issuance of long-term debt	6,607	6,786
Principal payments on long-term debt	(6,414)	(2,524)
Net cash provided by (used in) financing activities	(5,071)	11,529

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Effect of exchange rate changes on cash	(173)	29
Net increase in cash and cash equivalents	586	6,635
Cash and cash equivalents at beginning of period	66,074	67,828
Cash and cash equivalents at end of period	\$ 66,660	\$ 74,463

-4-

Table of Contents

	Six Months Ended	
	June 30, 2016	2015
Noncash Investing and Financing Activities:	_010	2010
Equipment acquired under capital leases	\$ 1,237	\$ 150
Supplemental Disclosures of Cash Flow Information:		
Interest paid	\$ 947	\$ 897
Income taxes paid	\$ 553	\$ —

See Accompanying Notes to Condensed Consolidated Financial Statements.

-5-

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AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

1. General

Amphastar Pharmaceuticals, Inc., a California corporation, was incorporated on February 29, 1996, and merged with and into Amphastar Pharmaceuticals, Inc., a Delaware corporation, in July 2004 (together with its subsidiaries, hereinafter referred to as "the Company"). The Company is a specialty pharmaceutical company that primarily develops, manufactures, markets, and sells generic and proprietary injectable, inhalation, and intranasal products including products with high technical barriers to market entry. Additionally, the Company sells insulin active pharmaceutical ingredient, or API products. Most of the Company's products are used in hospital or urgent care clinical settings and are primarily contracted and distributed through group purchasing organizations and drug wholesalers. The Company's insulin API products are sold to other pharmaceutical companies for use in their own products and are being used by the Company in the development of injectable finished pharmaceutical products. The Company's inhalation products will be primarily distributed through drug retailers once they are brought to market.

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements of the Company for the year ended December 31, 2015, and the notes thereto as filed with the Securities and Exchange Commission in the Company's Annual Report on Form 10-K for the year ended December 31, 2015. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with generally accepted accounting principles, or GAAP, have been condensed or omitted from the accompanying condensed consolidated financial statements. The accompanying year-end condensed consolidated balance sheet was derived from the audited financial statements. The accompanying interim financial statements are unaudited, but reflect all adjustments which are, in the opinion of management, necessary for a fair statement of the Company's consolidated financial position, results of operations, comprehensive income (loss) and cash flows for the periods presented. Unless otherwise noted, all such adjustments are of a normal, recurring nature. The Company's results of operations, comprehensive income (loss) and cash flows for the interim periods are not necessarily indicative of the results of operations and cash flows that it may achieve in future periods.

2. Summary of Significant Accounting Policies

Basis of Presentation

All significant intercompany activity has been eliminated in the preparation of the condensed consolidated financial statements. The unaudited condensed consolidated financial statements have been prepared in accordance with the requirements of Form 10-Q and Rule 10-01 of Regulation S-X. Some information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles, or GAAP, have been condensed or omitted pursuant to those rules and regulations. In the opinion of management, the accompanying unaudited condensed consolidated financial statements include all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the consolidated financial position, results of operations, and cash flows of the Company.

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries: International Medication Systems, Limited, or IMS; Armstrong Pharmaceuticals, Inc., or Armstrong; Amphastar Nanjing Pharmaceuticals Co., Ltd., or ANP; Nanjing Letop Fine Chemistry Co., Ltd., or Letop, and Amphastar France Pharmaceuticals, S.A.S., or AFP.

Use of Estimates

The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates. The principal accounting estimates include: determination of allowances for doubtful accounts and discounts, provision for chargebacks, liabilities for product returns, reserves for

-6-

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)
excess or unsellable inventory, impairment of long-lived and intangible assets and goodwill, self-insured claims, workers' compensation liabilities, litigation reserves, stock price volatilities for share-based compensation expense, fair market values of the Company's common stock, valuation allowances for deferred tax assets, and liabilities for uncertain income tax positions.
Foreign Currency
The functional currency of the Company and its domestic and Chinese subsidiary, ANP is the U.S. dollar, or USD. ANP maintains its books of record in Chinese Yuan. These books are remeasured into the functional currency of USD using the current or historical exchange rates. The resulting currency remeasurement adjustments and other transactional foreign exchange gains and losses are reflected in the Company's statement of operations.
The Company's French subsidiary, AFP, maintains its books of record in Euros, which is the local currency in France and has been determined to be its functional currency. These books are translated into USD using average exchange rates during the period. Assets and liabilities are translated at the rate of exchange prevailing on the balance sheet date. Equity is translated at the prevailing rate of exchange at the date of the equity transactions. Translation adjustments are reflected in stockholders' equity and are included as a component of other comprehensive income (loss).
Additionally, the Company does not undertake hedging transactions to cover its foreign currency exposure.
Comprehensive Income (Loss)
For the three and six months ended June 30, 2016 and 2015, the Company included its foreign currency translation adjustment as part of its comprehensive income (loss).
Financial Instruments

The carrying amounts of cash and cash equivalents, short-term investments, accounts receivable, accounts payable, accrued expenses, and short-term borrowings approximate fair value due to the short maturity of these items. A majority of the Company's long-term obligations consist of variable rate debt, and their carrying value approximates fair value as the stated borrowing rates are comparable to rates currently offered to the Company for instruments with similar maturities. However, the Company has one fixed-rate, long-term mortgage for which the carrying value differs from the fair value and is not remeasured on a recurring basis (see Note 12).

Deferred Income Taxes

The Company utilizes the liability method of accounting for income taxes, under which deferred taxes are determined based on the temporary differences between the financial statements and the tax basis of assets and liabilities using enacted tax rates. A valuation allowance is recorded when it is more likely than not that the deferred tax assets will not be realized. The Company has adopted the with-and-without methodology for determining when excess tax benefits from the exercise of share based awards are realized. Under the with-and-without methodology, current year operating loss deductions and prior-year operating loss carryforwards are deemed to be utilized prior to the utilization of current-year excess tax benefits from share based awards.

Business Combinations

Business combinations are accounted for in accordance with Accounting Standards Codification, or ASC 805, Business Combinations, using the acquisition method of accounting, which requires an acquirer to recognize the assets acquired and the liabilities assumed at the acquisition date measured at their fair values as of that date. Fair value determinations are based on discounted cash flow analyses or other valuation techniques. In determining the fair value of the assets

-7-

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

acquired and liabilities assumed in a material acquisition, the Company may utilize appraisals from third party valuation firms to determine fair values of some or all of the assets acquired and liabilities assumed, or may complete some or all of the valuations internally. In either case, the Company takes full responsibility for the determination of the fair value of the assets acquired and liabilities assumed. The value of goodwill reflects the excess of the fair value of the consideration conveyed to the seller over the fair value of the net assets received.

Acquisition-related costs are costs the Company incurs to effect a business combination. The Company accounts for acquisition-related costs as expenses in the periods in which the costs are incurred.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued an accounting standards update that creates a single source of revenue guidance for companies in all industries. The new standard provides guidance for all revenue arising from contracts with customers and affects all entities that enter into contracts to provide goods or services to their customers, unless the contracts are within the scope of other accounting standards. It also provides a model for the measurement and recognition of gains and losses on the sale of certain nonfinancial assets. This guidance must be adopted using either a full retrospective approach for all periods presented or a modified retrospective approach and will be effective for fiscal years beginning after December 15, 2017, which will be the Company's fiscal 2018. The Company has not yet evaluated the potential impact of adopting the guidance on the Company's consolidated financial statements.

In August 2014, the FASB issued an accounting standards update that will require management to evaluate if there is substantial doubt about the Company's ability to continue as a going concern and, if so, to disclose this in both interim and annual reporting periods. This guidance will become effective for the Company's annual filing for the period ending December 31, 2016, and interim periods thereafter, and allows for early adoption. The Company does not expect the adoption of the guidance will have a material impact on the Company's consolidated financial statements.

In July 2015, the FASB issued an accounting standards update which requires entities to measure most inventories at the lower of cost or net realizable value, or NRV, thereby simplifying the current guidance under which an entity must measure inventory at the lower of cost or market. Under the new guidance, inventory is measured at the lower of cost or net realizable value, which eliminates the need to determine replacement cost and evaluate whether it is above the

ceiling (NRV) or below the floor (NRV less a normal profit margin). The guidance defines NRV as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The guidance is effective for annual periods beginning after December 15, 2016, and interim periods therein. The standard will be effective for the Company for the first quarter of the Company's fiscal 2017. Early application is permitted. The new guidance must be applied prospectively. The Company does not believe the adoption of this accounting guidance will have a material impact on the Company's consolidated financial statements and related disclosures.

In November 2015, the FASB issued an accounting standards update to the balance sheet classification of deferred taxes. Under existing standards, deferred taxes for each tax-paying jurisdiction are presented as a net current asset or liability and net long-term asset or liability. To simplify presentation, the new guidance will require that all deferred tax assets and liabilities, along with related valuation allowances, be classified as long-term on the balance sheet. As a result, each tax-paying jurisdiction will now only have one net long-term deferred tax asset or liability. The new guidance does not change the existing requirement that prohibits offsetting deferred tax liabilities from one jurisdiction against deferred tax assets of another jurisdiction. The guidance is effective for annual periods beginning after December 15, 2016, and interim periods therein. Early adoption is permitted. The new guidance may be applied prospectively or retrospectively. The Company has elected to adopt the guidance early and apply the guidance prospectively, therefore, prior periods were not retrospectively adjusted. The reclassification of the Company's deferred tax assets and liabilities does not have any impact to the Company's net income or cash flow, thus the adoption of the guidance does not have a material impact on the Company's consolidated financial statements.

-8-

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AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

In February 2016, the FASB issued an accounting standards update that is aimed at making leasing activities more transparent and comparable, and requires substantially all leases be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability, including leases currently accounted for as operating leases. This guidance will become effective for the Company's interim and annual reporting periods during the year ending December 31, 2019, and all annual and interim reporting periods thereafter. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements and related disclosures.

In March 2016, the FASB issued an accounting standards update that is aimed to improve the employee share-based payment accounting. The standard update simplifies the accounting for employee share-based payments and involves several aspects of the accounting for share-based transactions, including the potential timing of expenses, the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. The guidance is effective for annual periods beginning after December 15, 2016, and interim periods therein. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements and related disclosures.

In June 2016, the FASB issued an accounting standards update that is aimed to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit. The standard update changes the impairment model for financial assets measured at amortized cost, requiring presentation at the net amount expected to be collected. The measurement of expected credit losses requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Available-for-sale debt securities with unrealized losses will be recorded through an allowance for credit losses. The guidance is effective for the Company's interim and annual reporting periods during the year ending December 31, 2020. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements and related disclosures.

3. Business Acquisition and Product Acquisitions

Acquisition of fourteen injectable products from Hikma Pharmaceuticals PLC

In March 2016, the Company acquired fourteen abbreviated new drug applications, or ANDAs, representing eleven different injectable chemical entities from Hikma Pharmaceuticals PLC for \$4.0 million. The Company plans to transfer the manufacturing of these products to its facilities in California, which will require FDA approval before the products can be launched. The Company has concluded that this transaction will be accounted for as a business combination in accordance with ASC 805.

The Company's accounting for this acquisition is preliminary. The fair value estimates for the \$4.0 million assets acquired, which the Company allocated as intangible assets, were based upon preliminary calculations and valuations, and the Company's estimates and assumptions are subject to change as the Company obtains additional information for its estimates during the measurement period (up to one year from the acquisition date).

Acquisition of Nanjing Letop Medical Technology Co. Ltd.

In January 2016, the Company's Chinese subsidiary, ANP, acquired Nanjing Letop Medical Technology Co. Ltd., for \$0.8 million. The Company recognized \$0.4 million of goodwill, which represents the difference between the purchase price and the fair value of Letop's net assets at acquisition. Letop had previously supplied ANP with intermediates used in making various active pharmaceutical ingredients. In March 2016, this subsidiary was renamed Nanjing Letop Fine Chemistry Co., Ltd. The Company has concluded that this transaction will be accounted for as a business combination in accordance with ASC 805.

-9-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

The Company's accounting for this acquisition is preliminary. The fair value estimates for the \$1.4 million assets acquired, which excludes the \$0.4 million of goodwill and the \$1.0 million of liabilities assumed, were based upon preliminary calculations and valuations, and the Company's estimates and assumptions are subject to change as the Company obtains additional information for its estimates during the measurement period (up to one year from the acquisition date).

Acquisition of Merck's API Manufacturing Business

On April 30, 2014, the Company completed the acquisition of the Merck Sharpe & Dohme's API manufacturing business in Éragny-sur-Epte, France, or the Merck API Transaction, which manufactures porcine insulin API and recombinant human insulin API, or RHI API. The purchase price of the transaction totaled €24.8 million, or \$34.4 million on April 30, 2014, subject to certain customary post closing adjustments and currency exchange fluctuations. The terms of the purchase include multiple payments over four years as follows (see Note 12):

		U.S.
	Euros	Dollars
	(in thousa	nds)
At Closing, April 2014	€ 13,252	\$ 18,352
December 2014	4,899	5,989
December 2015	3,186	3,483
December 2016	3,186	3,538
December 2017	500	555
	€ 25,023	\$ 31,917

In order to facilitate the acquisition, the Company established a subsidiary in France, AFP. The Company is continuing the current site manufacturing activities, which consist of the manufacturing of porcine insulin API and RHI API. As part of the transaction, the Company has entered into various additional agreements, including various supply agreements, as well as the assignment and/or licensing of patents under which Merck was operating at this facility. In addition, certain existing customer agreements have been assigned to AFP.

4. Revenue Recognition

Generally, revenue is recognized at the time of product delivery to the Company's customers. In some cases, revenue is recognized at the time of shipment when stipulated by the terms of the sale agreements. The Company also records profit-sharing revenue stemming from a distribution agreement with Actavis, Inc., or Actavis. This distribution agreement is in the process of being terminated (see Note 16). Profit-sharing revenue is recognized at the time Actavis sells the products to its customers. Revenues derived from contract manufacturing services are recognized when third-party products are shipped to customers, after the customer has accepted test samples of the products to be shipped.

The Company does not recognize product revenue unless the following fundamental criteria are met: (i) persuasive evidence of an arrangement exists, (ii) transfer of title has occurred, (iii) the price to the customer is fixed or determinable, and (iv) collection is reasonably assured. Furthermore, the Company does not recognize revenue until all customer acceptance requirements have been met. The Company estimates and records reductions to revenue for discounts, product returns, and pricing adjustments, such as wholesaler chargebacks, in the same period that the related revenue is recorded.

The Company's accounting policy is to review each agreement involving contract development and manufacturing services to determine if there are multiple revenue-generating activities that constitute more than one unit of accounting. Revenues are recognized for each unit of accounting based on revenue recognition criteria relevant to that unit. The Company does not have any revenue arrangements with multiple deliverables.

-10-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Provision for Wholesaler Chargebacks

The provision for chargebacks is a significant estimate used in the recognition of revenue. As part of its sales terms with wholesale customers, the Company agrees to reimburse wholesalers for differences between the gross sales prices at which the Company sells its products to wholesalers and the actual prices of such products at the time wholesalers resell them under the Company's various contractual arrangements with third parties such as hospitals and group purchasing organizations. The Company estimates chargebacks at the time of sale to wholesalers based on wholesaler inventory stocking levels, historic chargeback rates, and current contract pricing.

The provision for chargebacks is reflected in net revenues and a reduction to accounts receivable. The following table is an analysis of the chargeback provision:

	Six Months Ended				
	June 30,				
	2016	2015			
	(in thousands)				
Beginning balance	\$ 15,217	\$ 11,872			
Provision related to sales made in the current period	69,549	80,390			
Credits issued to third parties	(72,965)	(80,957)			
Ending balance	\$ 11,801	\$ 11,305			

Changes in chargeback provision from period to period are primarily dependent on the Company's sales to its wholesalers, the level of inventory held by the wholesalers, and on the wholesaler's customer mix. The approach that the Company uses to estimate chargebacks has been consistently applied for all periods presented. Variations in estimates have been historically small. The Company continually monitors the provision for chargebacks and makes adjustments when it believes that the actual chargebacks may differ from the estimates. The settlement of chargebacks generally occurs within 30 days after the sale to wholesalers.

Accrual for Product Returns

The Company offers most customers the right to return qualified excess or expired inventory for partial credit; however, products sold to Actavis are non-returnable. The Company's product returns primarily consist of the returns of expired products from sales made in prior periods. Returned products cannot be resold. At the time product revenue is recognized, the Company records an accrual for estimated returns. The accrual is based, in part, upon the historical relationship of product returns to sales and customer contract terms. The Company also assesses other factors that could affect product returns including market conditions, product obsolescence, and the introduction of new competition. Although these factors do not normally give the Company's customers the right to return products outside of the regular return policy, the Company realizes that such factors could ultimately lead to increased returns. The Company analyzes these situations on a case-by-case basis and makes adjustments to the product return reserve as appropriate.

-11-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

The provision for product returns is reflected in net revenues. The following table is an analysis of product return liability:

	Six Months Ended				
	June 30,				
	2016	2015			
	(in thousa	ınds)			
Beginning balance	\$ 2,621	\$ 2,408			
Provision for product returns	637	1,179			
Credits issued to third parties	(715)	(977)			
Ending balance	\$ 2,543	\$ 2,610			

For the six months ended June 30, 2016 and 2015, the Company's aggregate product return rate was 1.1% and 1.1% of qualified sales, respectively.

5. Income (loss) per Share

Basic income (loss) per share is calculated based upon the weighted-average number of shares outstanding during the period and contingently issuable shares such as fully vested deferred stock units, or DSUs, and in 2015, such equity was issued as restricted stock units, or RSUs (such RSUs and DSUs are collectively referred to herein as RSUs), in addition to shares expected to be issued under the Company's employee stock purchase plan, or ESPP, as of the date all necessary conditions for issuance have been met. Diluted income per share gives effect to all potential dilutive shares outstanding during the period, such as stock options, nonvested RSUs and shares issuable under the Company's ESPP.

For the three and six months ended June 30, 2016, options to purchase 6,827,011 shares of stock with a weighted-average exercise price of \$18.16 per share, were excluded in the computation of diluted net income per share because the effect from the assumed exercise of these options would be anti-dilutive.

As the Company reported a net loss for the three and six months ended June 30, 2015, the diluted net loss per share, as reported, is equal to the basic net loss per share since the effect of the assumed exercise of stock options vesting of nonvested RSUs and issuance of common shares under the Company's ESPP are anti-dilutive. Total stock options, nonvested RSUs, and shares issuable under the Company's ESPP, excluded from the three and six months ended June 30, 2015, net loss per share were 12,550,398, 896,693, and 165,167, respectively.

-12-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

The following table provides the calculation of basic and diluted net income (loss) per share for each of the periods presented:

	Three Mon June 30,	ths Ended	Six Months June 30,	Ended		
	2016	2015	2016	2015		
	(in thousan	ds, except per	share data)	share data)		
Basic and dilutive numerator:						
Net income (loss)	\$ 6,895	\$ (6,647)	\$ 9,384	\$ (7,312)		
Denominator:						
Shares outstanding	44,957	44,849	44,999	44,725		
Weighted-average shares outstanding — basic	44,957	44,849	44,999	44,725		
Net effect of dilutive securities:						
Incremental shares from equity awards	1,011		713			
Weighted-average shares outstanding — diluted	45,968	44,849	45,712	44,725		
Net income (loss) per share — basic	\$ 0.15	\$ (0.15)	\$ 0.21	\$ (0.16)		
Net income (loss) per share — diluted	\$ 0.15	\$ (0.15)	\$ 0.21	\$ (0.16)		

6. Segment Reporting

The Company's business is the development, manufacture, and marketing of pharmaceutical products. The Company has established two reporting segments that each report to the Chief Operating Decision Maker, or CODM, as defined in ASC 280, Segment Reporting. The Company's performance is assessed and resources are allocated by the CODM based on the following two reportable segments:

- · Finished pharmaceutical products
- · Active pharmaceutical ingredients, or API

The finished pharmaceutical products segment manufactures, markets and distributes enoxaparin, Cortrosyn®, Amphadase®, naloxone, lidocaine jelly, as well as various other critical and non-critical care drugs. The API segment manufactures and distributes RHI and porcine insulin. The Company also uses RHI for internal product development.

-13-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Selected financial information by reporting segment is presented below:

	Three Months Ended June 30,		Six Months June 30,	Ended
	2016	2015	2016	2015
	(in thousan	ids)		
Net revenues:				
Finished pharmaceutical products	\$ 63,756	\$ 50,075	\$ 122,310	\$ 100,947
API	4,277	3,778	5,089	9,792
Total net revenues	68,033	53,853	127,399	110,739
Gross profit:				
Finished pharmaceutical products	30,598	12,634	56,422	25,487
API	1,116	684	194	1,111
Total gross profit	31,714	13,318	56,616	26,598
Operating expenses	21,384	23,578	42,211	44,119
Income (loss) from operations	10,330	(10,260)	14,405	(17,521)
Non-operating income (expenses)	(578)	31	(837)	1,095
Income (loss) before income taxes	\$ 9,752	\$ (10,229)	\$ 13,568	\$ (16,426)

The Company manages its business segments to the gross profit level and manages its operating and other costs on a company-wide basis. The Company does not identify total assets by segment for internal purposes, as the Company's CODM does not assess performance, make strategic decisions, or allocate resources based on assets.

Prior to the Merck API Transaction on April 30, 2014, Merck notified the Company of several environmental items that were not in alignment with Merck's own internal policies and procedures. None of these items were in violation of any French environmental law or regulation. The Company has assessed the nature of the remedial actions to be undertaken and since April 30, 2014, recorded the related expenses of $\{0.6 \text{ million as incurred in cost of sales within the API segment.}$ Based on the letter of understanding signed in conjunction with the acquisition on April 30, 2014, the Company and Merck further entered into an agreement on May 11, 2016, pursuant to which Merck shall reimburse the Company for the costs to complete the remedial actions up to $\{0.0 \text{ million.}\}$ Accordingly, in the three months and six months ended June 30, 2016, the Company recorded the reimbursement of $\{0.0 \text{ million for the expenses already}\}$

incurred as a reduction of cost of sales within the API segment.

Net revenues and carrying values of long-lived assets of enterprises by geographic regions are as follows:

	Net Reven	ue	Long-Lived Assets					
	Three Mon	ths Ended	Six Months	Ended	_			
	June 30,		June 30,		June 30,	December 31,		
	2016	2015	2016	2015	2016	2015		
	(in thousan	nds)						
U.S.	\$ 67,550	\$ 52,757	\$ 126,089	\$ 105,717	\$ 101,430	\$ 100,404		
China					33,835	28,547		
France	483	1,096	1,310	5,022	13,382	13,210		
Total	\$ 68,033	\$ 53,853	\$ 127,399	\$ 110,739	\$ 148,647	\$ 142,161		

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

7. Customer and Supplier Concentration

Customer Concentrations

Three large wholesale drug distributors, AmerisourceBergen Corporation, or AmerisourceBergen, Cardinal Health, Inc. or Cardinal, and McKesson Corporation, or McKesson, are all distributors of the Company's products, as well as suppliers of a broad range of health care products. Actavis has exclusive marketing rights of the Company's enoxaparin product to the U.S. retail pharmacy market (see Note 16). MannKind Corporation began buying RHI API from the Company in December 2014. The Company considers these five customers to be its major customers, as each individually, and these customers collectively, represented a significant percentage of the Company's net revenue for the three and six months ended June 30, 2016 and 2015, and accounts receivable as of June 30, 2016 and December 31, 2015. The following table provides accounts receivable and net revenues information for these major customers:

	% of Total Accounts				% of Net							
	Receivable			Revenue								
				Three Months			Six Months					
				Ended			Ended					
	June 30, December 31		December 31,		June 30,			June 30,				
	2016		2015		2016		2015		2016		2015	
Actavis, Inc. (1)	8	%	12	%	18	%	21	%	20	%	22	%
AmerisourceBergen	12	%	12	%	20	%	18	%	19	%	17	%
Cardinal Health	19	%	20	%	20	%	17	%	20	%	17	%
MannKind Corporation	17	%	13	%	6	%	5	%	3	%	8	%
McKesson	18	%	21	%	19	%	23	%	20	%	21	%

⁽¹⁾ The distribution agreement with Actavis is in the process of being terminated (see Note 16).

Supplier Concentrations

The Company depends on suppliers for raw materials, active pharmaceutical ingredients, and other components that are subject to stringent U.S. Food and Drug Administration, or FDA, requirements. Some of these materials may only be available from one or a limited number of sources. Establishing additional or replacement suppliers for these materials may take a substantial period of time, as suppliers must be approved by the FDA. Furthermore, a significant portion of raw materials may only be available from foreign sources. If the Company is unable to secure, on a timely basis, sufficient quantities of the materials it depends on to manufacture and market its products, it could have a materially adverse effect on the Company's business, financial condition, and results of operations.

8. Fair Value Measurements

The accounting standards of the Financial Accounting Standards Board, or FASB, define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability at the measurement date (an exit price). These standards also establish a hierarchy that prioritizes observable and unobservable inputs used in measuring fair value of an asset or liability, as described below:

- · Level 1 Inputs to measure fair value are based on quoted prices (unadjusted) in active markets on identical assets or liabilities:
 - Level 2 Inputs to measure fair value are based on the following: a) quoted prices in active markets on similar assets or liabilities, b) quoted prices for identical or similar instruments in inactive markets, or c) observable (other than quoted prices) or collaborated observable market data used in a pricing model from which the fair value is derived; and

-15-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

· Level 3 – Inputs to measure fair value are unobservable and the assets or liabilities have little, if any, market activity; these inputs reflect the Company's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities based on best information available in the circumstances.

The Company measures fair value based on the prices that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Company classifies its cash equivalents and short-term investments as Level 1 assets, as they are valued on a recurring basis using quoted market prices with no valuation adjustments applied. The Company does not hold any Level 2 or Level 3 instruments that are measured for fair value on a recurring basis.

The fair values of the Company's financial assets and liabilities measured on a recurring basis, as of June 30, 2016 and December 31, 2015, are as follows:

		Quoted Prices in						
		Active Significant Si			Signi	Significant		
		Markets	Othe	r	Other	•		
		for Identical	Obse	ervable	Unob	servable		
		-				Inputs		
	Total	(Level 1) (Level 2)			(Level 3)			
	(in thousan	ids)						
Cash equivalents:								
Money market accounts	\$ 37,592	\$ 37,592	\$		\$	_		
Restricted short-term investments:								
Certificates of deposit	1,390	1,390						
Fair value measurement as of June 30, 2016 Cash equivalents:	\$ 38,982	\$ 38,982	\$	_	\$			
Money market accounts	\$ 42,486	\$ 42,486	\$	_	\$	_		

Restricted short-term investments:

Fair value measurement as of December 31, 2015

Certificates of deposit 1,285 1,285 — —

The fair value of the Company's cash equivalents includes money market funds and certificates of deposit with original maturities of three months or less. Short-term investments consist of certificate of deposit accounts that expire within 12 months for which market prices are readily available. The restrictions placed on the certificate of deposit accounts have a negligible effect on the fair value of these financial assets; these funds are restricted to meet the Company's obligation for workers' compensation claims.

\$ 43,771

\$ 43,771

\$

The Company adopted the required fair value measurements and disclosures provisions related to nonfinancial assets and liabilities. These assets and liabilities are not measured at fair value on a recurring basis but are subject to fair value adjustments in certain circumstances. These items primarily include long-lived assets, goodwill, and intangible assets for which the fair value of assets is determined as part of the related impairment test. As of June 30, 2016 and December 31, 2015, there were no significant adjustments to fair value for nonfinancial assets or liabilities.

-16-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

9. Goodwill and Intangible Assets

The table below shows the weighted-average life, original cost, accumulated amortization, and net book value by major intangible asset classification as of the dates set forth below:

	Weighted-Average		Accumulated	Net
		Original		Book
	Life (Years) (in thousands)	Cost	Amortization	Value
Definite-lived intangible assets	,			
Product rights	12	\$ 27,134	\$ 23,570	\$ 3,564
Patents	10	293	122	171
Land-use rights	39	2,540	321	2,219
Acquired ANDAs(1)	15	4,000	89	3,911
Other intangible assets	1	575	526	49
Subtotal	12	34,542	24,628	9,914
Indefinite-lived intangible assets				
Trademark	*	29,225		29,225
Goodwill				
Finished pharmaceutical products	*	4,159		4,159
Subtotal	*	33,384	_	33,384
As of June 30, 2016	*	\$ 67,926	\$ 24,628	\$ 43,298

	Weighted-Average		A	ccumulated	NI-4	
	Life (Years) (in thousands)	•		nortization	Net Book Value	
Definite-lived intangible assets						
Product rights	12	\$ 27,134	\$	22,679	\$ 4,455	
Patents	10	293		107	186	

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Land-use rights	39	2,540	288	2,252
Other intangible assets	1	590	533	57
Subtotal	12	30,557	23,607	6,950
Indefinite-lived intangible assets				
Trademark	*	29,225		29,225
Goodwill				
Finished pharmaceutical products	*	3,726		3,726
Subtotal	*	32,951		32,951
As of December 31, 2015	*	\$ 63,508	\$ 23,607	\$ 39,901

^{*}Intangible assets with indefinite lives have an indeterminable average life.

⁽¹⁾In March 2016, the Company acquired fourteen ANDAs representing eleven different injectable chemical entities from Hikma Pharmaceuticals PLC for \$4.0 million. The accounting for this transaction is preliminary. (See note 3).

	- 1	1 1		c	~
1	3	nı	0	\cap t	Contents
J	· a	U		$\mathbf{o}_{\mathbf{I}}$	Contonts

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Goodwill

The changes in the carrying amounts of goodwill were as follows:

	June 30,	De	cember 31,
	2016	20	15
	(in thousa	nds)	
Beginning balance	\$ 3,726	\$	4,467
Goodwill related to acquisition of business	370		
Currency translation and other adjustments	63		(741)
Ending balance	\$ 4,159	\$	3,726

Primatene® Trademark

In January 2009, the Company acquired the exclusive rights to the trademark, domain name, website and domestic marketing, distribution and selling rights related to Primatene® Mist, an over-the-counter bronchodilator product, for a total consideration of \$29.2 million, which is its carrying value as of June 30, 2016.

In determining the useful life of the trademark, the Company considered the following: the expected use of the intangible; the longevity of the brand; the legal, regulatory and contractual provisions that affect their maximum useful life; the Company's ability to renew or extend the asset's legal or contractual life without substantial costs; effects of the regulatory environment; expected changes in distribution channels; maintenance expenditures required to obtain the expected future cash flows from the asset; and considerations for obsolescence, demand, competition and other economic factors.

As a result of environmental concerns about Chlorofluorocarbons, or CFCs, the FDA issued a final ruling on January 16, 2009, that required the CFC formulation of its Primatene® Mist product to be phased out by December 31, 2011. The former formulation of Primatene® Mist contained CFCs as a propellant; however, the Company intends to use the trademark for a future version of Primatene® that utilizes hydrofluoroalkane, or HFA, as a propellant.

In 2013, the Company filed a new drug application, or NDA, for Primatene® HFA and received a Prescription Drug User Fee Act date set for May 2014. In May 2014, the Company received a complete response letter, or CRL, from the FDA, which requires additional non-clinical information, label revisions and follow-up studies (label comprehension, behavioral/human factors and actual use) to assess consumers' ability to use the device correctly to support approval of the product in the over-the-counter setting. The Company met with the FDA in October 2014 to discuss preliminary data results and to clarify the FDA requirements for further studies. The Company received further advice regarding its ongoing studies from the FDA in January 2016, and subsequently completed the human factor studies accordingly. The Company submitted the NDA amendment on June 28, 2016 and received a target response date of December 28, 2016. However, there can be no guarantee that any amendment to the Company's NDA will result in timely approval of Primatene® HFA or approval at all.

Based on the Company's filed version of Primatene® HFA, the Company's response to the CRL to address the FDA's concerns, the long history of the Primatene® trademark (marketed since 1963) and the Company's perpetual rights to the trademark, the Company has determined that the trademark has an indefinite useful life. If the HFA version is approved by the FDA, it will be marketed under the same trade name; therefore, an impairment charge would not be required.

-18-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

10. Inventories

Inventories are stated at the lower of cost or market, using the first-in, first-out method. Provisions are made for slow-moving, unsellable or obsolete items. Inventories consist of the following:

	June 30,	De	December 31,	
	2016 2015		15	
	(in thousan	ds)		
Raw materials and supplies	\$ 42,574	\$	31,878	
Work in process	16,654		21,455	
Finished goods	30,739		19,867	
Total inventory	89,967		73,200	
Less reserve for excess and obsolete inventories	(1,640)		(2,535)	
Total inventory, net	\$ 88,327	\$	70,665	

11. Property, Plant, and Equipment

Property, plant, and equipment consist of the following:

	June 30,	December 31,
	2016	2015
	(in thousands)	
Buildings	\$ 84,246	\$ 82,309
Leasehold improvements	24,580	23,392
Land	6,915	6,895
Machinery and equipment	109,562	108,442
Furniture, fixtures, and automobiles	14,872	13,439
Construction in progress	25,178	19,942

Total property, plant, and equipment	265,353	254,419
Less accumulated depreciation	(116,706)	(112,258)
Total property, plant, and equipment, net	\$ 148,647	\$ 142,161

As of June 30, 2016, the Company had \$2.7 million in capitalized manufacturing equipment that is intended to be used specifically for the manufacture of Primatene® HFA. The Company will continue to monitor developments with the FDA as it relates to its Primatene® HFA indefinite lived intangible asset in determining if there is an impairment of these related fixed assets (see Note 9).

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

12. Debt

Debt consists of the following:

Loans with East West Bank	June 30, 2016 (in thousan	20	ecember 31, 15
Mortgage payable due September 2016 Equipment loan due April 2017 Line of credit facility due September 2017 Equipment loan due January 2019 Mortgage payable due February 2021 Equipment credit line due September 2021	\$ 2,173 1,072 — 3,978 3,699 2,882	\$	2,211 1,700 — 4,748 3,725 —
Loans with Cathay Bank			
Line of credit facility due May 2018 Acquisition loan due April 2019 Mortgage payable due April 2021 Loans with Seine-Normandie Water Agency			
French government loan 1 due March 2018 French government loan 2 due June 2020 French government loan 3 due July 2021	31 103 335		46 128 325
Payment Obligation to Merck	4,043		3,942
Equipment under Capital Leases Total debt and capital leases Less current portion of long-term debt and capital leases Long-term debt and capital leases, net of current portion	1,861 42,646 10,904 \$ 31,742	\$	802 41,099 10,934 30,165

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Mortgage Payable—Due September 2016

In September 2006, the Company entered into a mortgage term loan in the principal amount of \$2.8 million, which matures in September 2016. The loan is payable in monthly installments with a final balloon payment of \$2.2 million plus interest. The loan is secured by one of the buildings at the Company's Rancho Cucamonga, California, headquarters complex. The variable interest rate is equal to the three-month LIBOR plus 2.50%.

Equipment Loan—Due April 2017

In March 2012, the Company entered into an \$8.0 million revolving credit facility. In March 2013, the Company converted the outstanding principal balance of \$4.9 million into an equipment loan. Borrowings under the facility are secured by equipment purchased with debt proceeds. Borrowings under the facility bear interest at the prime rate as published by The Wall Street Journal, plus 0.25%, with a minimum interest rate of 3.50%. This facility matures in April 2017.

-20-

	- 1	1 1		c	~
1	3	nı	0	\cap t	Contents
J	· a	U		$\mathbf{o}_{\mathbf{I}}$	Contonts

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Line of Credit Facility—Due September 2017

In March 2012, the Company entered into a \$10.0 million line of credit facility. Borrowings under the facility are secured by inventory and accounts receivable. Borrowings under the facility bear interest at the prime rate as published by The Wall Street Journal. This facility was to mature in March 2016. In March 2016, the Company amended the facility to increase the line of credit to \$15.0 million and extended the maturity date to September 2017. As of June 30, 2016, the Company did not have any amounts outstanding under this facility.

Equipment Loan—Due January 2019

In July 2013, the Company entered into an \$8.0 million line of credit facility. Borrowings under the facility were secured by equipment. The facility bore interest at the prime rate as published in The Wall Street Journal plus 0.25% and was to mature in January 2019.

In January 2015, the Company drew down \$6.2 million from the line of credit facility. Subsequently, the facility was converted into an equipment loan with an outstanding principal balance of \$6.2 million. Borrowings under the facility are secured by equipment purchased with the debt proceeds. The Company entered into a fixed interest rate swap contract on this facility to exchange the floating rate for a fixed interest payment over the life of the facility without the exchange of the underlying notional debt amount. The fair value of the derivative and unrealized loss was immaterial to the Company's consolidated financial statement at June 30, 2016. The facility bears interest at a fixed rate of 4.48% and matures in January 2019. As of June 30, 2016, the loan had a book value of \$4.0 million, which approximates fair value. The variable interest rate is deemed to be a Level 2 input for measuring fair value.

Mortgage Payable—Due February 2021

In December 2010, the Company refinanced an existing mortgage term loan, which had a principal balance outstanding of \$4.5 million at December 31, 2010. The loan was payable in monthly installments with a final balloon payment of \$3.8 million. The loan was secured by one of the buildings at the Company's Rancho Cucamonga, California, headquarters complex, as well as one of its buildings at its Chino, California, complex. The loan had a

variable interest rate at the prime rate as published by The Wall Street Journal, with a minimum interest rate of 5.00%, and matured in January 2016.

The Company refinanced the existing mortgage term loan in January 2016, which had a principal balance outstanding of \$3.7 million at December 31, 2015. The loan is payable in monthly installments with a final balloon payment of \$3.3 million. The loan is secured by one of the buildings at the Company's Rancho Cucamonga, California, headquarters complex. The loan has a variable interest rate at the prime rate as published by The Wall Street Journal. Subsequently, the Company entered into a fixed interest rate swap contract on this loan to exchange the variable interest rate for a fixed interest payment over the life of the loan without the exchange of the underlying notional debt amount. The loan bears interest at a fixed rate of 4.39%, and matures in February 2021. The fair value of the derivative and unrealized loss was approximately \$0.1 million at June 30, 2016. As of June 30, 2016, the loan had a book value of \$3.7 million, which approximates fair value. The variable interest rate is deemed to be a Level 2 input for measuring fair value.

Equipment Credit Line – Due September 2021

In March 2016, the Company entered into a \$5.0 million equipment credit line with an 18-month draw down period and interest payments due monthly through September 2017 at the prime rate as published by The Wall Street Journal. After the draw down period, the outstanding principal balance converts into a 48-month loan with principal and interest payments due monthly. Borrowings under the facility are secured by the equipment purchased with the debt proceeds, and bears interest at the prime rate as published by The Wall Street Journal. This facility matures in September 2021. As of June 30, 2016, the Company has drawn \$2.9 million from the equipment line of credit.

-21-

Table of Contents
AMPHASTAR PHA
NOTES TO COND
(Unaudited)

ARMACEUTICALS, INC.

ENSED CONSOLIDATED FINANCIAL STATEMENTS

Loans with Cathay Bank

Line of Credit Facility—Due May 2018

In April 2012, the Company entered into a \$20.0 million revolving line of credit facility. Borrowings under the facility are secured by inventory, accounts receivable, and intangibles held by the Company. The facility bears interest at the prime rate as published by The Wall Street Journal with a minimum interest rate of 4.00%. This revolving line of credit was to mature in May 2016. In June 2016, the Company modified the facility to extend the maturity date to May 2018. As of June 30, 2016, the Company did not have any amounts outstanding under this facility.

Acquisition Loan with Cathay Bank—Due April 2019

On April 22, 2014, in conjunction with the Merck API Transaction, the Company entered into a secured term loan with Cathay Bank as lender. The principal amount of the loan is \$21.9 million and bears a variable interest rate at the prime rate as published by The Wall Street Journal, with a minimum interest rate of 4.00%. Beginning on June 1, 2014 and through the maturity date, April 22, 2019, the Company must make monthly payments of principal and interest based on the then outstanding amount of the loan amortized over a 120 month period. On April 22, 2019, all amounts outstanding under the loan become due and payable, which would be approximately \$12.0 million based upon an interest rate of 4.00%. The loan is secured by 65% of the issued and outstanding shares of stock in AFP and certain assets of the Company, including accounts receivable, inventory, certain investment property, goods, deposit accounts, and general intangibles but not including the Company's equipment and real property.

The loan includes customary restrictions on, among other things, the Company's ability to incur additional indebtedness, pay dividends in cash or make other distributions in cash, make certain investments, create liens, sell assets, and make loans. The loan also includes customary events of defaults, the occurrence and continuation of any of which provide Cathay Bank the right to exercise remedies against the Company and the collateral securing the loan. These events of default include, among other things, the Company's failure to pay any amounts due under the loan, the Company's insolvency, the occurrence of any default under certain other indebtedness or material agreements, and a final judgment against the Company that is not discharged in 30 days.

Mortgage Payable—Due April 2021

In March 2007, the Company entered into a mortgage term loan in the principal amount of \$5.3 million, which matured in March 2014. In April 2014, the Company refinanced the mortgage term loan, which had a principal balance outstanding of \$4.6 million. The loan is payable in monthly installments with a final balloon payment of \$3.9 million. The loan is secured by the building at the Company's Canton, Massachusetts location and bears interest at a fixed rate of 5.42% and matures in April 2021. As of June 30, 2016, the loan had a fair value of \$4.8 million, compared to a book value of \$4.4 million. The fair value of the loan was determined by using the interest rate associated with the Company's mortgage loans with similar terms and collateral that has variable interest rates. The fair value of debt obligations is not measured on a recurring basis and the variable interest rate is deemed to be a Level 2 input for measuring fair value.

Loans with Seine-Normandie Water Agency

In January 2015, the Company entered into three French government loans with the Seine-Normandie water agency in the aggregate amount of €0.6 million, or \$0.7 million, subject to currency exchange fluctuations. The life of the loans range between three to six years, and include annual equal payments and bear no interest over the life of the loans.

As of June 30, 2016, the payment obligation had an aggregate book value of €0.4 million, or \$0.5 million, subject to currency exchange fluctuations, which approximates fair value. The fair value of the payment obligation was determined by using the interest rate associated with the Company's acquisition loan with Cathay Bank that bears a variable interest

-22-

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Table of Contents
AMPHASTAR PHARMACEUTICALS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)
rate at the prime rate as published by The Wall Street Journal, with a minimum interest rate of 4.00%. The fair value of the debt obligation is not measured on a recurring basis and the variable interest rate is deemed to be a Level 2 input for measuring fair value.
Payment Obligation
Merck—Due December 2017
On April 30, 2014, in conjunction with the Merck API Transaction, the Company entered into a commitment obligation with Merck, in the principal amount of $\{11.6 \text{ million}, \text{ or } \$16.0 \text{ million}, \text{ subject to currency exchange}$ fluctuations. The terms of the purchase price include annual payments over four years and bear a fixed interest rate of 3.00% . The final payment to Merck relating to this obligation is due December 2017. In December 2015 and 2014, the Company made a principal payment of $\{3.2 \text{ million}, \text{ or } \$3.5 \text{ million} \text{ and } \{4.9 \text{ million}, \text{ or } \$6.0 \text{ million}, \text{ respectively}.$
As of June 30, 2016, the payment obligation had a book value of €3.6 million, or \$4.0 million, which approximates fair value. The fair value of the payment obligation was determined by using the interest rate associated with the Company's acquisition loan with Cathay Bank that bears a variable interest rate at the prime rate as published by The Wall Street Journal, with a minimum interest rate of 4.00%. The fair value of the debt obligation is not re-measured on a recurring basis and the variable interest rate is deemed to be a Level 2 input for measuring fair value.
Covenants

At June 30, 2016 and December 31, 2015, the Company was in compliance with its debt covenants, which include a minimum current ratio, minimum debt service coverage, minimum tangible net worth, and maximum debt-to-effective-tangible-net-worth ratio, computed on a consolidated basis in some instances and on a separate-company basis in others.

Equipment under Capital Leases

The Company entered into leases for certain equipment under capital leasing arrangements, which will expire at various times through 2021. The cost of equipment under capital leases was \$1.9 million and \$1.5 million at June 30, 2016 and December 31, 2015, respectively.

The accumulated depreciation of equipment under capital leases was \$0.1 million and \$0.7 million at June 30, 2016 and December 31, 2015, respectively. Depreciation of assets recorded under capital leases is included in depreciation expense in the accompanying consolidated financial statements.

13. Income Taxes

The following table sets forth the Company's income tax provision for the periods indicated:

	Three Mo June 30,	onths Ended	Six Months June 30,	Ended
	2016	2015	2016	2015
	(in thousa	ands)		
Income (loss) before taxes	\$ 9,752	\$ (10,229)	\$ 13,568	\$ (16,426)
Income tax expense (benefit)	2,857	(3,582)	4,184	(9,114)
Net income (loss)	\$ 6,895	\$ (6,647)	\$ 9,384	\$ (7,312)
Income tax provision (benefit) as a percentage of income				
(loss) before income taxes	29.3 %	(35.0) %	30.8 %	(55.5) %

-23-

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

The Company's income tax provision for the three and six months ended June 30, 2016, was 29.3% and 30.8% of income before taxes, respectively. The Company has a full valuation allowance against its French deferred tax assets; however, a tax benefit is included in the annual effective tax rate computation due to the French entity reporting a year-to-date foreign exchange gain in other comprehensive income. The blended effective income tax rate expected for the year ending December 31, 2016, is 30.9%. This effective tax rate factors in various permanent differences, including domestic deductions, the impact of foreign operations, and various credits. The Company's income tax benefit of 35.0% and 55.5% during the three and six months ended June 30, 2015, respectively, factored in similar permanent items as well as the impact of its foreign operations.

Valuation Allowance

In assessing the need for a valuation allowance, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. Ultimately, the realization of deferred tax assets depends on the existence of future taxable income. Management considers sources of taxable income such as income in prior carryback periods, future reversal of existing deferred taxable temporary differences, tax-planning strategies, and projected future taxable income.

In connection with the AFP purchase accounting in 2014, the Company recorded a valuation allowance against an intangible deferred tax asset of €3.2 million, or \$4.4 million, subject to currency exchange fluctuations, with an offsetting entry to goodwill, since management did not believe that it was more likely than not that the deferred tax asset would be realized. In March 2015, the Company reversed the €3.2 million, or \$3.3 million, subject to currency exchange fluctuations, deferred tax valuation allowance in conjunction with the transfer of AFP's intangible assets from France to the U.S. The difference in U.S. dollars relates to the currency exchange fluctuation, which is recorded in the Company's accumulated other comprehensive loss as a foreign currency translation adjustment.

In 2015, the Company assessed the realizability of the deferred tax assets for AFP. Due to the potential impact of reduced revenues from the MannKind contract and other factors, the Company determined that it was not more likely than not that the net deferred tax assets of AFP would be realized. Therefore, the Company established a full valuation allowance of \$0.9 million as of December 31, 2015, and continues to maintain a full valuation allowance on all AFP deferred tax assets.

In 2016, for computing its annual effective tax rate, the Company did not benefit from its losses in the states where it files separately. This increased the Company's income tax expense by \$0.1 million and \$0.2 million during the three and six months ended June 30, 2016, respectively.

-24-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

14. Stockholders' Equity

A summary of the changes in stockholders' equity for the six months ended June 30, 2016, consisted of the following:

	Six Months Ended June 30, 2016 (in thousands)	
Stockholders' equity as of December 31, 2015 Net income Accumulated other comprehensive loss Exercise of stock options Issuance of common stock to employees under ESPP Nonemployee share-based compensation expense Employee share-based compensation expense Repurchase of common stock(1) Purchase of treasury stock Stockholders' equity as of June 30, 2016	\$ 295,510 9,384 (215) 3,253 915 815 7,234 (1,242) (8,190) \$ 307,464	
Stockholders' equity as of June 30, 2016	\$ 307,464	

⁽¹⁾ Repurchase of common stock relating to the tax withholding of equity award settlements.

2014 Employee Stock Purchase Plan

In June 2014, the Company adopted the Employee Stock Purchase Plan, or ESPP, in connection with its initial public offering. A total of 2,000,000 shares of common stock are reserved for issuance under this plan. The Company's ESPP permits eligible employees to purchase common stock at a discount through payroll deductions during defined offering periods. Under the ESPP, the Company may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of its common stock will be purchased for employees participating in the offering. An offering may be terminated under certain circumstances. The price at which the stock is purchased is equal to the lower of 85% of the fair market value of the common stock at the beginning of an offering period or on the date of purchase.

As of June 30, 2016, the Company has issued 193,849 shares of common stock under the ESPP and 1,806,151 shares of its common stock remained available for issuance.

For the three and six months ended June 30, 2016, the Company recorded ESPP expense of \$0.2 million and \$0.3 million, respectively. For the three and six months ended June 30, 2015, the Company recorded ESPP expense of \$0.1 million and \$0.2 million, respectively.

Share Buyback Program

On November 6, 2014, the Company's Board of Directors authorized a \$10.0 million share buyback program, which was completed in December 2015. On November 10, 2015, the Company's Board of Directors authorized an additional \$10.0 million share buyback program. The primary goal of the programs is to offset dilution created by the Company's equity compensation programs.

Purchases are being made through the open market and private block transactions pursuant to Rule 10b5-1 plans, privately negotiated transactions or other means as determined by the Company's management and in accordance with the requirements of the Securities and Exchange Commission. The timing and actual number of shares repurchased will

-25-

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

depend on a variety of factors including price, corporate and regulatory requirements, and other conditions. These repurchased shares are accounted for under the cost method and are included as a component of treasury stock in the Company's Consolidated Balance Sheets.

Pursuant to the Company's share repurchase program, the Company purchased 265,900 and 664,500 shares of its common stock during the three and six months ended June 30, 2016, for total consideration of \$3.5 million and \$8.2 million, respectively.

The 2015 Equity Incentive Plan

In March 2015, the Board of Directors adopted the Company's 2015 Equity Incentive Plan, or the 2015 Plan, which was approved by the Company's stockholders in May 2015 and is set to expire in March 2025. The 2015 Plan is designed to meet the needs of a publicly traded company, including the requirements for granting "performance based compensation" under Section 162(m) of the Internal Revenue Code. The 2015 Plan provides for the grant of incentive stock options, nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units, performance shares, and other stock or cash awards to employees of the Company and its subsidiaries, members of the Board of Directors and consultants.

The Company initially reserved 5,000,000 shares of common stock for issuance under the 2015 Plan. This number will be increased by the number of shares available for issuance under the Company's prior equity incentive plans or arrangements that are not subject to options or other awards, plus the number of shares of common stock related to options or other awards granted under the Company's prior equity incentive plans or arrangements that are repurchased, forfeited, expired, or cancelled on or after the effective date of the 2015 Plan. The 2015 Plan also contains an "evergreen provision" that allows for an annual increase in the number of shares available for issuance on January 1 of each year during the 10 year term of the 2015 Plan, beginning January 1, 2016. The annual increase in the number of shares shall be the lessor of (i) 3,000,000 shares, (ii) two and one-half percent (2.5%) of the outstanding shares on the last day of the immediately preceding fiscal year, or (iii) such number of shares as determined by the Board of Directors. As of the effective date, there were 5,300,296 shares available for grant under the 2015 Plan.

As of June 30, 2016, the Company reserved an aggregate of 3,876,768 shares of common stock for future issuance under the 2015 Plan, including an additional 1,129,962 shares reserved under the 2015 Plan pursuant to the evergreen

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provision.

Share-Based Award Activity and Balances

The Company accounts for share based compensation payments in accordance with ASC 718, which requires measurement and recognition of compensation expense at fair value for all share based payment awards made to employees, directors, and nonemployees. Under these standards, the fair value of share based payment awards is estimated at the grant date using an option-pricing model and the portion that is ultimately expected to vest is recognized as compensation cost over the requisite service period. The Company uses the Black-Scholes option-pricing model to estimate the fair value of share based awards and recognizes share based compensation cost over the vesting period using the straight-line single option method. Non vested stock options held by non-employees are revalued using the Company's estimate of fair value at each balance sheet date.

-26-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

The weighted-averages for key assumptions used in determining the fair value of options granted during the three and six months ended June 30, 2016 and 2015, are as follows:

	Three M	lonths	Six Mor	iths
	Ended		Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Average volatility	33.0 %	24.9 %	30.4 %	27.1 %
Risk-free interest rate	0.9 %	1.1 %	1.5 %	1.2 %
Weighted-average expected life in years	3.0	3.2	5.5	4.5
Dividend yield rate	_ %	%	_ %	%

A summary of option activity under all plans for the six months ended June 30, 2016, is presented below:

	Options	righted-Average ercise ce	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value(1) (in thousands)
Outstanding as of December 31, 2015	12,240,467	\$ 15.41		,
Options granted	2,382,036	12.15		
Options exercised	(280,303)	11.61		
Options cancelled	(126,225)	13.46		
Options expired	(233,136)	24.11		
Outstanding as of June 30, 2016	13,982,839	\$ 14.80	4.62	\$ 37,001
Exercisable as of June 30, 2016	8,039,685	\$ 16.02	3.25	\$ 19,081

⁽¹⁾ The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the estimated fair value of the Company's common stock for those awards that have an exercise price below the estimated fair value at June 30, 2016.

For the three and six months ended June 30, 2016, the Company recorded stock option expense related to employees and the Board of Directors under all plans of \$2.5 million and \$4.8 million, respectively. For the three and six months ended June 30, 2015, the Company recorded stock option expense related to employees and the Board of Directors under all plans of \$2.4 million and \$4.0 million, respectively.

Information relating to option grants and exercises is as follows:

	Three Months				
	Ended		Six Mont	hs Ended	
	June 30,		June 30,		
	2016	2015	2016	2015	
	(in thousands, except per share data)				
Weighted-average grant date fair value	\$ 3.88	\$ 2.89	\$ 3.40	\$ 3.44	
Intrinsic value of options exercised	967	2,264	982	2,453	
Cash received	3,149	9,531	3,253	10,441	
Total fair value of the options vested during the year	2,000	1,112	5,260	2,536	

-27-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

A summary of the status of the Company's nonvested options as of June 30, 2016, and changes during the six months ended June 30, 2016, are presented below:

		•	ghted-Averag at Date	;e
	Options		Value	
Nonvested as of December 31, 2015	5,202,095	\$	3.44	
Options granted	2,382,036		3.40	
Options vested	(1,514,752)		3.47	
Options forfeited	(126,225)		4.65	
Nonvested as of June 30, 2016	5,943,154		3.39	

As of June 30, 2016, there was \$14.1 million of total unrecognized compensation cost, net of forfeitures, related to nonvested stock option based compensation arrangements granted under all plans. The cost is expected to be recognized over a weighted-average period of 2.4 years and will be adjusted for future changes in estimated forfeitures.

Deferred Stock Units/Restricted Stock Units

Beginning in 2007, the Company granted deferred stock units, or DSUs, to certain employees and members of the Board of Directors with a vesting period of up to five years, and commencing in 2015, such equity was issued as restricted stock units, or RSUs (such RSUs and DSUs are collectively referred to herein as RSUs). The grantee receives one share of common stock at a specified future date for each RSU awarded. The RSUs may not be sold or otherwise transferred until certificates of common stock have been issued, recorded, and delivered to the participant. The RSUs do not have any voting or dividend rights prior to the issuance of certificates of the underlying common stock. The share-based expense associated with these grants was based on the Company's common stock fair value at the time of grant and is amortized over the requisite service period, which generally is the vesting period. The Company recorded a total expense of \$1.6 million and \$3.0 million for the three and six months ended June 30, 2016, respectively, for these RSU awards, compared to the prior year expense of \$1.2 million and \$1.7 million for the three and six months ended June 30, 2015, respectively.

As of June 30, 2016, there was \$12.6 million of total unrecognized compensation cost, net of forfeitures, related to nonvested RSU-based compensation arrangements granted under all Plans. The cost is expected to be recognized over a weighted-average period of 2.6 years and will be adjusted for future changes in estimated forfeitures.

Additionally, prior to the Company's initial public offering, the Company issued RSUs that were treated as an accounting exchange for expiring stock options, whereby the fair value of the expiring stock options equaled the fair value of the RSUs at the date of the exchange. As such, the Company did not record any expense related to these award modifications.

-28-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Information relating to RSU grants and deliveries is as follows:

		Total Fair Market Value of RSUs Issued
	Total RSUs	as
	Issued	Compensation(1) (in thousands)
RSUs outstanding at December 31, 2015	866,540	
RSUs granted	726,830	\$ 8,549
RSUs forfeited	(39,070)	
Common stock delivered	(207,569)	
RSUs surrendered for taxes	(102,641)	
RSUs outstanding at June 30, 2016	1,244,090	

⁽¹⁾ The total fair market value is derived from the number of RSUs granted times the current stock price on the date of grant.

Equity Awards to Consultants

The Company has entered into various consulting agreements with Company stockholders and outside consultants. Consulting expenses are accrued as services are rendered. Consulting services are paid in cash and/or in common stock or stock options. Share-based compensation expense is recorded over the service period based on the estimated fair market value of the equity award at the date services are performed or upon completion of all services under the agreement. During the three months ended June 30, 2016, the Company recorded an immaterial amount of share-based compensation related to the issuance of equity awards for services rendered by consultants. During the six months ended June 30, 2016, the Company recorded approximately \$0.1 million in share-based compensation related to the issuance of equity awards for services rendered by consultants. During the three and six months ended June 30, 2015, the Company recorded an immaterial amount of share-based compensation related to the issuance of equity awards for services rendered by consultants.

The Company recorded share-based compensation expense under all plans and is included in the Company's consolidated statement of operations as follows:

	Three Mor Ended	nths	Six Month	s Ended
	June 30,	2015	June 30,	2015
	2016 (in thousar	2015 nds)	2016	2015
Cost of revenues	\$ 771	\$ 730	\$ 1,570	\$ 1,218
Operating expenses:				
Selling, distribution and marketing	65	59	131	99
General and administrative	3,100	2,650	5,746	4,140
Research and development	262	261	602	473
Total share-based compensation	\$ 4,198	\$ 3,700	\$ 8,049	\$ 5,930

15. Employee Benefits

401(k) Plan

The Company has a defined contribution 401(k) plan, or the Plan, whereby eligible employees voluntarily contribute up to a defined percentage of their annual compensation. The Company matches contributions at a rate of 50% on the first 6% of employee contributions, and pays the administrative costs of the Plan. Employer contributions vest over four years. Total employer contributions for the three and six months ended June 30, 2016, were approximately \$0.3 million

-29-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

and \$0.5 million, respectively, compared to the prior year expense of \$0.2 million and \$0.4 million for the three and six months ended June 30, 2015, respectively.

Defined Benefit Pension Plan

In connection with the Merck API Transaction, the Company assumed an obligation associated with a defined-benefit plan for eligible employees of AFP. This plan provides benefits to the employees from the date of retirement and is based on the employee's length of time with the Company. The calculation is based on a statistical calculation combining a number of factors that include the employee's age, length of service, and AFPs turnover rate.

The liability under the plan is based on a discount rate of 1.75% as of June 30, 2016 and December 31, 2015. The liability is included in accrued liabilities in the accompanying consolidated balance sheets. The plan is currently unfunded, and the benefit obligation under the plan was \$1.7 million and \$1.6 million at June 30, 2016 and December 31, 2015, respectively. The Company recorded an immaterial amount of expense under the plan for the three and six months ended June 30, 2015.

16. Commitments and Contingencies

Distribution Agreement with Actavis, Inc.

In May 2005, the Company entered into an agreement to grant certain exclusive marketing rights for its enoxaparin product to Andrx Pharmaceuticals, Inc., or Andrx, which generally extends to the U.S. retail pharmacy market. To obtain such rights, Andrx made a non-refundable, upfront payment of \$4.5 million to the Company upon execution of the agreement, which was classified as deferred revenues. Under the agreement, the Company is paid a fixed cost per unit sold to Andrx and also shares in the gross profits (as defined) from Andrx's sales of the product in the U.S. retail pharmacy market. In November 2006, Watson Pharmaceuticals, Inc., or Watson, acquired Andrx and all of the rights and obligations associated with the agreement. In January 2013, Watson adopted Actavis, Inc. as its new global name. In March 2015, Actavis acquired Allergan plc and adopted Allergan plc as its new global name in June 2015.

In January 2012, the Company launched enoxaparin, beginning the seven-year period in which Actavis has the exclusive marketing rights for the Company's enoxaparin product in the U.S. retail pharmacy market and the start of the Company's recognition of the \$4.5 million deferred revenue over this period on a straight-line basis. Actavis has an option to renew the agreement for an additional three years. As of June 30, 2016 and December 31, 2015, the balance of the deferred revenue was \$1.7 million and \$2.0 million, respectively. On June 30, 2016, the Company and Actavis agreed to terminate the agreement upon the earlier of (i) January 1, 2017, and (ii) such earlier date that is 30 days after Actavis notifies the Company in writing that Actavis has less than 30 days inventory of the enoxaparin product remaining in Actavis's possession or scheduled to be delivered pursuant to the pending purchase orders. The Company will recognize the remaining balance of the deferred revenue of \$1.7 million as of June 30, 2016 over the period from July 1, 2016 through December 31, 2016, on a straight-line basis as a result of the revised estimate of the contractual period.

The Company manufactures its enoxaparin product for the retail market according to demand specifications of Actavis. Upon shipment of enoxaparin to Actavis, the Company recognizes product sales at an agreed transfer price and records the related cost of products sold. Based on the terms of the Company's distribution agreement with Actavis, the Company is entitled to a share of the ultimate profits based on the eventual net revenue from enoxaparin sales by Actavis to the end user less the agreed transfer price originally paid by Actavis to the Company. Actavis provides the Company with a quarterly sales report that calculates the Company's share of Actavis enoxaparin gross profit. The Company records its share of Actavis gross profit as a component of net revenue.

-30-

T 11	c	~
Tabl	$\alpha \cap t$	Contents
1 aur	C OI	Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Supply Agreement with MannKind Corporation

On July 31, 2014, the Company entered in a supply agreement with MannKind Corporation, or MannKind, pursuant to which the Company will manufacture for and supply to MannKind certain quantities of RHI for use in MannKind's product Afrezza®. Under the terms of the supply agreement, the Company will be responsible for manufacturing the RHI in accordance with MannKind's specifications and agreed-upon quality standards. MannKind has agreed to purchase annual minimum quantities of RHI under the supply agreement of an aggregate amount of approximately €120.1 million, or approximately \$146.0 million, in calendar years 2015 through 2019.

MannKind paid a non-refundable reservation fee to the Company in the amount of €11.0 million, or approximately \$14.0 million upon entry into the agreement. Under the agreement, the non-refundable reservation fee was considered as partial payment for the purchase commitment quantity for 2015. The Company classified the amount as deferred revenue. As of December 31, 2015, the full amount of the deferred revenue has been recognized.

Unless earlier terminated, the term of the supply agreement expires on December 31, 2019, and can be renewed for additional, successive two-year terms upon 12 month's written notice given prior to the end of the initial term or any additional two-year term. MannKind and the Company each have customary termination rights, including termination for material breach that is not cured within a specific time frame or in the event of liquidation, bankruptcy, or insolvency of the other party. In addition, MannKind may terminate the supply agreement upon two years' prior written notice to the Company without cause or upon 30 days prior written notice to the Company if a controlling regulatory authority withdraws approval for Afrezza®; provided, however, in the event of a termination pursuant to either of these scenarios, the provisions of the supply agreement require MannKind to pay the full amount of all unpaid purchase commitments due over the initial term within 60 calendar days of the effective date of such termination.

In January 2015, the Company entered into a supply option agreement with MannKind, pursuant to which MannKind will have the option to purchase RHI, for use in MannKind's product Afrezza®, in addition to the amounts specified in the July 2014 supply agreement. Under the agreement, MannKind has the option to purchase additional RHI in calendar years 2016 through 2019. In the event MannKind elects not to exercise its minimum annual purchase option for any year, MannKind shall pay the Company a capacity cancellation fee.

By mutual agreement, MannKind did not purchase the full contractually obligated quantities of RHI in 2015. The 2015 sales of RHI to MannKind were \$20.8 million. In October 2015, MannKind informed the Company they were not going to exercise the option to purchase additional quantities of RHI for 2016 under the supply option agreement. Accordingly, MannKind paid the Company a capacity cancellation fee in October 2015 for not exercising its minimum annual purchase option for 2016. The Company recognized this payment as revenue in fiscal 2015. In the six months ended June 30, 2016, sales of RHI to MannKind totaled \$3.8 million. The Company is currently in discussions with MannKind regarding the timing of future purchases.

Collaboration Agreement with a Medical Device Manufacturer

The Company has entered into a collaboration agreement with a medical device manufacturer to develop a drug delivery system to be used by the Company for one of its pipeline products. As of June 30, 2016 the Company has paid an upfront payment of \$0.5 million and \$0.7 million in milestone payments under this agreement, which were classified as research and development expense. The Company is obligated to pay up to an additional \$1.3 million if certain milestones are met. As of June 30, 2016, no such obligation existed. If the medical device manufacturer is successful in the development of this drug delivery system and the Company's pipeline products receive appropriate regulatory approval, the Company intends to enter into a commercial supply agreement with such medical device manufacturer for a minimum purchase of 1.0 million units during the first 12 months.

-31-

T 11	c	~
Tabl	$\alpha \cap t$	Contents
1 aur	C OI	Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Operating Lease Agreements

The Company leases real and personal property, in the normal course of business, under various non-cancelable operating leases. The Company, at its option, can renew a substantial portion of its leases, at the market rate, for various renewal periods ranging from one to six years. Rental expense under these leases for the three and six months ended June 30, 2016, was approximately \$0.9 million and \$1.7 million, respectively, compared to \$0.9 million and \$1.7 million for the three and six months ended June 30, 2015, respectively.

Purchase Commitments

As of June 30, 2016, the Company has entered into commitments to purchase equipment and raw materials for an aggregate of \$16.9 million. The Company anticipates that most of these commitments will be fulfilled by 2017.

The Company entered into agreements with a Chinese governmental entity to acquire land-use rights to real property in Nanjing, China. Under the terms of these agreements, the Company committed to invest capital in its wholly-owned subsidiary, ANP, and to develop these properties as an API manufacturing facility for the Company's pipeline products. In conjunction with these agreements, ANP modified its business license on July 3, 2012, to increase its authorized capital. As of June 30, 2016, the Company had invested approximately \$49.0 million in ANP of its registered capital commitment of \$61.0 million. The Company has committed to invest an additional \$12.0 million in ANP by December 2017. This investment in ANP will result in cash being transferred from the U.S. parent company to ANP.

Per these agreements, in January 2010, the Company acquired certain land-use rights with a carrying value of \$1.2 million. In addition, the Company purchased additional land-use rights in November 2012 for \$1.3 million. The Company committed to spend approximately \$15.0 million in land development. The agreements require the construction of fixed assets on the property and specified a timetable for the construction of these fixed assets. The current pace of development of the property is behind the schedules described in the purchase agreements and, per the purchase agreement, potential monetary penalties could result if the development is delayed or not completed in accordance with the guidelines stated in the purchase agreements. The Company is in discussions with the Chinese government regarding the development and believes that the likelihood of incurring any penalty is remote.

17. Litigation

Enoxaparin Patent Litigation

In September 2011, Momenta Pharmaceuticals, Inc., or Momenta, a Boston based pharmaceutical company, and Sandoz Inc., or Sandoz, the generic division of Novartis, initiated litigation against the Company for alleged patent infringement of two patents related to testing methods for batch release of enoxaparin, which the Company refers to as the "'886 patent" and the "'466 patent." The lawsuit was filed in the United States District Court for the District of Massachusetts, or the District Court. In October 2011, the District Court issued a preliminary injunction barring the Company from selling its generic enoxaparin product and also requiring Momenta and Sandoz to post a \$100.1 million bond. The preliminary injunction was stayed by the United States Court of Appeals for the Federal Circuit, or the Federal Circuit, in January 2012, and reversed by the Federal Circuit in August 2012.

In January 2013, the Company moved for summary judgment of non infringement of both patents. Momenta and Sandoz withdrew their allegations as to the '466 patent, and in July 2013, the District Court granted the Company's motion for summary judgment of non infringement of the '886 patent and denied Momenta and Sandoz's motion for leave to amend their infringement contentions. On January 24, 2014, the District Court judge entered final judgment in the Company's favor on both patents. Momenta and Sandoz also filed a motion to collect attorneys' fees and costs relating to a discovery motion which the District Court granted. On May 9, 2016, the District Court issued an order imposing fees and costs of approximately \$0.4 million in relation to this discovery motion. This amount has been accrued in the General and

-32-

Table of Contents

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Administrative expense for the quarter ended March 31, 2016. On January 30, 2014, Momenta and Sandoz filed a notice of appeal to the Federal Circuit appealing the court's final judgment including summary judgment denying Momenta and Sandoz's motion for leave to amend their infringement contentions.

Following appeal briefing filed by the parties, the Federal Circuit held oral argument on May 4, 2015. On November 10, 2015, the Federal Circuit panel affirmed-in-part and vacated-in-part the decision of the District Court granting summary judgment of non-infringement as to the Company, and it remanded the case to the District Court for further proceedings consistent with its opinion. The Federal Circuit panel affirmed the District Court's holding in the Company's favor that the Company does not infringe under 35 U.S.C. 271(g), and the panel vacated the grant of summary judgment to the extent it was based on the determination that the Company's activities fall within the 35 U.S.C. 271(e)(1) safe harbor. The Federal Circuit panel also left to the District Court's discretion whether to reconsider on remand its denial of leave for Momenta and Sandoz to amend their infringement contentions. On January 11, 2016, the Company filed a Petition for Rehearing En Banc with the Federal Circuit. On February 17, 2016, the Federal Circuit denied the Company's Petition, and the Federal Circuit issued its mandate on February 24, 2016, whereby the case will return to the District Court for further proceedings.

On March 18, 2016, the parties filed a joint status report with the District Court. On June 21, 2016, the District Court granted Momenta and Sandoz's Motion for Leave to Amend its Infringement Contentions. In light of Momenta and Sandoz's Amended Infringement Contentions and recent changes in Supreme Court precedent since the case was stayed in 2012, the Company sought to amend its Non-Infringement and Invalidity Contentions. The District Court then held a status conference on July 6, 2016 and referred the issue of the Company's amended contentions to the Magistrate Judge for briefing and further informed the parties that replies to any Summary Judgment motion are due in May 2017 and trial is set to begin on July 10, 2017. On July 15, 2016, the District Court entered the Amended Scheduling Order setting the end of any remaining fact discovery for November 22, 2016 and the end of expert discovery for March 24, 2017.

On July 18, 2016, the Company submitted its Motion for Leave to Amend Its Non-Infringement and Invalidity Contentions and Momenta and Sandoz's responded on July 25, 2016. In light of new arguments made in their response, the Company further filed a Motion For Leave to Reply in Further Support of Defendants' Motion for Leave to Amend Non-Infringement and Invalidity Contentions. The District Court has not yet ruled on the Company's pending motions regarding its amended contentions.

In parallel with the District Court proceedings, the Company is appealing the Federal Circuit's decision to vacate the grant of the Company's summary judgment to the extent it was based on the determination that the Company's activities are protected under the Safe Harbor. The Company filed a Petition for a Writ of Certiorari with the Supreme Court on May 17, 2016. Momenta and Sandoz initially waived their right to respond to the petition; however, on May 31, 2016, the Supreme Court requested a response from Momenta and Sandoz. The response from Momenta and Sandoz was initially due on June 30, 2016 but they requested an extension. Momenta and Sandoz filed their response on August 1, 2016.

The Company intends to vigorously defend this case in the District Court and pursue its legal appeal with the Supreme Court. The Company intends to attempt to collect the \$100.1 million bond posted by Momenta and Sandoz following a decision on the merits in the event the Company prevails in District Court, or following a decision by the Supreme Court, in the event that the Supreme Court reverses the Federal Circuit decision that the Company's activities do not fall within the Safe Harbor.

False Claims Act Litigation

In January 2009, the Company filed a qui tam complaint in the U.S. District Court for the Central District of California, or the District Court, alleging that Aventis Pharma S.A., or Aventis, through its acquisition of a patent through false and misleading statements to the U.S. Patent and Trademark Office, as well as through false and misleading statements to the

-33-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

FDA, overcharged the federal and state governments for its Lovenox® product. If the Company is successful in this litigation, it could be entitled to a portion of any damage award that the government ultimately may recover from Aventis. In October 2011, the District Court unsealed the Company's complaint.

On February 28, 2014, Aventis filed a motion for summary judgment on the issue of the adequacy of the Company's notice letter to the government, and the District Court denied Aventis' motion for summary judgment in a final order it issued on May 12, 2014. On June 9, 2014, at Aventis' request, the District Court issued an order certifying for appeal its order denying Aventis' motion for summary judgment. On June 9, 2014, Aventis filed with the United States Court of Appeals for the Ninth Circuit, or the Ninth Circuit, a petition for permission to appeal the District Court's denial of Aventis' motion for summary judgment, and the Company filed an opposition to Aventis' petition on June 19, 2014. On August 22, 2014, the Ninth Circuit granted Aventis' petition. The parties have completed and filed their respective appeal briefs with the Ninth Circuit. A date for oral argument has not been set by the Ninth Circuit.

The District Court set an evidentiary hearing for July 7, 2014 on the "original source" issue, a key element under the False Claims Act. The evidentiary hearing was conducted as scheduled, from July 7, 2014 through July 10, 2014. On July 13, 2015, the District Court issued a ruling concluding that the Company is not an original source under the False Claims Act, and the District Court entered final judgment dismissing the case for lack of subject matter jurisdiction.

On July 27, 2015, Aventis filed a request for attorneys' fees with the District Court, and on August 3, 2015, the Company filed objections to Aventis's request. On July 20, 2015, the Company filed with the Ninth Circuit a notice of appeal of the District Court's dismissal of the case, and Aventis filed a notice of cross-appeal on August 5, 2015. On November 12, 2015, Aventis filed a pleading asking that the District Court impose various monetary penalties and fines against the Company, including disgorgement of enoxaparin revenues and attorneys' fees expended by Aventis in this action, based on Aventis's allegations that the Company engaged in sanctionable conduct. On November 23, 2015, the District Court issued an order setting forth a procedure for sanctions proceedings as to the Company as well as its outside counsel. On December 24, 2015, the Company filed a pleading with the District Court opposing the imposition of sanctions, and on January 20, 2016, Aventis filed a response pleading further pressing for the imposition of sanctions. On May 4, 2016, the District Court issued three orders requesting that the Company and its outside counsel file a document showing cause as to why sanctions should not be imposed and to set up a conference call with the partiers and the court to discuss whether any discovery and/or a hearing is necessary. On June 13, 2016, the Company and its outside counsel each filed responses to the Court's order to show cause as to why sanctions should not be imposed. On July 21, 2016, Aventis filed a response contending that the Court should impose sanctions. The Company intends to continue to vigorously defend against any such imposition of sanctions.

On March 28, 2016, the Company filed its opening brief with the Ninth Circuit Court of Appeals setting forth detailed arguments as to why the False Claims Act litigation should not have been dismissed by the District Court. On June 20, 2016, Aventis filed its principal brief in the appeal, responding to the Company's arguments regarding dismissal of the False Claims Act litigation, and setting forth Aventis's argument that it should be awarded attorneys' fees and expenses. The Company's reply brief is due on September 19, 2016. The Company intends to vigorously defend this case.

California Employment Litigation

On January 6, 2015, the Company received a formal demand from Plaintiff's counsel in an employment related lawsuit captioned Eva Hernandez v. International Medication Systems Limited, in connection with a complaint originally filed on February 4, 2013 in the Superior Court of California County of Los Angeles, or the Court, by plaintiff Eva Hernandez on behalf of herself and others similarly situated. Plaintiff's complaint included alleged violations of the California Labor Code stemming from the Company's alleged timekeeping practices, as well as other similar and related claims brought under California law. In the complaint, Plaintiff sought damages and related remedies under California law, as well as various penalty payments under the California Labor Code, on behalf of herself and others similarly situated. On April 7, 2015, solely to resolve the dispute, minimize disruption to the Company due to ongoing litigation, and other

-34-

AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

similar and related factors (but unrelated to the alleged merits of Plaintiff's claims), the Company reached an agreement in principle to settle this matter on a class wide basis for a total amount of \$3.2 million, plus applicable payroll taxes. The Joint Stipulation of Settlement as executed by the parties was filed with the Court on June 2, 2015. On July 1, 2015, the Court preliminarily approved the settlement, and on November 5, 2015, the Court entered an order granting final approval of the settlement.

Momenta/Sandoz Antitrust Litigation

On September 17, 2015, the Company initiated a lawsuit by filing a Complaint in the Central District of California against Momenta and Sandoz. The Company's complaint generally asserts that Momenta and Sandoz have engaged in certain types of illegal, monopolistic, and anticompetitive conduct giving rise to various causes of action against them. On December 9, 2015, Defendants filed a motion to dismiss and a motion to transfer the case to the District of Massachusetts. On January 4, 2016, the Company filed oppositions to both motions. On January 26, 2016, the District Court of the Central District of California granted Defendants' motion to transfer and did not rule on Defendants' motion to dismiss. Accordingly, the case was transferred to the District of Massachusetts. On February 9, 2016, the Company filed a writ of mandamus with the Ninth Circuit Court of Appeals to attempt to appeal the District Court of the Central District of California's granting of Defendants' motion to transfer to the District of Massachusetts. The Ninth Circuit denied this petition on May 20, 2016, and as such the case will remain before the District of Massachusetts. On July 27, 2016, the Massachusetts District Court granted Defendants' motion to dismiss based upon an antitrust immunity doctrine, without addressing the substantive merits of the claims. The Company intends to continue vigorously pursuing these claims and is currently evaluating an appeal.

Other Litigation

The Company is also subject to various other claims and lawsuits from time-to-time arising in the ordinary course of business. The Company records a provision for contingent losses when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. In the opinion of management, the ultimate resolution of any such matters is not expected to have a materially adverse effect on its financial position, results of operations, or cash flows; however, the results of litigation and claims are inherently unpredictable and the Company's view of these matters may change in the future. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources, and other factors.

Table of Conten	ıts
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AMPHASTAR PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

18. Subsequent Events

In August 2016, the Company, through its newly established wholly-owned UK subsidiary, Amphastar UK Limited, acquired International Medication Systems (UK) Limited, a UK-based subsidiary of UCB PHARMA GmbH, including its product trademarks, and other related product assets, as well as marketing authorizations for thirty-three products in the UK, Ireland, Australia, and New Zealand, representing eleven different injectable chemical entities. The Company paid \$7.7 million in cash as consideration for the transaction. The products are generic injectables containing the following active ingredients; Adrenaline, Amiodarone, Atropine, Calcium Chloride, Furosemide, Glucose, Lidocaine, Magnesium Sulphate, Morphine, Naloxone and Sodium Bicarbonate. The Company plans to transfer the manufacturing of the products to its facilities in California. The transfer will require UK Medicines and Healthcare products Regulatory Agency and other related regulatory agency approval before the products can be sold by the Company. The Company has preliminary concluded that this transaction will be accounted for as a business combination in accordance with ASC 805.

-36-

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is a discussion and analysis of our financial condition and the results of operations as of and for the periods presented below. The following discussion and analysis should be read in conjunction with the "Condensed Consolidated Financial Statements" and notes thereto included elsewhere in this Quarterly Report on Form 10-Q, or Quarterly Report. This discussion contains forward-looking statements that are based on the beliefs of our management, as well as assumptions made by, and information currently available to our management, and are subject to known and unknown risks, uncertainties, and other factors that may cause our actual results to differ materially from those expressed or implied by such forward-looking statements. These risks, uncertainties, and other factors include, among others, those identified under the "Special Note About Forward-Looking Statements," above and described in greater detail elsewhere in this Quarterly Report and in our Annual Report on Form 10-K for the year ended December 31, 2015, particularly in Item 1A. "Risk Factors".

Overview

Amphastar Pharmaceuticals, Inc., together with our wholly-owned subsidiaries, International Medication Systems, Limited, or IMS; Armstrong Pharmaceuticals, Inc., or Armstrong; Amphastar Nanjing Pharmaceuticals Co., Ltd., or ANP; and Amphastar France Pharmaceuticals, S.A.S., or AFP, is a specialty pharmaceutical company that focuses primarily on developing, manufacturing, marketing and selling technically-challenging generic and proprietary injectable, inhalation and intranasal products. Additionally, we sell insulin active pharmaceutical ingredient, or API products. We currently manufacture and sell 19 products including Amphadase®, which we re-launched in the fourth quarter of 2015. Additionally, we are developing a portfolio of 15 generic abbreviated new drug applications, or ANDAs, three generic biosimilar and six proprietary injectable and inhalation product candidates.

Our largest product by net revenues is currently enoxaparin sodium injection, the generic equivalent of Sanofi S.A.'s Lovenox®. Enoxaparin is a difficult to manufacture injectable form of low molecular weight heparin that is used as an anticoagulant and is indicated for multiple indications, including the prevention and treatment of deep vein thrombosis.

We have agreements with established group purchasing organizations and wholesaler networks to distribute enoxaparin, which is marketed under our own label for the hospital and clinic market. For the U.S. retail market, we have an agreement with Actavis Inc., or Actavis, to distribute enoxaparin, which is marketed under Actavis' label. On June 30, 2016, Actavis and Amphastar agreed to terminate the agreement upon the earlier of (i) January 1, 2017, and (ii) such earlier date that is 30 days after Actavis notifies us in writing that Actavis has less than 30 days inventory of the enoxaparin product remaining in Actavis' possession or scheduled to be delivered pursuant to the pending purchase orders.

In June 2015, we received approval of our new drug application, or NDA supplement for Amphadase®. This marks the first approved starting material from ANP and signifies that our facility located in Nanjing, China has been qualified by the U.S. Food and Drug Administration, or FDA. We re-launched Amphadase® in the fourth quarter of 2015. Amphadase® is competing in the hyaluronidase market and is used for the dispersion and absorption of other injected drugs.

Our pipeline of over 20 generic and proprietary product candidates is in various stages of development and targets a variety of indications. With respect to these product candidates, we have four ANDAs and two NDAs on file with the FDA.

In addition to our existing pipeline, we acquired fourteen ANDAs in March 2016, representing eleven different injectable chemical entities from Hikma Pharmaceuticals PLC. We plan to transfer the product candidates to our facilities in California, which will require FDA approval before the product candidates can be launched.

To complement our internal growth and expertise, we have made several strategic acquisitions of companies, products and technologies. These acquisitions collectively have strengthened our core injectable and inhalation product

-37-

Table of Contents

technology infrastructure by providing additional manufacturing, marketing, and research and development capabilities including the ability to manufacture raw materials, APIs and other components for our products.

Business Segments

Our performance will be assessed and resources will be allocated based on the following two reportable segments: (1) finished pharmaceutical products and (2) API products. The finished pharmaceutical products segment currently manufactures, markets and distributes enoxaparin, Cortrosyn®, Amphadase®, naloxone, lidocaine jelly, as well as various other critical and non-critical care drugs. The API segment currently manufactures and distributes recombinant human insulin, or RHI and porcine insulin. Information reported herein is consistent with how it is reviewed and evaluated by our chief operating decision maker. Factors used to identify our segments include markets, customers and products.

For more information regarding our segments, see "Part I – Item 1. Financial Statements – Notes to Condensed Consolidated Financial Statements – Segment Reporting."

Results of Operations

Three Months Ended June 30, 2016 Compared to Three Months Ended June 30, 2015

Net revenues

	Three Months Ended June 30,		Change		
	2016	2015	Dollars	%	
	(in thousan	ds)			
Net revenues					
Finished pharmaceutical products					
Enoxaparin	\$ 17,328	\$ 19,541	\$ (2,213)	(11)%	
Other products	46,428	30,534	15,894	52 %	
Total finished pharmaceutical products	\$ 63,756	\$ 50,075	\$ 13,681	27 %	
API	4,277	3,778	499	13 %	
Total net revenues	\$ 68,033	\$ 53,853	\$ 14,180	26 %	
Cost of revenues					

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Finished pharmaceutical products	\$ 33,159	\$ 37,441	\$ (4,282)	(11)%
API	3,160	3,094	66	2 %
Total cost of revenues	\$ 36,319	\$ 40,535	\$ (4,216)	(10)%
Gross profit	\$ 31,714	\$ 13,318	\$ 18,396	138 %
as % of net revenues	47 %	25 %		

Net revenues were \$68.0 million and \$53.9 million for the three months ended June 30, 2016 and 2015, respectively, representing an increase of \$14.2 million, or 26%. The increase was primarily due to an increase in sales of other finished pharmaceutical products largely due to an increase in sales of naloxone to \$15.6 million from \$10.7 million, as a result of a significant increase in unit volumes. Pricing of naloxone declined in the three months ended June 30, 2016 compared to the three months ended June 30, 2015, as we increased discounting and rebates. This increase was also due to an increase in sales of phytonadione to \$8.8 million from \$1.8 million, sales of epinephrine to \$5.2 million from \$2.2 million, and an increase in sales of lidocaine to \$8.2 million from \$7.3 million. Additionally, our insulin API business had an increase in sales of RHI and porcine insulin to \$4.3 million from \$3.8 million, as MannKind purchased part of their unfulfilled 2015 commitments during the second quarter of 2016. These increases were partially offset by a decrease of sales of enoxaparin, which decreased \$2.2 million from \$19.5 million to \$17.3 million on lower average selling prices.

We expect that the declines in the average selling price of enoxaparin will continue and that unit volume will decline in the near term as a result of increased competition. In addition, the timing of sales into the retail channel may be adversely affected in the near term, as we will stop shipping to Actavis in the third quarter, and we cannot sell into the retail market

-38-

Table of Contents

directly until the contract termination date which is the earlier of (i) January 1, 2017, and (ii) such earlier date that is 30 days after Actavis notifies us in writing that Actavis has less than 30 days inventory of the enoxaparin product remaining in Actavis' possession or scheduled to be delivered pursuant to the pending purchase orders. We believe that pricing increases on several other finished pharmaceutical products will partially offset lower enoxaparin sales; however, we expect that net revenues for the remainder of 2016 may be negatively impacted. Net revenues would also be impacted if sales of our products were affected by any manufacturing or production issues, supply chain interruptions or unexpected regulatory issues.

We anticipate that sales of insulin API will continue to fluctuate due to the inherent uncertainties related to sales of RHI to MannKind. In addition, most of our API sales are denominated in Euros, and the fluctuation in the value of the Euro versus the dollar compared to 2015 has had, and will continue to have, an impact on API sales revenues in the near term.

Cost of revenues

Cost of revenues was \$36.3 million and \$40.5 million for the three months ended June 30, 2016 and 2015, respectively, representing a decrease of \$4.2 million, or 10%. The decrease was primarily due to a decrease in average cost per unit of enoxaparin. Gross profit as a percentage of net revenues increased because of a lower average heparin material costs and higher average prices of several finished pharmaceutical products. Additional factors affecting gross profit in the second quarter of 2016 included an increase in manufacturing volume, which increased overhead absorption. This benefit was partially offset by increased personnel costs at our domestic manufacturing sites.

Declining prices and unit volume of enoxaparin will put downward pressure on gross margins, but we believe this trend will be partially offset by increases in prices of several other finished pharmaceutical products. As a result, gross margin is expected to be variable depending on revenue mix.

Selling, distribution and marketing, general and administrative, and impairment of long-lived assets

Three Months Ended			
June 30,		Change	
2016	2015	Dollars	%
(in thousa	inds)		
\$ 1,332	\$ 1,470	\$ (138)	(9) %
9,458	11,308	(1,850)	(16)%
114	74	40	54 %
	June 30, 2016 (in thousa \$ 1,332 9,458	2016 2015 (in thousands) \$ 1,332 \$ 1,470 9,458 11,308	June 30, Change 2016 2015 Dollars (in thousands) \$ 1,332 \$ 1,470 \$ (138) 9,458 11,308 (1,850)

General and administrative expenses were \$9.5 million and \$11.3 million for the three months ended June 30, 2016 and 2015, respectively, representing a decrease of \$1.8 million, or 16%. The decrease was primarily due to a decrease in personnel cost.

We expect general and administrative expenses will increase on an annual basis due to increased costs associated with ongoing compliance with public company reporting obligations.

Research and development

	Three Mon	ths Ended		
	June 30,		Change	
	2016	2015	Dollars	%
	(in thousan	ids)		
Research and development	\$ 10,480	\$ 10,726	\$ (246)	(2)%

Research and development expenses were \$10.5 million and \$10.7 million for the three months ended June 30, 2016 and 2015, respectively, representing a decrease of \$0.2 million, or 2%. This decrease was primarily due to a decrease in clinical trial expense and cost of research and development supplies. The decrease was partially offset by an increase in FDA fees pertaining to the NDA filing of our intranasal naloxone product candidate.

-39-

Research and development costs consist primarily of costs associated with the research and development of our product candidates, such as salaries and other personnel related expenses for employees involved with research and development activities, manufacturing pre launch inventory, clinical trials, FDA fees, testing, operating and lab supplies, depreciation and other related expenses. We expense research and development costs as incurred.

We have made, and expect to continue to make, substantial investments in research and development to expand our product portfolio and grow our business. These costs will fluctuate significantly from quarter to quarter based on the timing of various clinical trials, the pre-launch costs associated with new products, and FDA filing fees. As we undertake new and challenging research and development projects, we anticipate that the associated annual costs will increase significantly over the next several years.

The following table sets forth our research and development expenses for the three months ended June 30, 2016 and 2015:

	Three Mon June 30,	ths Ended	Change	
	2016	2015	Dollars	%
	(in thousan	ids)		
Salaries and personnel-related expenses	\$ 3,368	\$ 3,472	\$ (104)	(3) %
Clinical trials	153	1,772	(1,619)	(91) %
FDA fees	2,388	59	2,329	3,947%
Testing, operating and lab supplies	2,543	3,612	(1,069)	(30) %
Depreciation	1,183	993	190	19 %
Other expenses	845	818	27	3 %
Total research and development expenses	\$ 10,480	\$ 10,726	\$ (246)	(2) %

Provision for income tax expense (benefit)

	Three Mon	ths Ended		
	June 30,		Change	
	2016	2015	Dollars	%
	(in thousan	ids)		
Income tax expense (benefit)	\$ 2,857	\$ (3,582)	\$ 6,439	NM
Effective tax rate	29 %	(35) %		

Provision for income tax expense was \$2.9 million for the three months ended June 30, 2016, compared to an income tax benefit of \$3.6 million for the three months ended June 30, 2015, representing an increase in income tax expense

of \$6.4 million. The increase in income tax expense is related to a pre-tax income during the second quarter of 2016 compared to a pre-tax loss during the second quarter of 2015.

-40-

Six Months Ended June 30, 2016 Compared to Six Months Ended June 30, 2015

Net revenues

	Six Months Ended June 30,		Change	
	2016	2015	Dollars	%
	(in thousands))		
Net revenues				
Finished pharmaceutical products				
Enoxaparin	\$ 35,686	\$ 43,383	\$ (7,697)	(18)%
Other products	86,624	57,564	29,060	50 %
Total finished pharmaceutical products	\$ 122,310	\$ 100,947	\$ 21,363	21 %
API	5,089	9,792	(4,703)	(48)%
Total net revenues	\$ 127,399	\$ 110,739	\$ 16,660	15 %
Cost of revenues				
Finished pharmaceutical products	\$ 65,888	\$ 75,460	\$ (9,572)	(13)%
API	4,895	8,681	(3,786)	(44)%
Total cost of revenues	\$ 70,783	\$ 84,141	\$ (13,358)	(16)%
Gross profit	\$ 56,616	\$ 26,598	\$ 30,018	113 %
as % of net revenues	44 %	24 %		

Net revenues were \$127.4 million and \$110.7 million for the six months ended June 30, 2016 and 2015, respectively, representing an increase of \$16.7 million, or 15%. The increase was primarily due to an increase in sales of other finished pharmaceutical products largely due to an increase in sales of naloxone to \$25.8 million from \$17.4 million, as a result of a significant increase in unit volumes. Pricing of naloxone declined during the six months ended June 30, 2016, compared to the six months ended June 30, 2015, as we increased discounting and rebates. This increase was also due to an increase in sales of phytonadione to \$14.9 million from \$4.4 million, an increase in sales of epinephrine to \$9.6 million from \$4.9 million and an increase in sales of lidocaine to \$18.1 million from \$14.5 million. These increases were partially offset by a decrease of sales of enoxaparin, which decreased \$7.7 million from \$43.4 million to \$35.7 million on lower average selling prices. Additionally, our insulin API business had decreased sales of RHI and porcine insulin by \$4.7 million from \$9.8 million to \$5.1 million as a result of no sales to MannKind during the first quarter of 2016.

Cost of revenues

Cost of revenues was \$70.8 million and \$84.1 million for the six months ended June 30, 2016 and 2015, respectively, representing a decrease of \$13.3 million, or 16%. The decrease was primarily due to a decrease in average cost per unit of enoxaparin and reduced shipments of RHI. Gross profit as a percentage of net revenues increased because of a

lower average heparin material costs and higher average prices of several finished pharmaceutical products. Additional factors affecting gross profit during the six months ended June 30, 2016 included an increase in manufacturing volume, which increased overhead absorption. This benefit was partially offset by increased personnel costs at our domestic manufacturing sites.

Selling, distribution and marketing, general and administrative, and impairment of long-lived assets

	Six Months	s Ended		
	June 30,		Change	
	2016	2015	Dollars	%
	(in thousan	ids)		
Selling, distribution, and marketing	\$ 2,684	\$ 2,992	\$ (308)	(10)%
General and administrative	20,328	23,759	(3,431)	(14)%
Impairment of long-lived assets	331	74	257	347 %

-41-

General and administrative expenses were \$20.3 million and \$23.8 million for the six months ended June 30, 2016 and 2015, respectively, representing a decrease of \$3.5 million, or 14%. The decrease was primarily due to the effect on the first quarter of 2015 of a \$3.3 million settlement in 2015 relating to our California employment litigation.

Research and development

	Six Month	s Ended		
	June 30,		Change	
	2016	2015	Dollars	%
	(in thousan	ıds)		
Research and development	\$ 18,868	\$ 17,294	\$ 1,574	9 %

Research and development expenses were \$18.9 million and \$17.3 million for the six months ended June 30, 2016 and 2015, respectively, representing an increase of \$1.6 million, or 9%. This increase was primarily due to an increase in FDA fees pertaining to the NDA filing of our intranasal naloxone product candidate. This increase was partially offset by a decrease in clinical trial expense and research and development supplies.

Research and development costs consist primarily of costs associated with the research and development of our product candidates, such as salaries and other personnel related expenses for employees involved with research and development activities, manufacturing pre launch inventory, clinical trials, FDA fees, testing, operating and lab supplies, depreciation and other related expenses. We expense research and development costs as incurred.

The following table sets forth our research and development expenses for the six months ended June 30, 2016 and 2015:

	Six Months	s Ended			
	June 30,		Change		
	2016	2015	Dollars	%	
	(in thousan	ids)			
Salaries and personnel-related expenses	\$ 6,955	\$ 6,687	\$ 268	4	%
Clinical trials	997	1,870	(873)	(47)	%
FDA fees	2,402	174	2,228	1,280)%
Testing, operating and lab supplies	4,428	5,168	(740)	(14)	%
Depreciation	2,397	2,001	396	20	%
Other expenses	1,689	1,394	295	21	%
Total research and development expenses	\$ 18,868	\$ 17,294	\$ 1,574	9	%

Provision for income tax expense (benefit)

	Six Month	s Ended		
	June 30,		Change	
	2016	2015	Dollars	%
	(in thousa	nds)		
Income tax expense (benefit)	\$ 4,184	\$ (9,114)	\$ 13,298	NM
Effective tax rate	31 %	(55) %		

Provision for income tax expense was \$4.2 million for the six months ended June 30, 2016, compared to an income tax benefit of \$9.1 million for the six months ended June 30, 2015, representing an increase in income tax expense of \$13.3 million. The increase in income tax expense is related to a pre-tax income during the six months ended June 30, 2016, compared to a pre-tax loss during the six months ended June 30, 2015. Additionally, in 2015 there was a reversal of a deferred tax valuation allowance which had previously been reserved that contributed to the income tax benefit.

-42-

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Table of Contents
Liquidity and Capital Resources
Cash Requirements and Sources
We need capital resources to maintain and expand our business. We expect our cash requirements to increase significantly in the foreseeable future as we sponsor clinical trials for, seek regulatory approvals of, and develop, manufacture and market our current development stage product candidates and pursue strategic acquisitions of businesses or assets. Our future capital expenditures include projects to upgrade, expand and improve our manufacturing facilities in the United States, China and France. Our cash obligations include the principal and interest payments due on our existing loans and lease payments, as described below and throughout this Quarterly Report on Form 10-Q. We believe that our cash reserves, operating cash flows, and borrowings availability under our credit facilities will be sufficient to fund our operations for the next 12 months. We expect additional cash flows to be generated in the longer term from future product introductions, although there can be no assurance as to the receipt of regulatory approval for any product candidates or the timing of any product introductions, which could be lengthy or ultimately unsuccessful.
We maintain a shelf registration statement on Form S-3 pursuant to which we may, from time to time, sell up to an aggregate of \$250 million of our common stock, preferred stock, depositary shares, warrants, units, or debt securities. If we require or elect to seek additional capital through debt or equity financing in the future, we may not be able to raise capital on terms acceptable to us or at all. To the extent we raise additional capital through the sale of equity or convertible debt securities, the issuance of such securities will result in dilution to our stockholders. If we are required and unable to raise additional capital when desired, our business, operating results and financial condition may be adversely affected.
Working capital decreased \$0.4 million to \$115.6 million at June 30, 2016, compared to \$116.0 million at December 31, 2015.
Cash Flows from Operations

The following table summarizes our cash flows used in operating, investing, and financing activities for the six

months ended June 30, 2016:

Six Months Ended

	June 30, 2016 (in thousands)		
Statement of Cash Flow Data:			
Net cash provided by (used in)			
Operating activities	\$	23,256	
Investing activities		(17,426)	
Financing activities		(5,071)	
Effect of exchange rate changes on cash		(173)	
Net increase in cash and cash equivalents	\$	586	

Sources and Use of Cash

Operating Activities

Net cash provided by operating activities was \$23.3 million for the six months ended June 30, 2016, which included net income of \$9.4 million. Non-cash items were comprised of \$7.0 million of depreciation and amortization, and \$8.0 million of share-based compensation expense. This was partially offset by a change of \$5.9 million in operating assets and liabilities which was primarily due to the reduction of accounts receivable and by an inventory increase.

Investing Activities

Net cash used in investing activities was \$17.4 million for the six months ended June 30, 2016, was primarily due to \$4.0 million for the purchase of the fourteen ANDAs from Hikma Pharmaceuticals PLC, \$0.8 million relating to the

-43-

Table of Contents

acquisition of Nanjing Letop Medical Technology Co. Ltd., or Letop, and \$9.3 million in purchases of property, machinery, and equipment, including the associated capitalized labor and interest on self-constructed assets. Additionally, \$3.2 million in deposits were made for machinery and equipment during the first half of 2016.

Financing Activities

Net cash used in financing activities of \$5.1 million for the six months ended June 30, 2016, was primarily related to \$9.4 million for the repurchase of our common stock and \$6.4 million in principal payments on our long-term debt. This was partially offset by an increase of \$6.6 million in proceeds from issuance on long-term debt relating to the refinancing of one of our mortgage loans and \$4.2 million in proceeds from our equity plans relating to stock options exercises and purchases of our common stock through the Employee Stock Purchase Plan.

Indebtedness

For more information regarding our outstanding indebtedness, see "Part I – Item 1. Financial Statements – Notes to Consolidated Financial Statements – Debt."

Contractual Obligations

There have been no material changes outside the ordinary course of our business in the contractual obligations disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015, except that our outstanding debt obligations have changed as follows:

	June 30,	December 31,	
	2016	2015	Change
	(in thousan		
Short-term debt and current portion of long-term debt	\$ 10,904	\$ 10,934	\$ (30)
Long-term debt	31,742	30,165	1,577
Total debt	\$ 42,646	\$ 41,099	\$ 1,547

As of June 30, 2016, we had \$37.1 million in unused borrowing capacity under revolving lines of credit with Cathay Bank and East West Bank.

We have entered into a collaboration agreement with a medical device manufacturer to develop a drug delivery system to be used by us for one of our pipeline products. As of June 30, 2016, we have paid an upfront payment of \$0.5 million and \$0.7 million in milestone payments under this agreement, which were classified as research and development expense. We are obligated to pay up to an additional \$1.3 million if certain milestones are met. As of June 30, 2016, no such obligation existed. If the medical device manufacturer is successful in the development of this drug delivery system and the Company's pipeline products receive appropriate regulatory approval, we intend to enter into a commercial supply agreement with such medical device manufacturer for a minimum purchase of 1.0 million units during the first 12 months.

Recent Accounting Pronouncements

For information regarding recent accounting pronouncements, refer to "Recent Accounting Pronouncements" in Note 2 in the accompanying "Notes to Condensed Consolidated Financial Statements" in this Quarterly Report.

Off-Balance Sheet Arrangements

We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts.

-44-

Table of Contents

Government Regulation

Our products and facilities are subject to regulation by a number of federal and state governmental agencies. The Food and Drug Administration, or FDA, in particular, maintains oversight of the formulation, manufacture, distribution, packaging, and labeling of all of our products. The Drug Enforcement Administration, or DEA, maintains oversight over our products that are considered controlled substances.

From January 19 through January 22, 2015, our facility in Éragny-Sur-Epte, France was subject to an inspection by the French National Agency for Medicines and Health Products Safety (Agence nationale de sécurité du médicament et des produits de santé), or ANSM. The inspection included a review of current EU Good Manufacturing Practices, or EU-GMP for Medicinal Products for Human and Veterinary Use (EU-GMP Part II for Active Substances) and Manufacture of Biological Active Substances and Medicinal Products for Human Use (EU-GMP Annex 2). The inspections resulted in various observations issued formally to the facility. We responded to those observations on March 13, 2015, with a minor follow up response on April 3, 2015. We received acknowledgment from ANSM that our responses to the observations were satisfactorily addressed and this facility was issued a certificate of EU-GMP compliance from the Agency dated April 9, 2015, that is valid until January 2018.

From July 22, 2015 through August 10, 2015, our IMS facility in South El Monte, California was subject to an inspection by the FDA. The inspection included a review of our compliance with cGMP regulations and preapproval inspections for abbreviated new drug applications currently being reviewed by the FDA. The inspections resulted in multiple observations on Form 483, an FDA form on which deficiencies are noted after an FDA inspection. We responded to those observations on August 31, 2015. We believe that our responses to the Form 483 will satisfy the FDA and that no significant further actions will be necessary.

From February 29, 2016 through March 4, 2016, our facility in Éragny-sur-Epte, France was subject to an inspection by the FDA. The inspection included a review of Quality Systems, Production Controls, Laboratory Controls, Material Management, and Facilities and Equipment Maintenance. The inspection resulted in multiple observations on Form 483. We responded to those observations on March 24, 2016. We believe our response to the Form 483 will satisfy the FDA and no further actions will be necessary.

From April 25, 2016 through April 28, 2016, our facility in Nanjing, China was subject to an inspection by the FDA. The inspection included a review of Quality Systems, Production Controls, Laboratory Controls, Material Management, and Facilities and Equipment Maintenance. The inspection resulted in no observations on Form 483.

-45-

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

The following discussion provides forward-looking quantitative and qualitative information about our potential exposure to market risk. Market risk represents the potential loss arising from adverse changes in the value of financial instruments. The risk of loss is assessed based on the likelihood of adverse changes in fair values, cash flows or future earnings. We are exposed to market risk for changes in the market values of our investments (Investment Risk), the impact of interest rate changes (Interest Rate Risk), and the impact of foreign currency exchange changes (Foreign Currency Exchange Risk).

Investment Risk

We regularly review the carrying value of our investments and identify and recognize losses, for income statement purposes, when events and circumstances indicate that any declines in the fair values of such investments below our accounting basis are other than temporary. As of June 30, 2016, we did not have any such investments.

As of June 30, 2016, we had \$4.4 million deposited in four banks located in China and \$5.5 million deposited in one bank located in France. We also maintained \$37.6 million in Money Market Insured Deposit Account Service, or MMIDAS, and Insured Cash Sweep, or ICS, accounts as of June 30, 2016. The remaining amounts of our cash equivalent as of June 30, 2016, are in non-interest bearing accounts.

The MMIDAS accounts and ICS accounts allow us to distribute our funds among a network of depository institutions that are re-allocated such that each deposit account is below the \$250.0 thousand Federal Deposit Insurance Corporation, or FDIC, limit, thus providing greater FDIC insurance coverage for our overall cash balances. We have not experienced any losses in such accounts, nor do we believe we are exposed to any significant credit risk on our bank account balances.

Interest Rate Risk

Our primary exposure to market risk is interest rate sensitive investments and credit facilities, which are affected by changes in the general level of U.S. interest rates. Due to the nature of our short-term investments, such as our certificates of deposit, we believe that we are not subject to any material interest rate risk with respect to our short-term investments.

As of June 30, 2016, we had \$42.6 million in long-term debt and capital leases outstanding. Of this amount, \$24.2 million had variable interest rates with a weighted-average interest rate of 3.9% at June 30, 2016. An increase in the index underlying these rates of 1% (100 basis points) would increase our annual interest expense on the variable-rate debt by approximately \$0.2 million per year.

Foreign Currency Rate Risk

Our products are primarily sold in U.S. domestic market, and for the three and six months ended June 30, 2016 and 2015, foreign sales were minimal. Therefore, we have little exposure to foreign currency price fluctuations. However, as a result of our acquisition of the API manufacturing business in Éragny-sur-Epte, France, we are exposed to market risk related to changes in foreign currency exchange rates. Specifically, our insulin sales contracts are primarily denominated in Euros, which are subject to fluctuations relative to the U.S. dollar, or USD. We do not currently hedge our foreign currency exchange rate risk. At this time, an immediate 10% change in currency exchange rates would not have a material effect on our financial position, results of operations or cash flows.

Our Chinese subsidiary, Amphastar Nanjing Pharmaceuticals, Limited, or ANP, maintains their books of record in Chinese Yuan. These books are remeasured into the functional currency of USD, using the current or historical exchange rates. The resulting currency re-measurement adjustments and other transactional foreign exchange gains and losses are reflected in our statement of operations.

-46-

Table of Contents

Our French subsidiary, Amphastar France Pharmaceuticals, S.A.S., or AFP, maintains their books of record in Euros. These books are translated to USD at the average exchange rates during the period. Assets and liabilities are translated at the rate of exchange prevailing on the balance sheet date. Equity is translated at the prevailing rate of exchange at the date of the equity transactions. Translation adjustments are reflected in stockholders' equity and are included as a component of other comprehensive income (loss). We do not undertake hedging transactions to cover our foreign currency exposure.

As of June 30, 2016, our foreign subsidiaries had receivables denominated in foreign currencies in the amount of \$2.0 million.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and our Chief Financial Officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act of 1934, as amended, as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that our disclosure controls and procedures were not effective at the reasonable level of assurance due to a material weakness in internal control over financial reporting discussed below (a) to ensure that information that we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and (b) include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in reports filed or submitted under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. For the year ended December 31, 2015, we identified a material weakness in our internal control over financial reporting in the area of non-standard and complex transactions. The accounting for certain non-standard and complex transactions were not analyzed and/or reviewed in sufficient detail by knowledgeable personnel to reach the appropriate accounting conclusion to properly record the transaction. The number of errors identified and the commonality of the root cause of the adjustments (namely, inadequate resources to provide for a more thorough and precise review in these areas), leads us to conclude that there is a material weakness in internal controls. Recognizing this material weakness and the resulting errors identified, management performed additional analyses and supplementary review procedures and has concluded that the effects of these errors were not material to any prior year or prior quarters' previously reported amounts. Despite the existence of this material weakness, we believe the consolidated financial statements included in this Quarterly Report on Form 10-Q present, in all material respects, our financial position, results of operations, comprehensive income (loss) and cash flows for the

periods presented in conformity with U.S. generally accepted accounting principles.

We are currently in process of remediating the material weakness described above. The remediation efforts are focused on addressing the underlying causes of the material weakness and will include hiring additional accounting and finance personnel with technical accounting and financial reporting experience, enhancing and segregating duties within our accounting and finance department, and enhancing our internal review procedures during the financial statement close process.

Changes in Internal Control Over Financial Reporting

Except for the remediation efforts described above, there have been no changes in our internal control over financial reporting that occurred during the three months ended June 30, 2016, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act), other than the remediation efforts as discussed above. Internal control over financial reporting means

-47-

Table of Contents

a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

Inherent Limitations of Internal Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

-48-

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For information regarding legal proceedings, refer to Litigation in Note 17 in the accompanying "Notes to Condensed Consolidated Financial Statements" in this Quarterly Report.

ITEM 1A. RISK FACTORS

Except as noted below, there were no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission on March 15, 2016.

Jack Yongfeng Zhang and Mary Ziping Luo have pledged shares of our common stock to secure certain borrowed funds. The forced sale of these shares pursuant to a margin call could cause our stock price to decline and negatively impact our business.

Beginning in September 30, 2015, UBS Bank USA, has made extensions of credit in the aggregate amount of \$4.8 million to Applied Physics & Chemistry Laboratories, Inc., which is owned solely by Jack Yongfeng Zhang and Mary Ziping Luo. The loan is pledged by 1,907,898 shares of our common stock currently held by Dr. Zhang and Dr. Luo. Interest on the loan accrues at market rates. UBS Bank USA received customary fees and expense reimbursements in connection with these loans.

We are not a party to these loans, which are full recourse against Applied Physics & Chemistry Laboratories, Inc. and are secured by pledges of a portion of our common stock currently beneficially owned by Dr. Zhang and Dr. Luo.

If the price of our common stock declines, Dr. Zhang and Dr. Luo may be forced by UBS Bank USA to provide additional collateral for the loans or to sell shares of our common stock held by them in order to remain within the margin limitations imposed under the terms of their loans. The loans between these banking institutions on the one hand, and Dr. Zhang and Dr. Luo on the other hand, prohibit the non-pledged shares currently owned by Dr. Zhang and Dr. Luo from being pledged to secure any other loans. These factors may limit Dr. Zhang and Dr. Luo's ability to either pledge additional shares of our common stock or sell shares of our common stock held by them as a means to avoid or satisfy a margin call with respect to their pledged common stock in the event of a decline in our stock price that is large enough to trigger a margin call. Any sales of common stock following a margin call that is not satisfied may cause the price of our common stock to decline further.

Risks Relating to Our Business and Industry

Our enoxaparin product represents a significant portion of our net revenues. If the sales volume or pricing of this product continues to decline, or if we are unable to satisfy market demand for this product, it could have a material adverse effect on our business, financial position and results of operations.

Sales from our enoxaparin product, which is our largest selling product, represented 34%, 51%, and 64% of our total net revenues for the years ended December 31, 2015, 2014, and 2013, respectively.. We are currently experiencing declining revenue from enoxaparin and some of our other existing products and we may operate at a loss in the near term while continuing to invest in developing new products. If the sales volume or pricing of enoxaparin continues to decline, or if we are unable to satisfy market demand for this product, our business, financial position and results of operations could be materially and adversely affected, and the market value of our common stock could decline. For example, due to intense pricing competition in the pharmaceutical industry, we have experienced significant declines in the per unit pricing and gross margins attributable to our enoxaparin product since its commercial launch. Our enoxaparin product could be rendered obsolete or negatively impacted by numerous factors, many of which are beyond our control, including:

· decreasing average sales prices;

-49-

Table of Contents

- · development by others of new pharmaceutical products that are more effective than ours;
- · entrance of new competitors into our markets;
- · loss of key relationships with suppliers, group purchasing organizations or end-user customers;
- · manufacturing or supply interruptions;
- · changes in the prescribing practices of physicians;
- · changes in third-party reimbursement practices;
- · product liability claims; and
- · product recalls or safety alerts.

Any factor adversely affecting the sale of enoxaparin may cause our revenues to decline, and we may not be able to achieve and maintain profitability. In addition, on June 30, 2016, we and Actavis agreed to terminate the agreement upon the earlier of (i) January 1, 2017, and (ii) such earlier date that is 30 days after Actavis notifies us in writing that Actavis has less than 30 days inventory of the enoxaparin product remaining in Actavis possession or scheduled to be delivered pursuant to the pending purchase orders. If we are unable to engage another marketing and distribution partner, or if we are unable to market and distribute our enoxaparin product ourselves, revenues could be delayed from this product, and our profitability would be adversely affected.

If our business partners do not fulfill their obligations with respect to our distribution or collaboration agreements our revenues and our business will suffer.

Pursuant to certain distribution or collaboration agreements, the success of some of our products or product candidates also depends on the success of the collaboration with our business partners, who are responsible for certain aspects of researching, developing, marketing, distributing or commercializing our products or product candidates. If such an agreement were to be terminated in accordance with its terms, including due to a party's failure to perform its obligations or responsibilities under the agreement, revenues could be delayed or diminished from these products and our revenues and/or profit share for these products could be adversely impacted.

For example, we have a profit sharing agreement with Actavis to market and distribute our enoxaparin product to the retail market in the U.S. On June 30, 2016, we and Actavis agreed to terminate the agreement upon the earlier of (i) January 1, 2017, and (ii) such earlier date that is 30 days after Actavis notifies us in writing that Actavis has less than 30 days inventory of the enoxaparin product remaining in Actavis's possession or scheduled to be delivered pursuant to the pending purchase orders. If we are unable to engage another marketing and distribution partner, or if we are unable to market and distribute our enoxaparin product ourselves, revenues could be delayed from this product, and our profitability would be adversely affected.

-50-

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(c)Issuer Purchases of Equity Securities

The table below provides information with respect to repurchases of our common stock.

Period April 1 –	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs	
April 30, 2016 May 1 –	131,000	\$ 12.68	131,000	_	
May 31, 2016 June 1 –	108,200	12.75	108,200	_	
June 30, 2016	26,700	15.70	26,700	_	

⁽¹⁾ During the second quarter of 2016, we repurchased shares of our common stock as part of the \$10.0 million share buyback program authorized by our Board of Directors in November 2015. As of June 30, 2016, \$1.6 million remained available under such program.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.
ITEM 6. EXHIBITS
A list of exhibits is set forth on the Exhibit Index immediately following the signature page of this Quarterly Report on Form 10-Q, and is incorporated herein by reference.

-51-

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMPHASTAR PHARMACEUTICALS, INC.

(Registrant)

By: /s/ JACK Y. ZHANG Jack Y. Zhang

Chief Executive Officer (Principal Executive Officer)

Date: August 9, 2016

AMPHASTAR PHARMACEUTICALS, INC.

(Registrant)

By: /s/ WILLIAM J. PETERS

William J. Peters

Chief Financial Officer

(Principal Financial and Accounting Officer)

Date: August 9, 2016

-52-

AMPHASTAR PHARMACEUTICALS, INC.

EXHIBIT INDEX TO FORM 10-Q

For the Quarterly Period Ended June 30, 2016

Exhibit No. 10.1	Description Fourth Modification to the Revolving Line of Credit Agreement, dated June 23, 2016, between Amphastar Pharmaceuticals, Inc. and Armstrong Pharmaceuticals, Inc. and Cathay Bank in the principal sum of \$20,000,000
10.2	Seventh Amendment and Termination Agreement by and between the Company and Actavis Laboratories FL, Inc. (f/k/a Watson Laboratories, Inc. – Florida and as Andrx Pharmaceuticals, Inc.) dated June 30, 2016. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on July 7, 2016)
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1#	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2#	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definitions Linkbase Document

#The information in Exhibits 32.1 and 32.2 shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall they be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act (including this Report), unless the Registrant specifically incorporates the foregoing information into those

documents b	v reference.
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-53-

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Cash

Net increase (decrease) in cash

(1,766) (504) (1,011) (40,776)

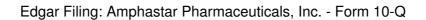
Cash at beginning of year

1,766 504 1,011 40,776

Cash at end of year

Cash paid du	ring the yea	r for interest	expense					
\$6,272,406	\$4,533,906	\$1,291,943	\$4,467,026	\$1,953,982				
Non-Cas	sh Financin	g Activities						
			of distributio	ons paid to Co	mmon Shareh	olders		
		emvestment	or arsurbull	ль рай ю Со	immon Sharen	OIGUIS		
\$29,9	21							

Supplemental Disclosure of Cash Flow Information



See Notes to Financial Statements.

Financial Highlights

BlackRock MuniHoldings California Quality Fund, Inc.
(MUC)

	2017	2016	Year Ended Jul 2015	y 31, 2014	2013
Per Share Operating Performance					
Net asset value, beginning of year	\$ 16.51	\$ 15.78	\$ 15.82	\$ 14.52	\$ 16.41
Net investment income ¹ Net realized and unrealized gain (loss)	0.69 (0.93)	0.77 0.76	0.78 $(0.00)^2$	0.82 1.34	0.86 (1.82)
Net increase (decrease) from investment operations	(0.24)	1.53	0.78	2.16	(0.96)
Distributions to Common Shareholders from net investment income ³	(0.74)	(0.80)	(0.82)	(0.86)	(0.93)
Net asset value, end of year	\$ 15.53	\$ 16.51	\$ 15.78	\$ 15.82	\$ 14.52
Market price, end of year	\$ 14.75	\$ 16.28	\$ 14.28	\$ 14.04	\$ 13.31
Total Return Applicable to Common Shareholders ⁴					
Based on net asset value	(1.08)%	10.20%	5.52%	15.94%	(6.16)%
Based on market price	(4.73)%	20.08%	7.60%	12.25%	(13.71)%
Ratios to Average Net Assets Applicable to Common Shareholders					
Total expenses	2.04%	1.60%	1.47%	1.57%	1.64%
Total expenses after fees waived and paid indirectly	1.96%	1.55%	1.45%	1.51%	1.56%
Total expenses after fees waived and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁵	0.93%	0.93%	0.93%	0.93%	0.92%
Net investment income to Common Shareholders	4.44%	4.79%	4.88%	5.44%	5.27%
Supplemental Data					
Net assets applicable to Common Shareholders, end of year (000)	\$ 636,865	\$ 677,128	\$ 646,897	\$ 648,837	\$ 595,269
VMTP Shares outstanding at \$100,000 liquidation value, end of year (000)	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000
Asset coverage per VMTP Shares at \$100,000 liquidation value, end of year	\$ 350,734	\$ 366,586	\$ 354,684	\$ 355,448	\$ 334,358
Borrowings outstanding, end of year (000)	\$ 181,685	\$ 169,699	\$ 161,571	\$ 88,271	\$ 172,316
Portfolio turnover rate	19%	21%	25%	25%	34%

¹ Based on average Common Shares outstanding.

² Amount is greater than \$(0.005) per share.

³ Distributions for annual periods determined in accordance with U.S. federal income tax regulations.

- ⁴ Total returns based on market price, which can be significantly greater or less than the net asset value, may result in substantially different returns. Where applicable, excludes the effects of any sales charges and assumes the reinvestment of distributions at actual reinvestment prices.
- Interest expense, fees and amortization of offering costs related to TOB Trusts and/or VMTP Shares. See Note 4 and Note 10 of the Notes to Financial Statements for details.

See Notes to Financial Statements.

Financial Highlights

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

	2	2017		Yo 2016	ear I	Ended July 2015		2014		2013
Per Share Operating Performance										
Net asset value, beginning of year	\$	16.55	\$	15.62	\$	15.74	\$	14.51	\$	16.54
Net investment income ¹ Net realized and unrealized gain (loss)		0.77 (0.94)		0.84 0.96		0.84 (0.07)		0.86 1.27		0.86 (2.00)
Net increase (decrease) from investment operations		(0.17)		1.80		0.77		2.13		(1.14)
Distributions to Common Shareholders: ² From net investment income From net realized gain		(0.81)		(0.87)		(0.89)		(0.89) (0.01)		(0.89)
Total distributions		(0.81)		(0.87)		(0.89)		(0.90)		(0.89)
Net asset value, end of year	\$	15.57	\$	16.55	\$	15.62	\$	15.74	\$	14.51
Market price, end of year	\$	14.88	\$	16.12	\$	13.55	\$	14.11	\$	13.30
Total Return Applicable to Common Shareholders ³										
Based on net asset value	(0.57)%		12.39%		5.59%		15.79%		(7.19)%
Based on market price	(2	2.44)%		26.20%		2.18%		13.24%	(12.33)%
Ratios to Average Net Assets Applicable to Common Shareholders										
Total expenses		1.89%		1.52%		1.62%4		1.64%		1.61%
Total expenses after fees waived and/or reimbursed and paid indirectly		1.89%		1.52%		1.57%4		1.57%		1.58%
Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering ${\rm costs}^5$		0.91%6		0.90%6		1.02% ^{4,6}		1.25%6		1.33%6
Net investment income to Common Shareholders		4.95%		5.27%		5.27%		5.78%		5.28%
Complemental Deta										
Supplemental Data Net assets applicable to Common Shareholders, end of year (000)	\$ 4	69,417	\$ 4	199,058	\$ 4	470,946	\$ 3	335,425	\$	309,165
VRDP Shares outstanding at \$100,000 liquidation value, end of year (000)	\$ 2	37,100	\$ 2	237,100	\$ 2	237,100	\$ 1	72,700	\$	172,700
Asset coverage per VRDP Shares at \$100,000 liquidation value, end of year	\$ 2	97,983	\$ 3	310,484	\$ 2	298,628	\$ 2	294,224	\$	279,019
Borrowings outstanding, end of year (000)	\$	63,877	\$	55,089	\$	52,744	\$	34,699	\$	38,231
Portfolio turnover rate		8%		9%		10%		16%		10%

¹ Based on average Common Shares outstanding.

² Distributions for annual periods determined in accordance with U.S. federal income tax regulations.

- Total returns based on market price, which can be significantly greater or less than the net asset value, may result in substantially different returns. Where applicable, excludes the effects of any sales charges and assumes the reinvestment of distributions at actual reinvestment prices.
- Includes reorganization costs associated with the Fund s reorganization. Without these costs, total expenses, total expenses after fees waived and/or reimbursed and/or paid indirectly and total expenses after fees waived and/or reimbursed and/or paid indirectly and excluding interest expense, fees and amortization of offering costs would have been 1.52%, 1.50% and 0.95%, respectively.
- 5 Interest expense, fees and amortization of offering costs related to TOB Trusts and/or VRDP Shares. See Note 4 and Note 10 of the Notes to Financial Statements for details.
- ⁶ For the years ended July 31, 2017, July 31, 2016, July 31, 2015, July 31, 2014 and July 31, 2013, the total expense ratio after fees waived and/or reimbursed and/or paid indirectly and excluding interest expense, fees, amortization of offering costs, liquidity and remarketing fees was 0.91%, 0.89%, 1.01%, 0.95% and 0.93%, respectively.

See Notes to Financial Statements.

Financial Highlights

BlackRock MuniYield Investment Quality Fund (MFT)

	Year Ended July 31,									
	2017		2016			2015	-	2014		2013
Per Share Operating Performance										
Net asset value, beginning of year	\$	15.55	\$	14.95	\$	14.83	\$	13.61	\$	15.73
Net investment income ¹		0.79		0.83		0.84		0.85		0.84
Net realized and unrealized gain (loss)		(0.91)		0.62		0.13		1.22		(2.11)
Net increase (decrease) from investment operations		(0.12)		1.45		0.97		2.07		(1.27)
		(0.02)		(0.05)		(0.05)		(0.05)		(0.05)
Distributions to Common Shareholders from net investment income ²		(0.83)		(0.85)		(0.85)		(0.85)		(0.85)
Net asset value, end of year	\$	14.60	\$	15.55	\$	14.95	\$	14.83	\$	13.61
1.00 asset (alab, 0.10 %) year	Ψ	1.100	Ψ	10.00	Ψ	1,0	Ψ	1 1100	Ψ	10.01
Market price, end of year	\$	14.67	\$	16.09	\$	13.37	\$	13.26	\$	12.20
Tatal Datama Applicable to Common Chambaldon 3										
Total Return Applicable to Common Shareholders ³ Based on net asset value	(0	0.51)%	1	0.31%		7.25%		16.40%		(8.41)%
		,,								()-
Based on market price	(3	3.39)%	2	27.63%		7.27%	6 16.10%		(16.52)%	
Ratios to Average Net Assets Applicable to Common Shareholders										
Total expenses	:	2.07%		1.61%		1.56%		1.67%		1.72%
Total expenses after fees waived and/or reimbursed and paid indirectly	1	2.07%		1.61%		1.56%		1.67%		1.72%
Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁴		1.00%		0.96%		0.98%		1.00%		1.00%
expense, rees and amortization of offering costs.		1.00%		0.90%		0.96%		1.00%		1.00%
Net investment income to Common Shareholders		5.35%		5.45%		5.52%		6.04%		5.36%
Supplemental Data Net assets applicable to Common Shareholders, end of year (000)	\$ 10	23,705	\$ 1	31,739	\$ 1	26,696	\$ 1	25,647	\$	115,287
1vet assets applicable to Common Shareholders, end of year (6000)	Ψ12	23,703	ψī	31,737	ΨI	.20,070	Ψ1	23,047	Ψ	113,207
VMTP Shares outstanding at \$100,000 liquidation value, end of year (000)	\$ 5	56,500	\$	56,500	\$	56,500	\$	56,500	\$	56,500
Asset coverage per VMTP Shares at \$100,000 liquidation value, end of year	\$ 31	18,947	\$ 3	33,167	\$ 3	324,240	\$ 3	22,384	\$	304,049
			_							
Borrowings outstanding, end of year (000)	\$ 2	27,229	\$	21,953	\$	19,488	\$	20,284	\$	28,192
Portfolio turnover rate		34%		21%		13%		32%		51%
ו טונוטווט נעוווטעכו זמנכ		34%		4170		13%		3270		31%

Based on average Common Shares outstanding.

² Distributions for annual periods determined in accordance with U.S. federal income tax regulations.

Total returns based on market price, which can be significantly greater or less than the net asset value, may result in substantially different returns. Where applicable, excludes the effects of any sales charges and assumes the reinvestment of distributions at actual reinvestment prices.

⁴ Interest expense, fees and amortization of offering costs related to TOB Trusts and/or VMTP Shares. See Note 4 and Note 10 of the Notes to Financial Statements for details.

See Notes to Financial Statements.

Financial Highlights

BlackRock MuniYield Michigan Quality Fund, Inc.

Per Share Operating Performance Net asset value, beginning of year S 16.36 S 15.48 S 15.24 S 14.16 S 16.18 S 16.38 S 15.48 S 15.24 S 14.16 S 16.18 S 16.38 S 15.24 S 14.16 S 16.38 S 16.36 S 15.48 S 15.24 S 16.30 S 16.36 S 15.48 S 16.30 S 1		Year Ended July 31,					
Net asset value, beginning of year \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 \$ 16.18 Net investment income! Net realized and unrealized gain (loss) 0.75 0.79 0.83 0.86 0.90 Net investment income! Net realized and unrealized gain (loss) (0.86) 0.92 0.27 1.12 (2.00) Net increase (decrease) from investment operations (0.11) 1.71 1.10 1.98 (1.10) Distributions to Common Shareholders from net investment income? (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on market price (0.07)% 11.99% 8.08% 15.24% (7.09)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54%4 1.52%5 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expe		2017	2016	2015	2014	2013	
Net investment income¹ 0.75 0.79 0.83 0.86 0.90 Net realized and unrealized gain (loss) (0.86) 0.92 0.27 1.12 (2.00) Net increase (decrease) from investment operations (0.11) 1.71 1.10 1.98 (1.10) Distributions to Common Shareholders from net investment income² (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Total Return Applicable to Common Shareholders³ Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54%⁴ 1.52%⁵ 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54%⁴ 1.48%⁵ 1.54% 1.50% Total expenses after fees waived and/or reimburs							
Net realized and unrealized gain (loss) (0.86) 0.92 0.27 1.12 (2.00) Net increase (decrease) from investment operations (0.11) 1.71 1.10 1.98 (1.10) Distributions to Common Shareholders from net investment income ² (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders ³ \$ 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.54% 1.54% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interes	Net asset value, beginning of year	\$ 16.	.36 \$ 15.48	\$ 15.24	\$ 14.16	\$ 16.18	
Net realized and unrealized gain (loss) (0.86) 0.92 0.27 1.12 (2.00) Net increase (decrease) from investment operations (0.11) 1.71 1.10 1.98 (1.10) Distributions to Common Shareholders from net investment income ² (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders ³ \$ 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.54% 1.54% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interes	Net investment income!	0	75 0.79	0.83	0.86	0.90	
Distributions to Common Shareholders from net investment income² (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% 0.93% 0.93% 0.93% 5.94% 5.62% Supplemental Data							
Distributions to Common Shareholders from net investment income² (0.77) (0.83) (0.86) (0.90) (0.92) Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% 0.93% 0.93% 0.93% 5.94% 5.62% Supplemental Data							
Net asset value, end of year \$ 15.48 \$ 16.36 \$ 15.48 \$ 15.24 \$ 14.16 Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on neat asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders Total expenses 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% 0.93% 0.93% 0.93% 0.93% 5.94% 5.62% Supplemental Data	Net increase (decrease) from investment operations	(0.	.11) 1.71	1.10	1.98	(1.10)	
Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs6 0.89% 0.93% 0.93% 0.93% 0.93% 0.89% Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62%	Distributions to Common Shareholders from net investment income ²	(0.	.77) (0.83)	(0.86)	(0.90)	(0.92)	
Market price, end of year \$ 14.19 \$ 15.38 \$ 13.22 \$ 13.47 \$ 12.57 Total Return Applicable to Common Shareholders³ Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs6 0.89% 0.93% 0.93% 0.93% 0.93% 0.89% Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62%	Net asset value, end of year	\$ 15.	.48 \$ 16.36	\$ 15.48	\$ 15.24	\$ 14.16	
Total Return Applicable to Common Shareholders³ Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs6 0.89% 0.93% 0.93% 0.93% 0.93% 0.89% Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62% Supplemental Data		,		7	,	,	
Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% (16.86)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders Total expenses 1.88% 1.54% 1.52% 1.54% 1.50%	Market price, end of year	\$ 14.	.19 \$ 15.38	\$ 13.22	\$ 13.47	\$ 12.57	
Based on net asset value (0.07)% 11.99% 8.08% 15.24% (7.09)% (16.86)% Based on market price (2.56)% 23.28% 4.43% 14.74% (16.86)% Ratios to Average Net Assets Applicable to Common Shareholders Total expenses 1.88% 1.54% 1.52% 1.54% 1.50% 1.50% 1.50% 1.54% 1.50% 1.50% 1.54% 1.55% 1.54% 1.50% 1.54% 1.55% 1.54% 1.50% 1.54% 1.50% 1.54% 1.50% 1.54% 1.55% 1.54% 1.50% 1.54% 1.55% 1.54% 1.50% 1.54% 1.55% 1.54% 1.50% 1.54% 1.55% 1.54% 1.50% 1.55% 1.54% 1.50% 1.55% 1.54% 1.50% 1.55% 1.54% 1.50% 1.55% 1.54% 1.50% 1.55% 1.54% 1.50% 1.55% 1.							
Ratios to Average Net Assets Applicable to Common Shareholders Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs 6 Net investment income to Common Shareholders Supplemental Data (2.56)% 23.28% 4.43% 14.74% (16.86)% 1.88% 1.54% 1.52% 1.54% 1.50% 1.88% 1.54% 1.54% 1.48% 1.52% 1.54% 1.50% 1.88% 1.54% 1.48% 1.54% 1.50% 1.88% 1.54% 1.54% 1.50% 1.50% 5.30% 5.94% 5.62%	Total Return Applicable to Common Shareholders ³						
Ratios to Average Net Assets Applicable to Common Shareholders Total expenses 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.54% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62%	Based on net asset value	(0.07))% 11.99%	8.08%	15.24%	(7.09)%	
Ratios to Average Net Assets Applicable to Common Shareholders Total expenses 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.54% 1.54% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62%	Pasad an markat price	(2.56	72 28%	1 120%	14 74%	(16.96)0/	
Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs 6 0.89% 0.93% 0.93% 0.93% 0.93% 0.89% Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62% Supplemental Data	based on market price	(2.30)	23.28%	4.43%	14.74%	(10.80)%	
Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.52% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs 6 0.89% 0.93% 0.93% 0.93% 0.93% 0.89% Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62% Supplemental Data							
Total expenses after fees waived and/or reimbursed and paid indirectly 1.88% 1.54% 1.48% 1.54% 1.50% Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% 0.93% 0.93% 0.93% 5.30% 5.94% 5.62% Supplemental Data		1.89	8% 154%4	1 52%5	1 54%	1 50%	
Total expenses after fees waived and/or reimbursed and paid indirectly and excluding interest expense, fees and amortization of offering costs ⁶ Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62%	Total expenses	1.00	1.54%	1.32/0	1.5470	1.50 /6	
interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% ⁴ 0.93% ⁵ 0.93% 0.93% 5.02% 5.30% 5.94% 5.62%	Total expenses after fees waived and/or reimbursed and paid indirectly	1.88	8% 1.54%4	1.48%5	1.54%	1.50%	
interest expense, fees and amortization of offering costs ⁶ 0.89% 0.93% ⁴ 0.93% ⁵ 0.93% 0.93% 5.02% 5.30% 5.94% 5.62%							
Net investment income to Common Shareholders 4.81% 5.02% 5.30% 5.94% 5.62% Supplemental Data		0.89	9% 0.93%4	1 0.93%5	0.93%	0.89%	
Supplemental Data	interest expense, rees and amortization of offering costs	0.0	0.5576	0.5570	0.5570	0.0570	
	Net investment income to Common Shareholders	4.81	1% 5.02%	5.30%	5.94%	5.62%	
	Supplemental Data						
	• •	\$ 457,8	\$483,968	\$ 282,534	\$ 278,143	\$ 258,341	
VDDD CI I'	VIDDD (I	¢ 221.0	000 ¢ 221 000	¢ 144.600	¢ 144.600	ф. 144.600	
VRDP Shares outstanding at \$100,000 liquidation value, end of year (000) \$231,900 \$231,900 \$144,600 \$144,600 \$144,600	VKDP Shares outstanding at \$100,000 liquidation value, end of year (000)	\$ 231,9	\$ 231,900	\$ 144,600	\$ 144,600	\$ 144,600	
Asset coverage per VRDP Shares at \$100,000 liquidation value, end of year \$297,450 \$308,697 \$295,390 \$292,354 \$278,659	Asset coverage per VRDP Shares at \$100,000 liquidation value, end of year	\$ 297,4	\$ 308,697	\$ 295,390	\$ 292,354	\$ 278,659	
Borrowings outstanding, end of year (000) \$ 52,002 \$ 51,227 \$ 23,487 \$ 23,487 \$ 34,876	Borrowings outstanding, end of year (000)	\$ 52,0	002 \$ 51,227	\$ 23,487	\$ 23,487	\$ 34,876	
Portfolio turnover rate 13% 19% 16% 17%	Portfolio turnover rate	13	3% 19%	19%	16%	17%	

3

¹ Based on average Common Shares outstanding.

² Distributions for annual periods determined in accordance with U.S. federal income tax regulations.

Total returns based on market price, which can be significantly greater or less than the net asset value, may result in substantially different returns. Where applicable, excludes the effects of any sales charges and assumes the reinvestment of distributions at actual reinvestment prices.

- Includes reorganization costs associated with the Fund s reorganization. Without these costs total expenses, total expenses after fees waived and/or reimbursed and/or paid indirectly and total expenses after fees waived and/or reimbursed and/or paid indirectly and excluding interest expense, fees and amortization of offering costs would have been 1.49%, 1.49% and 0.88%, respectively.
- Includes reorganization costs associated with the Fund s reorganization. Without these costs total expenses, total expenses after fees waived and/or reimbursed and/or paid indirectly and excluding interest expense, fees and amortization of offering costs would have been 1.48%, 1.48% and 0.92%, respectively
- 6 Interest expense, fees and amortization of offering costs related to TOB Trusts and/or VRDP Shares. See Note 4 and Note 10 of the Notes to Financial Statements for details.

See Notes to Financial Statements.

Financial Highlights

BlackRock MuniYield Pennsylvania Quality Fund (MPA)

	Y 2017 2016				Vear Ended July 31, 2015 2014			2013		
	20	017	20	10		2013		2014		2013
Per Share Operating Performance										
Net asset value, beginning of year	\$	16.76	\$	15.77	\$	15.77	\$	14.59	\$	16.57
Not to the last		0.76		0.00		0.01		0.07		0.00
Net investment income ¹ Net realized and unrealized gain (loss)		0.76 (1.03)		0.80 1.02		0.81 0.07		0.87 1.20		0.90 (1.99)
Net realized and unrealized gain (1088)		(1.03)		1.02		0.07		1.20		(1.99)
Net increase (decrease) from investment operations		(0.27)		1.82		0.88		2.07		(1.09)
The increase (decrease) from investment operations		(0.27)		1.02		0.00		2.07		(1.0)
Distributions to Common Shareholders from net investment income ²		(0.75)		(0.83)		(0.88)		(0.89)		(0.89)
		(31.12)		(0.00)		(0.00)		(0.02)		(0.00)
Net asset value, end of year	\$	15.74	\$	16.76	\$	15.77	\$	15.77	\$	14.59
,										
Market price, end of year	\$	14.69	\$	16.07	\$	13.50	\$	13.89	\$	13.07
Total Return Applicable to Common Shareholders ³										
Based on net asset value	(1.	.20)%	12	.38%		6.33%		15.39%		(6.78)%
Based on market price	(3.	.83)%	25	.87%		3.34%		13.45%	(13.42)%
Define to Annual Net Annual Annual to Common Should allow										
Ratios to Average Net Assets Applicable to Common Shareholders Total expenses	1	1.91%	1	.46%		1.54%4		1.48%		1.53%
Total expenses		1.71 /0	1	.40 /0		1.5470		1.40 /		1.55 /6
Total expenses after fees waived and/or reimbursed and paid indirectly	1	1.91%	1	.46%		1.45%4		1.48%		1.53%
Total expenses area rees waived and/or remodised and paid indirectly		1.71 /0		.4070		1.45 /6		1.40%		1.5570
Total expenses after fees waived and/or reimbursed and paid indirectly and excluding										
interest expense, fees and amortization of offering costs ⁵	(0.94%	0	.89%		$0.96\%^{4}$		0.95%		0.94%
Net investment income to Common Shareholders	4	4.83%	4	.98%		5.05%		5.79%		5.46%
Supplemental Data										
Net assets applicable to Common Shareholders, end of year (000)	\$ 21	0,170	\$ 22.	3,738	\$ 2	210,549	\$ 1	81,459	\$	167,857
VRDP Shares outstanding at \$100,000 liquidation value, end of year (000)	\$ 8	32,600	\$ 82	2,600	\$	82,600	\$	66,300	\$	66,300
Asset coverage per VRDP Shares at \$100,000 liquidation value, end of year	\$ 35	64,444	\$ 370	0,869	\$ 3	354,901	\$ 3	373,693	\$	353,178
			_							
Borrowings outstanding, end of year (000)	\$ 5	55,826	\$ 4	8,710	\$	28,468	\$	37,066	\$	53,010
Portfolio turnover rate		15%		17%		21%		16%		8%

3

Based on average Common Shares outstanding.

² Distributions for annual periods determined in accordance with U.S. federal income tax regulations.

Total returns based on market price, which can be significantly greater or less than the net asset value, may result in substantially different returns. Where applicable, excludes the effects of any sales charges and assumes the reinvestment of distributions at actual reinvestment prices.

- Includes reorganization costs associated with the Fund s reorganization. Without these costs total expenses, total expenses after fees waived and/or reimbursed, and total expenses after fees waived and/or reimbursed and/or paid indirectly and excluding interest expense, fees and amortization of offering costs would have been 1.40%, 1.40% and 0.91%, respectively.
- 5 Interest expense, fees and amortization of offering costs related to TOB Trusts and/or VRDP Shares. See Note 4 and Note 10 of the Notes to Financial Statements for details.

See Notes to Financial Statements.

Notes to Financial Statements

1. Organization:

The following are registered under the Investment Company Act of 1940, as amended (the 1940 Act), as closed-end management investment companies and are referred to herein collectively as the Funds , or individually as a Fund :

Fund Name	Herein Referred To As	Organized	Diversification Classification
BlackRock MuniHoldings California Quality Fund, Inc.	MUC	Maryland	Diversified*
BlackRock MuniHoldings New Jersey Quality Fund, Inc.	MUJ	Maryland	Non-diversified
BlackRock MuniYield Investment Quality Fund, Inc.	MFT	Massachusetts	Diversified*
BlackRock MuniYield Michigan Quality Fund, Inc.	MIY	Maryland	Non-diversified
BlackRock MuniYield Pennsylvania Quality Fund, Inc.	MPA	Massachusetts	Non-diversified

^{*} The Fund s classification changed from non-diversified to diversified during the reporting period.

The Boards of Directors of the Funds are collectively referred to throughout this report as the Board of Directors or the Board, and the directors thereof are collectively referred to throughout this report as Directors . The Funds determine and make available for publication the NAVs of their Common Shares on a daily basis.

The Funds, together with certain other registered investment companies advised by BlackRock Advisors, LLC (the Manager) or its affiliates, are included in a complex of closed-end funds referred to as the Closed-End Complex.

Reorganization: The Board and shareholders of MIY and the Board and shareholders of BlackRock MuniYield Michigan Quality Fund II, Inc. (MYM) approved the reorganizations of MYM into MIY. As a result, MIY acquired substantially all of the assets and assumed substantially all of the liabilities of MYM in exchange for an equal aggregate value of newly-issued Common Shares and Preferred Shares of MIY.

Each MYM Common Shareholder received Common Shares of MIY in an amount equal to the aggregate NAV of such Common Shareholder s MYM Common Shares, as determined at the close of business on September 11, 2015, less the costs of the MYM s reorganization. Cash was distributed for any fractional Common Shares.

Each MYM VRDP Shareholder received on a one-for-one basis one newly issued VRDP Share of MIY, par value \$0.10 per share and with a liquidation preference of \$100,000 per share, in exchange for each MYM VRDP Share held by such MYM VRDP Shareholder.

The reorganizations were accomplished by a tax-free exchange of Common Shares and VRDP Shares of MIY in the following amounts and at the following conversion ratios:

	Shares Prior to		
Target Fund	Reorganization	Conversion Ratio	Shares of MIY
MYM Common Shares	12,098,420	0.93643508	11,329,360
MYM VRDP Shares	873	1	873

MYM s common net assets and composition of common net assets on September 11, 2015, the valuation date of the reorganization, were as follows:

	MYM
Net assets Applicable to Common Shares	\$ 173,278,358
Paid-in-capital	\$ 162,329,528
Undistributed net investment income	\$ 63,895
Accumulated net realized loss	\$ (4,955,955)
Net unrealized appreciation (depreciation)	\$ 15,840,890

For financial reporting purposes, assets received and shares issued by MIY were recorded at fair value. However, the cost basis of the investments received from MYM was carried forward to align ongoing reporting of MIY s realized and unrealized gains and losses with amounts distributable to shareholders for tax purposes.

The net assets of MIY before the acquisition were \$279,109,521. The aggregate net assets of MIY immediately after the acquisition amounted to \$452,388,270. MYM s fair value and cost of investments and derivative financial instruments prior to the reorganization were as follows:

Fair Value of Investments and Derivative Financial Instruments

268,842,773

Cost of Investments \$ 253,001,883

TOB Trust Certificate \$ 14,792,998 Preferred Shares Value \$ 87,300,000

MYM

The purpose of these transactions was to combine two funds managed by the Manager with the same or substantially similar (but not identical) investment objectives, investment policies, strategies, risks and restrictions. Each reorganization was a tax-free event and was effective on September 14, 2015.

Assuming the acquisition had been completed on August 1, 2015, the beginning of the fiscal reporting period of MIY, the pro forma results of operations for the year ended July 31, 2016, are as follows:

Net investment income/loss: \$23,313,730

Net realized and change in unrealized gain/loss on investments: \$27,369,663

Net increase/decrease in net assets applicable to Common Shareholders resulting from operations: \$50,683,393

Because the combined investment portfolios have been managed as a single integrated portfolio since the acquisition was completed, it is not practicable to separate the amounts of revenue and earnings of MYM that have been included in MIY s Statement of Operations since September 14, 2015.

Reorganization costs incurred in connection with the reorganization were expensed by MIY.

2. Significant Accounting Policies:

The financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP), which may require management to make estimates and assumptions that affect the reported amounts of assets and liabilities in the financial statements, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of increases and decreases in net assets from operations during the reporting period. Actual results could differ from those estimates. Each Fund is considered an investment company under U.S. GAAP and follows the accounting and reporting guidance applicable to investment companies. Below is a summary of significant accounting policies:

Investment Transactions and Income Recognition: For financial reporting purposes, investment transactions are recorded on the dates the transactions are entered into (the trade dates). Realized gains and losses on investment transactions are determined on the identified cost basis. Interest income, including amortization and accretion of premiums and discounts on debt securities, is recognized on an accrual basis.

Segregation and Collateralization: In cases where a Fund enters into certain investments (e.g., futures contracts) or certain borrowings (e.g., TOB Trust transactions) that would be treated as senior securities for 1940 Act purposes, a Fund may segregate or designate on its books and records cash or liquid assets having a market value at least equal to the amount of its future obligations under such investments or borrowings. Doing so allows the investment or borrowing to be excluded from treatment as a senior security. Furthermore, if required by an exchange or counterparty agreement, the Funds may be required to deliver/deposit cash and/or securities to/with an exchange, or broker-dealer or custodian as collateral for certain investments or obligations.

Distributions: Distributions from net investment income are declared and paid monthly. Distributions of capital gains are recorded on the ex-dividend date and made at least annually. The character and timing of distributions are determined in accordance with U.S. federal income tax regulations, which may differ from U.S. GAAP.

Distributions to Preferred Shareholders are accrued and determined as described in Note 10.

Deferred Compensation Plan: Under the Deferred Compensation Plan (the Plan) approved by each Fund's Board, the independent Directors (Independent Directors) may defer a portion of their annual complex-wide compensation. Deferred amounts earn an approximate return as though equivalent dollar amounts had been invested in common shares of certain other BlackRock Closed-End Funds selected by the Independent Directors. This has the same economic effect for the Independent Directors as if the Independent Directors had invested the deferred amounts directly in certain other BlackRock Closed-End Funds.

The Plan is not funded and obligations thereunder represent general unsecured claims against the general assets of each Fund, if applicable. Deferred compensation liabilities are included in the officer s and directors fees payable in the Statements of Assets and Liabilities and will remain as a liability of the Funds until such amounts are distributed in accordance with the Plan.

Recent Accounting Standards: In November 2016, the Financial Accounting Standards Board issued Accounting Standards Update Restricted Cash which will require entities to include the total of cash, cash equivalents, restricted cash, and restricted cash equivalents in the beginning and ending cash balances in the Statements of Cash Flows. The guidance will be applied retrospectively and is effective for fiscal years beginning after December 15, 2017, and interim periods within those years. Management is evaluating the impact, if any, of this guidance on the Funds presentation in the Statements of Cash Flows.

In March 2017, the Financial Accounting Standards Board issued Accounting Standards Update Premium Amortization of Purchased Callable Debt Securities which amends the amortization period for certain purchased callable debt securities. Under the new guidance, the premium amortization of purchased callable debt securities that have explicit, non-contingent call features and are callable at fixed prices will be amortized to the earliest call date. The guidance will be applied on a modified retrospective basis and is effective for fiscal years, and their interim periods, beginning after December 15, 2018. Management is currently evaluating the impact of this guidance to the Funds.

SEC Reporting Modernization: The U.S. Securities and Exchange Commission (SEC) adopted new rules and forms and amended other rules to enhance the reporting and disclosure of information by registered investment companies. As part of these changes, the SEC amended Regulation S-X to standardize and enhance disclosures in investment company financial statements. The compliance date for implementing the new or amended rules is August 1, 2017.

Indemnifications: In the normal course of business, a Fund enters into contracts that contain a variety of representations that provide general indemnification. A Fund s maximum exposure under these arrangements is unknown because it involves future potential claims against a Fund, which cannot be predicted with any certainty.

Other: Expenses directly related to a Fund are charged to that Fund. Other operating expenses shared by several funds, including other funds managed by the Manager, are prorated among those funds on the basis of relative net assets or other appropriate methods.

Through May 31, 2016, the Funds had an arrangement with their custodian whereby credits were earned on uninvested cash balances, which could be used to reduce custody fees and/or overdraft charges. Credits previously earned have been utilized until December 31, 2016. Under current arrangements effective June 1, 2016, the Funds no longer earn credits on uninvested cash, and may incur charges on uninvested cash balances and overdrafts, subject to certain conditions.

3. Investment Valuation and Fair Value Measurements:

Investment Valuation Policies: The Funds investments are valued at fair value (also referred to as market value within the financial statements) as of the close of trading on the New York Stock Exchange (NYSE) (generally 4:00 p.m., Eastern time). U.S. GAAP defines fair value as the price the Funds would receive to sell an asset or pay to transfer a liability in an orderly transaction between market participants at the measurement date. The Funds determine the fair values of their financial instruments using various independent dealers or pricing services under policies approved by the Board. The BlackRock Global Valuation Methodologies Committee (the Global Valuation Committee) is the committee formed by management to develop global pricing policies and procedures and to oversee the pricing function for all financial instruments.

Fair Value Inputs and Methodologies: The following methods and inputs are used to establish the fair value of each Fund s assets and liabilities:

Municipal investments (including commitments to purchase such investments on a when-issued basis) are valued on the basis of prices provided by dealers or pricing services. In determining the value of a particular investment, pricing services may use certain information with respect to transactions in such investments, quotations from dealers, pricing matrixes, market transactions in comparable investments and information with respect to various relationships between investments.

Investments in open-end U.S. mutual funds are valued at net asset value (NAV) each business day.

Futures contracts traded on exchanges are valued at their last sale price.

If events (e.g., a company announcement, market volatility or a natural disaster) occur that are expected to materially affect the value of such investments, or in the event that the application of these methods of valuation results in a price for an investment that is deemed not to be representative of the market value of such investment, or if a price is not available, the investment will be valued by the Global Valuation Committee, or its delegate, in accordance with a policy approved by the Board as reflecting fair value (Fair Valued Investments). The fair valuation approaches that may be used by the Global Valuation Committee include Market approach, Income approach and Cost approach. Valuation techniques such as discounted cash flow, use of market comparables and matrix pricing are types of valuation approaches and are typically used in determining fair value. When determining the price for Fair Valued Investments, the Global Valuation Committee, or its delegate, seeks to determine the price that each Fund might reasonably expect to receive or pay from the current sale or purchase of that asset or liability in an arm s-length transaction. Fair value determinations shall be based upon all available factors that the Global Valuation Committee, or its delegate, deems relevant and consistent with the principles of fair value measurement. The pricing of all Fair Valued Investments is subsequently reported to the Board or a committee thereof on a quarterly basis.

Fair Value Hierarchy: Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a fair value hierarchy consisting of three broad levels for financial statement purposes as follows:

Level 1 Unadjusted price quotations in active markets/exchanges for identical assets or liabilities that each Fund has the ability to access

Level 2 Other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market corroborated inputs)

Level 3 Unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including each Fund own assumptions used in determining the fair value of investments and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety. Investments classified within Level 3 have significant unobservable inputs used by the Global Valuation Committee in determining the price for Fair Valued Investments. Level 3 investments include equity or debt issued by privately-held companies or funds. There may not be a secondary market, and/or there are a limited number of investors. Level 3 investments may also be adjusted to reflect illiquidity and/or non-transferability, with the amount of such discount estimated by the Global Valuation Committee in the absence of market information.

Changes in valuation techniques may result in transfers into or out of an assigned level within the hierarchy. In accordance with each Fund s policy, transfers between different levels of the fair value hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investments and derivative financial instruments and is not necessarily an indication of the risks associated with investing in those securities.

4. Securities and Other Investments:

Zero-Coupon Bonds: Zero-coupon bonds, are normally issued at a significant discount from face value and do not provide for periodic interest payments. These bonds may experience greater volatility in market value than other debt obligations of similar maturity which provide for regular interest payments.

Forward Commitments and When-Issued Delayed Delivery Securities: Certain Funds may purchase securities on a when-issued basis and may purchase or sell securities on a forward commitment basis. Settlement of such transactions normally occurs within a month or more after the purchase or sale commitment is made. A Fund may purchase securities under such conditions with the intention of actually acquiring them, but may enter into a separate agreement to sell the securities before the settlement date. Since the value of securities purchased may fluctuate prior to settlement, a Fund may be required to pay more at settlement than the security is worth. In addition, a Fund is not entitled to any of the interest earned prior to settlement. When purchasing a security on a delayed delivery basis, a Fund assumes the rights and risks of ownership of the security, including the risk of price and yield fluctuations. In the event of default by the counterparty, a Fund s maximum amount of loss is the unrealized appreciation of unsettled when-issued transactions.

Municipal Bonds Transferred to TOB Trusts: The Funds leverage their assets through the use of TOB Trust transactions. The Funds transfer municipal bonds into a special purpose trust (a TOB Trust). A TOB Trust issues two classes of beneficial interests: short-term floating rate interests (TOB Trust Certificates), which are sold to third party investors, and residual inverse floating rate interests (TOB Residuals), which are issued to the participating fund that contributed the municipal bonds to the TOB Trust. The TOB Trust Certificates have interest rates that reset weekly and their holders have the option to tender such certificates to the TOB Trust for redemption at par and any accrued interest at each reset date. The TOB Residuals held by a Fund provide the Fund with the right to cause the holders of a proportional share of the TOB Trust Certificates to tender their certificates to the TOB Trust at par plus accrued interest. The Funds may withdraw a corresponding share of the municipal bonds from the TOB Trust. Other funds managed by the investment adviser may also contribute municipal bonds to a TOB Trust into which a Fund has contributed bonds. If multiple BlackRock advised funds participate in the same TOB Trust, the economic rights and obligations under the TOB Residuals will be shared among the funds ratably in proportion to their participation in the TOB Trust.

TOB Trusts are supported by a liquidity facility provided by a third party bank or other financial institution (the Liquidity Provider) that allows the holders of the TOB Trust Certificates to tender their certificates in exchange for payment of par plus accrued interest on any business day. The tendered TOB Trust Certificates are remarketed by a Remarketing Agent. In the event of a failed remarketing, the TOB Trust may draw upon a loan from the Liquidity Provider to purchase the tendered TOB Trust Certificates. Any loans made by the Liquidity Provider will be secured by the purchased TOB Trust Certificates held by the TOB Trust and will be subject to an increased interest rate based on number of days the loan is outstanding.

The TOB Trust may be collapsed without the consent of a Fund, upon the occurrence of a termination event as defined in the TOB Trust agreement. Upon the occurrence of a termination event, a TOB Trust would be liquidated with the proceeds applied first to any accrued fees owed to the trustee of the TOB Trust, the Remarketing Agent and the Liquidity Provider. Upon certain termination events, TOB Trust Certificates holders will be paid before the TOB Residuals holders (i.e., the Funds) whereas in other termination events, TOB Trust Certificates holders and TOB Residuals holders will be paid pro rata.

While a Fund s investment policies and restrictions expressly permit investments in inverse floating rate securities, such as TOB Residuals, they generally restrict the ability of a Fund to borrow money for purposes of making investments. The management of each of MFT, MIY and MPA believes that each Fund s restrictions on borrowings do not apply to the Funds TOB Trust transactions. Each Fund s transfer of the municipal bonds to a TOB Trust is considered a secured borrowing for financial reporting purposes. The cash received by the TOB Trust from the sale of the TOB Trust Certificates, less certain transaction expenses, is paid to a Fund. A Fund typically invests the cash received in additional municipal bonds.

Accounting for TOB Trusts: The municipal bonds deposited into a TOB Trust are presented in a Fund s Schedule of Investments and the TOB Trust Certificates are shown in Other Liabilities in the Statements of Assets and Liabilities. Any loans drawn by the TOB Trust pursuant to the liquidity facility to purchase tendered TOB Trust Certificates are shown as Loan for TOB Trust Certificates. The carrying amount of a Fund s payable to the holder of the TOB Trust

Certificates or the Liquidity Provider, as reported in the Statements of Assets and Liabilities as TOB Trust Certificates or Loan for TOB Trust Certificates, approximates its fair value.

Interest income, including amortization and accretion of premiums and discounts, from the underlying municipal bonds is recorded by a Fund on an accrual basis. Interest expense incurred on the TOB Trust transaction and other expenses related to remarketing, administration, trustee, liquidity and other services to a TOB Trust are shown as interest expense, fees and amortization of offering costs in the Statements of Operations. Fees paid upon creation of the TOB Trust are recorded as debt issuance costs and are amortized to interest expense, fees and amortization of offering costs in the Statements of Operations to the expected maturity of the TOB Trust. In connection with the restructurings of the TOB Trusts to non-bank sponsored TOB Trusts, a Fund incurred non-recurring, legal and restructuring fees, which are recorded as interest expense, fees and amortization of deferred offering costs in the Statements of Operations.

For the year ended July 31, 2017, the following table is a summary of each Fund s TOB Trusts:

			Range of		Daily Weighted Average
	Underlying		Interest Rates	Average	Rate of Interest
	Municipal Bonds	Liability for	on TOB Trust	TOB Trust	and Other
	Transferred to	TOB Trust	Certificates at	Certificates	Expenses
	TOB Trusts ¹	Certificates ²	Period End	Outstanding	on TOB Trusts
MUC	\$ 386,922,686	\$ 181,685,265	0.84% - 1.02%	\$ 179,258,205	1.36%
MUJ	\$ 119,548,406	\$ 63,876,946	0.82% - 1.02%	\$ 55,570,254	1.44%
MFT	\$ 49,838,927	\$ 27,228,737	0.84% - 1.17%	\$ 25,454,120	1.41%
MIY	\$ 101,334,689	\$ 52,002,182	0.85% - 1.04%	\$ 52,703,140	1.42%
MPA	\$ 99,567,116	\$ 55,826,390	0.84% - 1.07%	\$ 51,758,175	1.37%

- The municipal bonds transferred to a TOB Trust are generally high grade municipal bonds. In certain cases, when municipal bonds transferred are lower grade municipal bonds, the TOB Trust transaction may include a credit enhancement feature that provides for the timely payment of principal and interest on the bonds to the TOB Trust by a credit enhancement provider in the event of default of the municipal bond. The TOB Trust would be responsible for the payment of the credit enhancement fee and the Funds, as TOB Residuals holders, would be responsible for reimbursement of any payments of principal and interest made by the credit enhancement provider. The maximum potential amounts owed by the Funds, for such reimbursements, as applicable, are included in the maximum potential amounts disclosed for recourse TOB Trusts.
- TOB Trusts may be structured on a non-recourse or recourse basis. When a Fund invests in TOB Trusts on a non-recourse basis, the Liquidity Provider may be required to make a payment under the liquidity facility to allow the TOB Trust to repurchase TOB Trust Certificates. The Liquidity Provider will be reimbursed from the liquidation of bonds held in the TOB Trust. If a Fund invests in a TOB Trust on a recourse basis, a Fund enters into a reimbursement agreement with the Liquidity Provider where a Fund is required to reimburse the Liquidity Provider for any shortfall between the amount paid by the Liquidity Provider and proceeds received from liquidation of municipal bonds held in the TOB Trust (the Liquidation Shortfall). As a result, if a Fund invests in a recourse TOB Trust, a Fund will bear the risk of loss with respect to any Liquidation Shortfall. If multiple funds participate in any such TOB Trust, these losses will be shared ratably, including the maximum potential amounts owed by a Fund at July 31, 2017, in proportion to their participation in the TOB Trust. The recourse TOB Trusts are identified in the Schedules of Investments including the maximum potential amounts owed by a Fund at July 31, 2017.
 For the year ended July 31, 2017, the following table is a summary of each Fund s Loan for TOB Trust Certificates:

			Daily Weighted
			Average
Loan	Interest Rate		Rate of Interest
Outstanding	on Loan at	Average Loans	and Other Expenses
at Period End	Period End	Outstanding	on Loans

 MUC
 \$ 162,894
 0.78%

 MIY
 \$ 499,875
 0.25%
 \$ 1,682,098
 0.82%

5. Derivative Financial Instruments:

The Funds engage in various portfolio investment strategies using derivative contracts both to increase the returns of the Funds and/or to manage their exposure to certain risks such as credit risk, equity risk, interest rate risk, foreign currency exchange rate risk, commodity price risk or other risks (e.g., inflation risk). Derivative financial instruments categorized by risk exposure are included in the Schedules of Investments. These contracts may be transacted on an exchange over-the-counter (OTC).

Futures Contracts: Futures contracts are purchased or sold to gain exposure to, or manage exposure to, changes in interest rates (interest rate risk), changes in the value of equity securities (equity risk) or foreign currencies (foreign currency exchange rate risk).

Futures contracts are agreements between the Funds and a counterparty to buy or sell a specific quantity of an underlying instrument at a specified price and on a specified date. Depending on the terms of a contract, it is settled either through physical delivery of the underlying instrument on the settlement date or by payment of a cash amount on the settlement date. Upon entering into a futures contract, the Funds are required to deposit initial margin with the broker in the form of cash or securities in an amount that varies depending on a contract s size and risk profile. The initial margin deposit must then be maintained at an established level over the life of the contract.

Securities deposited as initial margin are designated in the Schedules of Investments and cash deposited, if any, is shown as cash pledged for futures contracts in the Statements of Assets and Liabilities. Pursuant to the contract, the Funds agree to receive from or pay to the broker an amount of cash equal to the daily fluctuation in market value of the contract (variation margin). Variation margin is recorded as unrealized appreciation (depreciation)

and, if any, shown as variation margin receivable (or payable) on futures contracts in the Statements of Assets and Liabilities. When the contract is closed, a realized gain or loss is recorded in the Statements of Operations equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed. The use of futures contracts involves the risk of an imperfect correlation in the movements in the price of futures contracts and interest, foreign currency exchange rates or underlying assets.

6. Investment Advisory Agreement and Other Transactions with Affiliates:

The PNC Financial Services Group, Inc. is the largest stockholder and an affiliate of BlackRock, Inc. (BlackRock) for 1940 Act purposes.

Investment Advisory: Each Fund entered into an Investment Advisory Agreement with the Manager, the Funds investment adviser, an indirect, wholly-owned subsidiary of BlackRock, to provide investment advisory and administrative services. The Manager is responsible for the management of each Fund portfolio and provides the personnel, facilities, equipment and certain other services necessary to the operations of each Fund.

For such services, each Fund pays the Manager a monthly fee at an annual rate equal to the following percentages of the average daily value of each Fund NAV.

 MUC
 MUJ
 MFT
 MIY
 MPA

 Investment advisory fee
 0.55%
 0.50%
 0.50%
 0.49%
 0.49%

For purposes of calculating these fees, net assets mean the total assets of each Fund minus the sum of its accrued liabilities (which does not include liabilities represented by TOB Trusts and the liquidation preference of any outstanding preferred shares). It is understood that the liquidation preference of any outstanding preferred shares (other than accumulated dividends) and TOB Trusts is not considered a liability in determining a Fund s net asset value.

Waivers: With respect to each Fund, the Manager voluntarily agreed to waive its investment advisory fees by the amount of investment advisory fees each Fund pays to the Manager indirectly through its investment in affiliated money market funds (the affiliated money market fund waiver). These amounts are included in fees waived by the Manager in the Statements of Operations. For the year ended July 31, 2017, the amounts waived were as follows:

MUC MUJ MFT MIY MPA
Amounts waived \$7,432 \$4,419 \$581 \$4,232 \$2,624

Effective September 1, 2016, the Manager voluntarily agreed to waive its investment advisory fee with respect to any portion of each Fund s assets invested in affiliated equity and fixed-income mutual funds and affiliated exchange-traded funds that have a contractual management fee. Prior to September 1, 2016, the Manager did not waive such fees. Effective December 2, 2016, the waiver became contractual through June 30, 2018. The agreement can be renewed for annual periods thereafter, and may be terminated on 90 days notice, each subject to approval by a majority of the Funds Independent Directors.

The Manager, for MUC, voluntarily agreed to waive its investment advisory fee on the proceeds of the Preferred Shares and TOB Trusts that exceed 35% of total assets minus the sum of its accrued liabilities (which does not include liabilities represented by TOB Trusts and the liquidation preference of any outstanding preferred shares). The voluntary waiver may be reduced or discontinued at any time without notice. This amount is included in fees waived by the Manager in the Statements of Operations. For the year ended July 31, 2017, the waiver was \$486.212.

Officers and Directors: Certain officers and/or directors of the Funds are officers and/or directors of BlackRock or its affiliates. The Funds reimburse the Manager for a portion of the compensation paid to the Funds Chief Compliance Officer, which is included in Officer and Directors in the Statements of Operations.

7. Purchases and Sales:

For the year ended July 31, 2017, purchases and sales of investments, excluding short-term securities, were as follows:

	MUC	MUJ	MFT	MIY	MPA
Purchases	\$ 221,428,499	\$ 86,847,409	\$ 77,094,891	\$ 99,756,857	\$ 53,246,134
Sales	\$ 197,144,625	\$ 60,305,715	\$ 70,803,961	\$ 94,282,577	\$ 52,409,032

8. Income Tax Information:

It is each Fund s policy to comply with the requirements of the Internal Revenue Code of 1986, as amended, applicable to regulated investment companies, and to distribute substantially all of their taxable income to their shareholders. Therefore, no U.S. federal income tax provision is required.

Each Fund files U.S. federal and various state and local tax returns. No income tax returns are currently under examination. The statute of limitations on each Fund s U.S. federal tax returns generally remains open for each of the four years ended July 31, 2017. The statutes of limitations on each Fund s state and local tax returns may remain open for an additional year depending upon the jurisdiction.

Management has analyzed tax laws and regulations and their application to the Funds as of July 31, 2017, inclusive of the open tax return years, and does not believe that there are any uncertain tax positions that require recognition of a tax liability in the Funds financial statements.

U.S. GAAP requires that certain components of net assets be adjusted to reflect permanent differences between financial and tax reporting. These reclassifications have no effect on net assets or net asset values per share. As of period end, the following permanent differences attributable to amortization methods on fixed income securities, non-deductible expenses, the expiration of capital loss carryforwards, distributions received from a regulated investment company and the sale of bonds received from TOB Trusts were reclassified to the following accounts:

	MUC	MUJ	MFT	MIY	MPA
Paid-in capital	\$ (4,636,872)	\$ (19,040)		\$ (1,990,315)	\$ (1,664,650)
Undistributed net investment income	\$ (214,134)	\$ 17,082	\$ 391	\$ 586,323	\$ (6,425)
Accumulated net realized loss	\$ 4,851,006	\$ 1,958	\$ (391)	\$ 1,403,992	\$ 1,671,075
The tax character of distributions paid was as follows:					

		MUC	MUJ	MFT	MIY	MPA
Tax-exempt income ¹	7/31/2017	\$ 34,401,011	\$ 28,192,536	\$ 8,017,243	\$ 26,448,104	\$ 11,312,425
•	7/31/2016	\$ 35,447,940	\$ 28,555,112	\$ 7,871,314	\$ 24,757,593	\$ 11,948,617
Ordinary income ² .	7/31/2017		59,052		45,447	
•	7/31/2016	15,155	237,316	7	41	4,471
Total	7/31/2017	\$ 34,401,011	\$ 28,251,588	\$ 8,017,243	\$ 26,493,551	\$ 11,312,425
	7/31/2016	\$ 35,463,095	\$ 28,792,428	\$ 7,871,321	\$ 24,757,634	\$ 11,953,088

The Funds designate these amounts paid during the fiscal year ended July 31, 2017, as exempt-interest dividends.

As of July 31, 2017, the tax components of accumulated net earnings were as follows:

	MUC	MUJ	MFT	MIY	MPA
Undistributed tax-exempt income.	\$ 2,506,818	\$ 2,264,839	\$ 1,093,499	\$ 1,398,137	\$ 169,650
Undistributed ordinary income		22,572		134,372	15,687
Capital loss carryforwards .		(4,130,585)	(11,168,402)	(4,458,634)	(3,355,740)
Net unrealized gains ¹	54,964,434	47,152,000	15,756,608	41,767,744	17,732,582
Qualified late-year losses ²	(1,903,019)				
Total	\$ 55,568,233	\$ 45,308,826	\$ 5,681,705	\$ 38,841,619	\$ 14,562,179

1

Ordinary income consists primarily of taxable income recognized from market discount. Additionally, all ordinary income distributions are comprised of interest related dividends for non-U.S. residents and are eligible for exemption from U.S. withholding tax for nonresident aliens and foreign corporations.

The difference between book-basis and tax-basis net unrealized gains was attributable primarily to the tax deferral of losses on wash sales and straddles, amortization methods of premiums and discounts on fixed income securities, the realization for tax purposes of unrealized gains/losses on certain futures contracts, the treatment of residual interests in TOB Trusts and the deferral of compensation to Directors.

The Funds have elected to defer certain qualified late-year losses and recognize such losses in the next taxable year.

As of July 31, 2017, the Funds had capital loss carryforwards available to offset future realized capital gains through the indicated expiration dates as follows:

Expires July 31, No expiration date ¹ 2018 2019	MUJ \$ 4,130,585	MFT \$ 6,551,720 4,616,682	MIY \$ 4,458,634	MPA \$ 2,411,529 893,908 50,303
Total	\$ 4,130,585	\$ 11,168,402	\$ 4,458,634	\$ 3,355,740

During the year ended July 31, 2017, the Funds listed below utilized the following amounts of their respective capital loss carryforward:

 MUC
 MUJ
 MFT
 MIY
 MPA

 Amount utilized
 \$2,583,716
 \$3,062,369
 \$153,723
 \$2,123,209
 \$185,294

As of July 31, 2017, gross unrealized appreciation and depreciation based on cost for U.S. federal income-tax purposes were as follows:

Tax cost	MUC \$ 834,869,238	MUJ \$ 677,157,102	MFT \$ 164,746,722	MIY \$ 641,175,315	MPA \$ 274,776,212
Gross unrealized appreciation Gross unrealized depreciation	\$ 57,516,013 (2,215,169)	\$ 50,453,678 (3,301,665)	\$ 15,977,977 (221,369)	\$ 43,013,070 (463,595)	\$ 20,482,842 (2,643,658)
Net unrealized appreciation	\$ 55,300,844	\$ 47,152,013	\$ 15,756,608	\$ 42,549,475	\$ 17,839,184

¹ Must be utilized prior to losses subject to expiration.

9. Principal Risks:

Many municipalities insure repayment of their bonds, which may reduce the potential for loss due to credit risk. The market value of these bonds may fluctuate for other reasons, including market perception of the value of such insurance, and there is no guarantee that the insurer will meet its obligation.

Inventories of municipal bonds held by brokers and dealers may decrease, which would lessen their ability to make a market in these securities. Such a reduction in market making capacity could potentially decrease a Fund s ability to buy or sell bonds. As a result, a Fund may sell a security at a lower price, sell other securities to raise cash, or give up an investment opportunity, any of which could have a negative impact on performance. If a Fund needed to sell large blocks of bonds, those sales could further reduce the bonds prices and impact performance.

In the normal course of business, certain Funds invest in securities and enter into transactions where risks exist due to fluctuations in the market (market risk) or failure of the issuer to meet all its obligations, including the ability to pay principal and interest when due (issuer credit risk). The value of securities may also be affected by one or all of the following: (i) general economy; (ii) overall market as well as local, regional or global political and/or social instability; (iii) regulation, taxation or international tax treaties between various countries; and (iv) currency, interest rate and price fluctuations.

Each Fund may be exposed to prepayment risk, which is the risk that borrowers may exercise their option to prepay principal earlier than scheduled during periods of declining interest rates, which would force each Fund to reinvest in lower yielding securities. Each Fund may also be exposed to reinvestment risk, which is the risk that income from each Fund s portfolio will decline if each Fund invests the proceeds from matured, traded or called fixed-income securities at market interest rates that are below each Fund portfolio s current earnings rate.

The Funds may hold a significant amount of bonds subject to calls by the issuers at defined dates and prices. When bonds are called by issuers and the Funds reinvest the proceeds received, such investments may be in securities with lower yields than the bonds originally held, and correspondingly, could adversely impact the yield and total return performance of a Fund.

A Fund structures and sponsors the TOB Trusts in which it holds TOB Residuals and has certain duties and responsibilities, which may give rise to certain additional risks including, but not limited to, compliance, securities law and operational risks.

Should short-term interest rates rise, the Funds investments in TOB Trusts may adversely affect the Funds net investment income and dividends to Common Shareholders. Also, fluctuations in the market value of municipal bonds deposited into the TOB Trust may adversely affect the Funds NAVs per share.

The SEC and various federal banking and housing agencies have adopted credit risk retention rules for securitizations (the Risk Retention Rules). The Risk Retention Rules would require the sponsor of a TOB Trust to retain at least 5% of the credit risk of the underlying assets supporting the TOB Trust s municipal bonds. The Risk Retention Rules may adversely affect the Funds ability to engage in TOB Trust transactions or increase the costs of such transactions in certain circumstances.

TOB Trusts constitute an important component of the municipal bond market. Any modifications or changes to rules governing TOB Trusts may adversely impact the municipal market and the Funds, including through reduced demand for and liquidity of municipal bonds and increased financing costs for municipal issuers. The ultimate impact of any potential modifications on the TOB Trust market and the overall municipal market is not yet certain.

Counterparty Credit Risk: Similar to issuer credit risk, the Funds may be exposed to counterparty credit risk, or the risk that an entity may fail to or be unable to perform on its commitments related to unsettled or open transactions. The Funds manage counterparty credit risk by entering into transactions only with counterparties that the Manager believes have the financial resources to honor their obligations and by monitoring the financial stability of those counterparties. Financial assets, which potentially expose the Funds to market, issuer and counterparty credit risks, consist principally of financial instruments and receivables due from counterparties. The extent of the Funds exposure to market, issuer and counterparty credit risks with respect to these financial assets is approximately their value recorded in the Statements of Assets and Liabilities, less any collateral held by the Funds.

A derivative contract may suffer a mark-to-market loss if the value of the contract decreases due to an unfavorable change in the market rates or values of the underlying instrument. Losses can also occur if the counterparty does not perform under the contract.

With exchange-traded futures, there is less counterparty credit risk to the Funds since the exchange or clearinghouse, as counterparty to such instruments, guarantees against a possible default. The clearinghouse stands between the buyer and the seller of the contract; therefore, credit risk is limited to failure of the clearinghouse. While offset rights may exist under applicable law, a Fund does not have a contractual right of offset against a clearing broker or clearinghouse in the event of a default (including the bankruptcy or insolvency). Additionally, credit risk exists in exchange-traded futures with respect to initial and variation margin that is held in a clearing broker s customer accounts. While clearing brokers are required to segregate customer margin from their own assets, in the event that a clearing broker becomes insolvent or goes into bankruptcy and at that time there is a shortfall in the aggregate amount of margin held by the clearing broker for all its clients, typically the shortfall would be allocated on a pro rata basis across all the clearing broker s customers, potentially resulting in losses to the Funds.

Concentration Risk: MUC, MUJ, MIY and MPA invest a substantial amount of their assets in issuers located in a single state or limited number of states. This may subject each Fund to the risk that economic, political or social issues impacting a particular state or group of states could have an adverse and disproportionate impact on the income from, or the value or liquidity of, the Funds respective portfolios. Investment percentages in specific states or U.S. territories are presented in the Schedules of Investments.

As of period end, MUC invested a significant portion of its assets in securities in the county, city, special district and school district sector, MUJ and MFT invested a significant portion of their assets in securities in the transportation sector and MIY invested a significant portion of its assets in securities in the health sector. Changes in economic conditions affecting such sectors would have a greater impact on the Funds and could affect the value, income and/or liquidity of positions in such securities.

Certain Funds invest a significant portion of their assets in fixed-income securities and/or use derivatives tied to the fixed-income markets. Changes in market interest rates or economic conditions may affect the value and/or liquidity of such investments. Interest rate risk is the risk that prices of bonds and other fixed-income securities will increase as interest rates fall and decrease as interest rates rise. The Funds may be subject to a greater risk of rising interest rates due to the current period of historically low rates.

10. Capital Share Transactions:

Common Shares

MFT and MPA each is authorized to issue an unlimited numbers of Common Shares and 1 million Preferred Shares, all of which were initially classified as Common Shares. MUC, MUJ and MIY each is authorized to issue 200 million shares, all of which were initially classified as Common Shares. The par value for each Fund s Common Shares is \$0.10. The par value for each Fund s Preferred Shares outstanding is \$0.10, except for MFT and MPA, which is \$0.05. The Board is authorized, however, to reclassify any unissued Common Shares to Preferred Shares without the approval of Common Shareholders.

For the year ended July 31, 2017, Common Shares issued and outstanding increased by 2,005 for MFT. For the year ended July 31, 2016, Common Shares issued and outstanding remained constant for MFT.

For the years ended July 31, 2017 and July 31, 2016, shares issued and outstanding remained constant for MUC, MUJ and MPA.

For the year ended July 31, 2017, Common Shares issued and outstanding remained constant for MIY. For the year ended July 31, 2016, Common Shares issued and outstanding increased by 11,329,360 due to the reorganization for MIY.

Preferred Shares

Each Fund s Preferred Shares rank prior to the Fund s Common Shares as to the payment of dividends by the Fund and distribution of assets upon dissolution or liquidation of a Fund. The 1940 Act prohibits the declaration of any dividend on a Fund s Common Shares or the repurchase of a Fund s Common Shares if a Fund fails to maintain asset coverage of at least 200% of the liquidation preference of the Fund s outstanding Preferred Shares. In addition, pursuant to the Preferred Shares governing instruments, a Fund is restricted from declaring and paying dividends on classes of shares ranking junior to or on parity with the Fund s Preferred Shares or repurchasing such shares if a Fund fails to declare and pay dividends on the Preferred Shares, redeem any Preferred Shares required to be redeemed under the Preferred Shares governing instruments or comply with the basic maintenance amount requirement of the ratings agencies rating the Preferred Shares.

The holders of Preferred Shares have voting rights equal to the voting rights of the holders of Common Shares (one vote per share) as a single class on certain matters. However, the holders of Preferred Shares, voting as a separate class, are also entitled to elect two Directors to the Board of each Fund. The holders of Preferred Shares are also entitled to elect the full Board of Directors if dividends on the Preferred Shares are not paid for a period of two years. The holders of Preferred Shares are also generally entitled to a separate class vote to amend the Preferred Share governing documents. In addition, the 1940 Act requires the approval of the holders of a majority of any outstanding Preferred Shares, voting as a separate class, to (a) adopt any plan of reorganization that would adversely affect the Preferred Shares, (b) change a Fund s sub-classification as a closed-end investment company or change its fundamental investment restrictions or (c) change its business so as to cease to be an investment company.

VRDP Shares

MUJ, MIY and MPA (collectively, the VRDP Funds), have issued Series W-7 VRDP Shares, \$100,000 liquidation preference per share, in privately negotiated offerings. The VRDP Shares were offered to qualified institutional buyers as defined pursuant to Rule 144A under the Securities Act of 1933, as amended, (the Securities Act). The VRDP Shares include a liquidity feature and are currently in a special rate period, each as described below.

As of period end, the VRDP Shares outstanding of each Fund were as follows:

	Issue Date	Shares Issued	Aggı	regate Principal	Maturity Date
MUJ	6/30/11	1,727	\$	172,700,000	7/01/41
	4/13/15	644	\$	64,400,000	7/01/41
MIY	4/21/11	1,446	\$	144,600,000	5/01/41
	9/14/15	873	\$	87,300,000	5/01/41
MPA	5/19/11	663	\$	66,300,000	6/01/41
	4/13/15	163	\$	16.300.000	6/01/41

Redemption Terms: Each VRDP Fund is required to redeem its VRDP Shares on the maturity date, unless earlier redeemed or repurchased. Six months prior to the maturity date, each VRDP Fund is required to begin to segregate liquid assets with the Fund s custodian to fund the redemption. In addition, each VRDP Fund is required to redeem certain of its outstanding VRDP Shares if it fails to comply with certain asset coverage, basic maintenance amount or leverage requirements.

Subject to certain conditions, the VRDP Shares may also be redeemed, in whole or in part, at any time at the option of each VRDP Fund. The redemption price per VRDP Share is equal to the liquidation preference per share plus any outstanding unpaid dividends.

Liquidity Feature: Each VRDP Fund entered into a fee agreement with the liquidity provider that requires an initial commitment and a per annum liquidity fee payable to the liquidity provider. These fees, if applicable, are shown as liquidity fees in the Statements of Operations.

The fee agreements between VRDP Funds and the liquidity provider are for a 364 day term and are scheduled to expire, unless renewed or terminated in advance as follows:

 MUJ
 MIY
 MPA

 Expiration date
 4/15/20
 7/05/18
 7/05/18

In the event the fee agreement is not renewed or is terminated in advance, and the VRDP Funds do not enter into a fee agreement with an alternate liquidity provider, the VRDP Shares will be subject to mandatory purchase by the liquidity provider prior to the termination of the fee agreement. In the event of such mandatory purchase, the VRDP Funds are required to redeem the VRDP Shares six months after the purchase date. Immediately after such mandatory purchase, each VRDP Fund is required to begin to segregate liquid assets with their custodian to fund the redemption. There is no assurance the VRDP Fund will replace such redeemed VRDP Shares with any other preferred shares or other form of leverage.

Remarketing: The VRDP Funds may incur remarketing fees of 0.10% on the aggregate principal amount of all the Funds VRDP Shares, which, if any, are included in remarketing fees on Preferred Shares in the Statements of Operations. During any special rate period (as described below), VRDP Funds may incur no remarketing fees.

Dividends: Dividends on the VRDP Shares are payable monthly at a variable rate set weekly by the remarketing agent. Such dividend rates are generally based upon a spread over a base rate and cannot exceed a maximum rate. In the event of a failed remarketing, the dividend rate of the VRDP Shares will be reset to a maximum rate. The maximum rate is determined based on, among other things, the long-term preferred share rating assigned to the VRDP Shares and the length of time that the VRDP Shares fail to be remarketed. At the date of issuance, the VRDP Shares were assigned long-term ratings of Aaa from Moody s and AAA from Fitch. Subsequent to the issuance of the VRDP Shares, Moody s completed a review of its methodology for rating securities issued by registered closed-end funds. As of period end, the VRDP Shares were assigned a long-term rating of Aa2 from Moody s under its new ratings methodology. The VRDP Shares continue to be assigned a long-term

rating of AAA from Fitch.

For the year ended July 31, 2017, the annualized dividend rates for the VRDP Shares were as follows:

MUJ MIY MPA
Rate 1.59% 1.61% 1.61%

Ratings: The short-term ratings on the VRDP Shares are directly related to the short-term ratings of the liquidity provider for such VRDP Shares. Changes in the credit quality of the liquidity provider could cause a change in the short-term credit ratings of the VRDP Shares as rated by Moody s, Fitch and/or S&P. A change in the short-term credit rating of the liquidity provider or the VRDP Shares may adversely affect the dividend rate paid on such shares, although the dividend rate paid on the VRDP Shares is not directly based upon either short-term rating. The liquidity provider may be terminated prior to the scheduled termination date if the liquidity provider fails to maintain short-term debt ratings in one of the two highest rating categories.

Special Rate Period: On June 21, 2012, MIY and MPA commenced a three-year term ending June 24, 2015 (the special rate period) with respect to their VRDP Shares, during which the VRDP Shares will not be subject to any remarketing and the dividend rate will be based on a predetermined methodology. The special rate period has been extended each year for an additional one year term and is currently set to expire on June 20, 2018. Prior to June 20, 2018, the holder of the VRDP Shares and MIY and MPA may mutually agree to extend the special rate period. If the special rate period is not extended, the VRDP Shares will revert to remarketable securities upon the termination of the special rate period and will be remarketed and available for purchase by qualified institutional investors.

On April 17, 2014, MUJ commenced a three-year term ending April 19, 2017 (the special rate period) with respect to its VRDP Shares, during which the VRDP Shares will not be subject to any remarketing and the dividend rate will be based on a predetermined methodology. In April 2017, the special rate period was extended to April 15, 2020. Prior to April 15, 2020, the holder of the VRDP Shares and MUJ may mutually agree to extend the special rate period. If the special rate period is not extended, the VRDP Shares will revert to remarketable securities upon the termination of the special rate period and will be remarketed and available for purchase by qualified institutional investors.

During the special rate period, the liquidity and fee agreements remain in effect and the VRDP Shares remain subject to mandatory redemption by MUJ on the maturity date. The VRDP Shares will not be remarketed or subject to optional or mandatory tender events during the special rate period. During the special rate period, MUJ is required to comply with the same asset coverage, basic maintenance amount and leverage requirements for the VRDP Shares as is required when the VRDP Shares are not in a special rate period. MUJ will pay a nominal fee at the annual rate of 0.01% to the liquidity provider and remarketing agent during the special rate period. MUJ will also pay dividends monthly based on the sum of the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index rate and a percentage per annum based on the long-term ratings assigned to the VRDP Shares.

If the VRDP Funds redeem the VRDP Shares prior to end of the special rate period and the VRDP Shares have long-term ratings above A1/A+ and its equivalent by all ratings agencies then rating the VRDP Shares, then such redemption may be subject to a redemption premium payable to the holder of the VRDP Shares based on the time remaining in the special rate period, subject to certain exceptions for redemptions that are required to comply with minimum asset coverage requirements.

For the year ended July 31, 2017, VRDP Shares issued and outstanding of the VRDP Funds remained constant.

For the year ended July 31, 2016, the VRDP Shares issued and outstanding for MUJ and MPA remained constant, and the VRDP Shares issued and outstanding increased by 873 due to the reorganization of MIY.

VMTP Shares

MUC and MFT (collectively, the VMTP Funds) have issued Series W-7 VMTP Shares, \$100,000 liquidation preference per share, in privately negotiated offerings and sale of VMTP Shares exempt from registration under the Securities Act. The VMTP Shares are subject to certain restrictions on transfer, and VMTP Funds may also be required to register the VMTP Shares for sale under the Securities Act under certain circumstances. In addition, amendments to the VMTP governing documents generally require the consent of the holders of VMTP Shares.

As of period end, the VMTP Shares outstanding of each Fund were as follows:

	Issue Date	Shares Issued	Aggregate Principal	Term Redemption Date
MUC	3/22/12	2,540	254,000,000	3/30/19
MFT	12/16/11	565	56,500,000	1/2/19

Redemption Terms: Each VMTP Fund is required to redeem its VMTP Shares on the term redemption date, unless earlier redeemed or repurchased or unless extended. In September 2015, the term redemption date for MUC was extended until March 30, 2019. There is no assurance that the term of a Fund s VMTP Shares will be extended further or that a Fund s VMTP Shares will be replaced with any other preferred shares or other form of leverage upon the redemption or repurchase of the VMTP Shares. Six months prior to the term redemption date, each VMTP Fund is required to begin to segregate liquid assets with the Funds custodian to fund the redemption. In addition, each VMTP Fund is required to redeem certain of its outstanding VMTP Shares if it fails to comply with certain asset coverage, basic maintenance amount or leverage requirements.

Subject to certain conditions, a Fund s VMTP Shares may be redeemed, in whole or in part, at any time at the option of each VMTP Fund. The redemption price per VMTP Share is equal to the liquidation preference per share plus any outstanding unpaid dividends and applicable redemption premium. If the VMTP Fund redeems the VMTP Shares prior to the term redemption date and the VMTP Shares have long-term ratings above A1/A+ or its equivalent by the ratings agencies then rating the VMTP Shares, then such redemption may be subject to a prescribed redemption premium (up to 3% of the liquidation preference) payable to the holder of the VMTP Shares based on the time remaining until the term redemption date, subject to certain exceptions for redemptions that are required to comply with minimum asset coverage requirements.

Dividends: Dividends on the VMTP Shares are declared daily and payable monthly at a variable rate set weekly at a fixed rate spread to the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Index. The fixed spread is determined based on the long-term preferred share rating assigned to the VMTP Shares by the ratings agencies then rating the VMTP Shares. At the date of issuance, the VMTP Shares were assigned long-term

ratings of Aaa from Moody s and AAA from Fitch. Subsequent to the issuance of the VMTP Shares, Moody s completed a review of its methodology for rating securities issued by registered closed-end funds. As of period end, the VMTP Shares were assigned a long-term rating of Aa1 for MFT and Aa2 for MUC from Moody s under its new rating methodology. The VMTP Shares continue to be assigned a long-term rating of AAA from Fitch. The dividend rate on the VMTP Shares is subject to a step-up spread if the Funds fail to comply with certain provisions, including, among other things, the timely payment of dividends, redemptions or gross-up payments, and complying with certain asset coverage and leverage requirements.

For the year ended July 31, 2017, the annualized dividend rates for the VMTP Shares were as follows:

Rate MUC MFT 1.63% 1.71%

For the year ended July 31, 2017, VMTP Shares issued and outstanding of each VMTP Fund remained constant.

Offering Costs: The Funds incurred costs in connection with the issuance of VRDP and/or VMTP Shares, which were recorded as a direct deduction from the carrying value of the related debt liability and will be amortized over the life of the VRDP Shares with the exception of upfront fees paid to the liquidity provider which were amortized over the life of the liquidity agreement. Amortization of these costs is included in interest expense, fees and amortization of offering costs in the Statements of Operations.

Financial Reporting: The VRDP and VMTP Shares are considered debt of the issuer; therefore, the liquidation preference, which approximates fair value of the VRDP and VMTP Shares, is recorded as a liability in the Statements of Assets and Liabilities net of deferred offering costs. Unpaid dividends are included in interest expense and fees payable in the Statements of Assets and Liabilities, and the dividends accrued and paid on the VRDP and VMTP Shares are included as a component of interest expense, fees and amortization of offering costs in the Statements of Operations. The VRDP and VMTP Shares are treated as equity for tax purposes. Dividends paid to holders of the VRDP and VMTP Shares are generally classified as tax-exempt income for tax-reporting purposes.

11. Subsequent Events:

Management s evaluation of the impact of all subsequent events on the Funds financial statements was completed through the date the financial statements were issued and the following items were noted:

	Common Dividend Per Share			Preferred Shares ³		
	$Paid^1$	Declared ²	Shares	Series	Declared	
MUC	\$ 0.0615	\$ 0.0615	VMTP	W-7	\$ 367,361	
MUJ	\$ 0.0675	\$ 0.0675	VRDP	W-7	\$ 334,863	
MFT	\$ 0.0670	\$ 0.0670	VMTP	W-7	\$ 85,555	
MIY	\$ 0.0640	\$ 0.0640	VRDP	W-7	\$ 330,315	
MPA	\$ 0.0623	\$ 0.0623	VRDP	W-7	\$ 117,654	

Net investment income dividend paid on September 1, 2017, to Common Shareholders of record on August 15, 2017.

² Net investment income dividend declared on September 1, 2017, payable to Common Shareholders of record on September 15, 2017.

³ Dividends declared for period August 1, 2017 to August 31, 2017.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of BlackRock MuniHoldings California Quality Fund, Inc., BlackRock MuniHoldings New Jersey Quality Fund, Inc., BlackRock MuniYield Michigan Quality Fund, Inc., and to the Shareholders and Board of Trustees of BlackRock MuniYield Investment Quality Fund and BlackRock MuniYield Pennsylvania Quality Fund:

We have audited the accompanying statements of assets and liabilities of BlackRock MuniHoldings California Quality Fund, Inc., BlackRock MuniHoldings New Jersey Quality Fund, Inc., BlackRock MuniYield Investment Quality Fund, BlackRock MuniYield Michigan Quality Fund, Inc., and BlackRock MuniYield Pennsylvania Quality Fund (collectively, the Funds), including the schedules of investments, as of July 31, 2017, and the related statements of operations and the statements of cash flows for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended. These financial statements and financial highlights are the responsibility of the Funds management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. The Funds are not required to have, nor were we engaged to perform, an audit of their internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Funds internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. Our procedures included confirmation of securities owned as of July 31, 2017, by correspondence with the custodian and brokers; where replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements and financial highlights referred to above present fairly, in all material respects, the financial positions of BlackRock MuniHoldings California Quality Fund, Inc., BlackRock MuniHoldings New Jersey Quality Fund, Inc., BlackRock MuniYield Investment Quality Fund, BlackRock MuniYield Michigan Quality Fund, Inc., and BlackRock MuniYield Pennsylvania Quality Fund as of July 31, 2017, the results of their operations and their cash flows for the year then ended, the changes in their net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended, in conformity with accounting principles generally accepted in the United States of America.

Deloitte & Touche LLP

Boston, Massachusetts

September 25, 2017

Disclosure of Investment Advisory Agreements

The Board of Directors (the Board, the members of which are referred to as Board Members) of BlackRock MuniHoldings California Quality Fund, Inc. (MUC), BlackRock New Jersey Quality Fund (MUJ), BlackRock MuniYield Investment Quality Fund (MFT), BlackRock MuniYield Michigan Quality Fund, Inc. (MIY) and BlackRock MuniYield Pennsylvania Quality Fund (MPA) and together with MUC, MUJ, MFT and MIY, each a Fund, and, collectively, the Funds) met in person on April 27, 2017 (the April Meeting) and June 7-8, 2017 (the June Meeting) to consider the approval of each Fund s investment advisory agreement (each an Agreement, and, collectively, the Agreements) with BlackRock Advisors, LLC (the Manager), each Fund s investment advisor. The Manager is also referred to herein as BlackRock.

Activities and Composition of the Board

On the date of the June Meeting, the Board of each Fund consisted of eleven individuals, nine of whom were not interested persons of the Fund as defined in the Investment Company Act of 1940, as amended (the 1940 Act.) (the Independent Board Members.). The Board Members are responsible for the oversight of the operations of its Fund and perform the various duties imposed on the directors of investment companies by the 1940 Act. The Independent Board Members have retained independent legal counsel to assist them in connection with their duties. The Chair of each Board is an Independent Board Member. Each Board has established five standing committees: an Audit Committee, a Governance and Nominating Committee, a Compliance Committee, a Performance Oversight Committee, and an Executive Committee, each of which is chaired by an Independent Board Member and composed of Independent Board Members (except for the Executive Committee, which also has one interested Board Member).

The Agreements

Pursuant to the 1940 Act, each Board is required to consider the continuation of the Agreement for its Fund on an annual basis. Each Board has four quarterly meetings per year, each extending over two days, a fifth one-day meeting to consider specific information surrounding the consideration of renewing the Agreement for its Fund and additional in-person and telephonic meetings as needed. In connection with this year-long deliberative process, each Board assessed, among other things, the nature, extent and quality of the services provided to its Fund by BlackRock, BlackRock s personnel and affiliates, including, as applicable; investment management, administrative, and shareholder services; the oversight of fund service providers; marketing; risk oversight; compliance; and ability to meet applicable legal and regulatory requirements.

Each Board, acting directly and through its committees, considers at each of its meetings, and from time to time as appropriate, factors that are relevant to its annual consideration of the renewal of the Agreement for its Fund, including the services and support provided by BlackRock to the Fund and its shareholders. BlackRock also furnished additional information to each Board in response to specific questions from the Board. This additional information is discussed further below in the section titled Board Considerations in Approving the Agreements. Among the matters each Board considered were: (a) investment performance for one-year, three-year, five-year, ten-year, and/or since inception periods, as applicable, against peer funds, applicable benchmarks, and performance metrics, as applicable, as well as senior management s and portfolio managers analysis of the reasons for any over-performance or underperformance relative to its peers, benchmarks, and other performance metrics, as applicable; (b) fees, including advisory, administration, if applicable, paid to BlackRock and its affiliates by the Fund for services; (c) Fund operating expenses and how BlackRock allocates expenses to the Fund; (d) the resources devoted to, risk oversight of, and compliance reports relating to, implementation of the Fund s investment objective(s), policies and restrictions, and meeting regulatory requirements; (e) the Fund s adherence to its compliance policies and procedures; (f) the nature, cost and character of non-investment management services provided by BlackRock and its affiliates; (g) BlackRock s and other service providers internal controls and risk and compliance oversight mechanisms; (h) BlackRock s implementation of the proxy voting policies approved by the Board; (i) execution quality of portfolio transactions; (j) BlackRock s implementation of the Fund s valuation and liquidity procedures; (k) an analysis of management fees for products with similar investment mandates across the open-end fund, closed-end fund, sub-advised mutual fund, collective investment trust, and institutional separate account product channels, as applicable, and the similarities and differences between these products and the services provided as compared to the Fund; (1) BlackRock s compensation methodology for its investment professionals and the incentives and accountability it creates, along with investment professionals investments in the fund(s) they manage; and (m) periodic updates on BlackRock s business.

The Board of each Fund considered BlackRock $\,$ s efforts during the past several years with regard to the redemption of outstanding auction rate preferred securities ($\,$ AMPS $\,$). As of the date of this report, each Fund has redeemed all of its outstanding AMPS.

Board Considerations in Approving the Agreements

The Approval Process: Prior to the April Meeting, each Board requested and received materials specifically relating to the Agreement for its Fund. Each Board is continuously engaged in a process with its independent legal counsel and BlackRock to review the nature and scope of the information provided to better assist its deliberations. The materials provided to the Board of each Fund in connection with the April Meeting included (a) information independently compiled and prepared by Broadridge Financial Solutions, Inc. (Broadridge) on Fund fees and expenses

as compared with a peer group of funds as determined by Broadridge (Expense Peers) and the investment performance of the Fund as compared with a peer group of funds as determined by Broadridge¹ and a customized peer group selected by BlackRock (Customized Peer Group); (b) information on the profits realized by BlackRock and its affiliates pursuant to the Funds Agreement and a discussion of fall-out benefits to BlackRock and its affiliates; (c) a general analysis provided by BlackRock concerning investment management fees charged to other clients, such as institutional clients, sub-advised mutual funds, and open-end funds,

¹ Funds are ranked by Broadridge in quartiles, ranging from first to fourth, where first is the most desirable quartile position and fourth is the least desirable.

ANNUAL REPORT JULY 31, 2017 69

Disclosure of Investment Advisory Agreements (continued)

under similar investment mandates, as applicable; (d) review of non-management fees; (e) the existence, impact and sharing of potential economies of scale; and (f) a summary of aggregate amounts paid by the Fund to BlackRock.

At the April Meeting, each Board reviewed materials relating to its consideration of the Agreement for its Fund. As a result of the discussions that occurred during the April Meeting, and as a culmination of each Board s year-long deliberative process, each Board presented BlackRock with questions and requests for additional information. BlackRock responded to these requests with additional written information in advance of the June Meeting. Topics covered included: (a) fund repositionings and portfolio management changes, including additional information about the portfolio managers, research teams, organization and methods and historical track records of the teams, and the potential impact of such changes on fund performance and the costs of such changes; (b) scientific active equity management; (c) BlackRock s option overwrite policy; (d) differences in services between closed-end funds and mutual funds; (d) market discount; and (e) adviser profitability.

At the June Meeting, each Board, including the Independent Board Members, unanimously approved the continuation of the Agreement between the Manager and its Fund for a one-year term ending June 30, 2018. In approving the continuation of the Agreement for its Fund, each Board considered: (a) the nature, extent and quality of the services provided by BlackRock; (b) the investment performance of the Fund; (c) the advisory fee and the cost of the services and profits to be realized by BlackRock and its affiliates from their relationship with the Fund; (d) the Fund s costs to investors compared to the costs of Expense Peers and performance compared to the relevant performance metrics as previously discussed; (e) the sharing of potential economies of scale; (f) fall-out benefits to BlackRock and its affiliates as a result of its relationship with the Fund; and (g) other factors deemed relevant by the Board Members.

Each Board also considered other matters it deemed important to the approval process, such as other payments made to BlackRock or its affiliates relating to securities lending and cash management, services related to the valuation and pricing of Fund portfolio holdings, and advice from independent legal counsel with respect to the review process and materials submitted for the Board s review. Each Board noted the willingness of BlackRock personnel to engage in open, candid discussions with the Board. Each Board did not identify any particular information as determinative, and each Board Member may have attributed different weights to the various items considered.

A. Nature, Extent and Quality of the Services Provided by BlackRock: Each Board, including the Independent Board Members, reviewed the nature, extent and quality of services provided by BlackRock, including the investment advisory services and the resulting performance of its Fund. Throughout the year, each Board compared its Fund s performance to the performance of a comparable group of closed-end funds, relevant benchmark, and performance metrics, as applicable. Each Board met with BlackRock s senior management personnel responsible for investment activities, including the senior investment officers. Each Board also reviewed the materials provided by its Fund s portfolio management team discussing the Fund s performance and the Fund s investment objective(s), strategies and outlook.

Each Board considered, among other factors, with respect to BlackRock: the number, education and experience of investment personnel generally and its Fund s portfolio management team; BlackRock s research capabilities; investments by portfolio managers in the funds they manage; portfolio trading capabilities; use of technology; commitment to compliance; credit analysis capabilities; risk analysis and oversight capabilities; and the approach to training and retaining portfolio managers and other research, advisory and management personnel. Each Board engaged in a review of BlackRock s compensation structure with respect to its Fund s portfolio management team and BlackRock s ability to attract and retain high-quality talent and create performance incentives.

In addition to investment advisory services, each Board considered the quality of the administrative and other non-investment advisory services provided to its Fund. BlackRock and its affiliates provide each Fund with certain administrative, shareholder, and other services (in addition to any such services provided to the Fund by third parties) and officers and other personnel as are necessary for the operations of the Fund. In particular, BlackRock and its affiliates provide each Fund with administrative services including, among others: (i) preparing disclosure documents, such as the prospectus and the statement of additional information in connection with the initial public offering and periodic shareholder reports; (ii) preparing communications with analysts to support secondary market trading of the Fund; (iii) oversight of daily accounting and pricing; (iv) preparing periodic filings with regulators and stock exchanges; (v) overseeing and coordinating the activities of other service providers; (vi) organizing Board meetings and preparing the materials for such Board meetings; (vii) providing legal and compliance support; (viii) furnishing analytical and other support to assist the Board in its consideration of strategic issues such as the merger, consolidation or repurposing of certain closed-end funds; and (ix) performing other administrative functions necessary for the operation of the Fund, such as tax reporting, fulfilling regulatory filing requirements and call center services. Each Board reviewed the structure and duties of BlackRock s fund administration, shareholder services, and legal & compliance departments and considered BlackRock s policies and procedures for assuring compliance with applicable laws and regulations.

B. The Investment Performance of the Funds and BlackRock: Each Board, including the Independent Board Members, also reviewed and considered the performance history of its Fund. In preparation for the April Meeting, the Board of each Fund was provided with reports

independently prepared by Broadridge, which included a comprehensive analysis of the Fund s performance. Each Board also reviewed a narrative and statistical analysis of the Broadridge data that was prepared by BlackRock. In connection with its review, the Board of each Fund received and reviewed information regarding the investment performance, based on net asset value (NAV), of the Fund as compared to other funds in its applicable Broadridge category and its Customized Peer Group. Each Board was provided with a description of the methodology used by Broadridge to select peer funds and periodically meets with Broadridge

70 ANNUAL REPORT JULY 31, 2017

Disclosure of Investment Advisory Agreements (continued)

representatives to review its methodology. Each Board was provided with information on the composition of the Broadridge performance universes and expense universes. Each Board and its Performance Oversight Committee regularly review, and meet with Fund management to discuss, the performance of its Fund throughout the year.

In evaluating performance, each Board recognized that the performance data reflects a snapshot of a period as of a particular date and that selecting a different performance period could produce significantly different results. Further, each Board recognized that it is possible that long-term performance can be adversely affected by even one period of significant underperformance so that a single investment decision or theme has the ability to affect long-term performance disproportionately.

The Boards of MUC, MFT and MIY noted that for each of its Funds for each of the one-, three- and five-year periods reported, MUC, MFT and MIY each ranked first out of two funds against its Customized Peer Group Composite. BlackRock believes that the Customized Peer Group Composite is an appropriate performance metric for MUC, MFT and MIY. The Composite measures a blend of total return and yield.

The Board of MUJ noted that for the one-, three- and five-year periods reported, MUJ ranked second out of three funds, first out of three funds, and first out of three funds, respectively, against its Customized Peer Group Composite. BlackRock believes that the Customized Peer Group Composite is an appropriate performance metric for MUJ. The Composite measures a blend of total return and yield. The Board and BlackRock reviewed MUJ s underperformance during the one-year period.

The Board of MPA noted that for the one-, three- and five-year periods reported, MPA ranked second out of four funds, first out of four funds, and second out of four funds, respectively, against its Customized Peer Group Composite. BlackRock believes that the Customized Peer Group Composite is an appropriate performance metric for MPA. The Composite measures a blend of total return and yield.

C. Consideration of the Advisory/Management Fees and the Cost of the Services and Profits to be Realized by BlackRock and its Affiliates from their Relationship with the Funds: Each Board, including the Independent Board Members, reviewed its Fund s contractual management fee rate compared with the other funds in its Broadridge category. The contractual management fee rate represents a combination of the advisory fee and any administrative fees, before taking into account any reimbursements or fee waivers. Each Board also compared its Fund s total expense ratio, as well as its actual management fee rate as a percentage of total assets, to those of other funds in its Broadridge category. The total expense ratio represents a fund s total net operating expenses, excluding any investment related expenses. The total expense ratio gives effect to any expense reimbursements or fee waivers that benefit a fund, and the actual management fee rate gives effect to any management fee reimbursements or waivers that benefit a fund. Each Board considered the services provided and the fees charged by BlackRock and its affiliates to other types of clients with similar investment mandates, as applicable, including institutional accounts and sub-advised mutual funds (including mutual funds sponsored by third parties).

Each Board received and reviewed statements relating to BlackRock s financial condition. Each Board reviewed BlackRock s profitability methodology and was also provided with a profitability analysis that detailed the revenues earned and the expenses incurred by BlackRock for services provided to its Fund. Each Board reviewed BlackRock s profitability with respect to its Fund and other funds the Board currently oversees for the year ended December 31, 2016 compared to available aggregate profitability data provided for the prior two years. Each Board reviewed BlackRock s profitability with respect to certain other U.S. fund complexes managed by the Manager and/or its affiliates. Each Board reviewed BlackRock s assumptions and methodology of allocating expenses in the profitability analysis, noting the inherent limitations in allocating costs among various advisory products. Each Board recognized that profitability may be affected by numerous factors including, among other things, fee waivers and expense reimbursements by the Manager, the types of funds managed, precision of expense allocations and business mix. As a result, calculating and comparing profitability at individual fund levels is difficult.

Each Board noted that, in general, individual fund or product line profitability of other advisors is not publicly available. Each Board reviewed BlackRock s overall operating margin, in general, compared to that of certain other publicly-traded asset management firms. Each Board considered the differences between BlackRock and these other firms, including the contribution of technology at BlackRock, BlackRock s expense management, and the relative product mix.

In addition, each Board considered the cost of the services provided to its Fund by BlackRock, and BlackRock s and its affiliates profits relating to the management of its Fund and the other funds advised by BlackRock and its affiliates. As part of its analysis, each Board reviewed BlackRock s methodology in allocating its costs of managing its Fund, to the Fund. Each Board may receive and review information from independent third parties as part of its annual evaluation. Each Board considered whether BlackRock has the financial resources necessary to attract and retain high quality investment management personnel to perform its obligations under the Fund s Agreement and to continue to provide the high quality of services that is expected by the Board. Each Board further considered factors including but not limited to BlackRock s commitment of time, assumption of risk, and liability profile in servicing its Fund in contrast to what is required of BlackRock with respect to

other products with similar investment mandates across the open-end fund, closed-end fund, sub-advised mutual fund, collective investment trust, and institutional separate account product channels, as applicable.

The Boards of MUC, MUJ, MFT and MPA noted that each Fund s contractual management fee rate ranked in the first quartile, and that the actual management fee rate and total expense ratio each ranked in the first quartile, relative to the Expense Peers.

ANNUAL REPORT JULY 31, 2017

71

Disclosure of Investment Advisory Agreements (concluded)

The Board of MIY noted that MIY s contractual management fee rate ranked in the first quartile, and that the actual management fee rate and total expense ratio each ranked in the second quartile, relative to the Expense Peers.

D. Economies of Scale: Each Board, including the Independent Board Members, considered the extent to which economies of scale might be realized as the assets of its Fund increase. Each Board also considered the extent to which its Fund benefits from such economies in a variety of ways, and whether there should be changes in the advisory fee rate or breakpoint structure in order to enable the Fund to more fully participate in these economies of scale. Each Board considered its Fund sasset levels and whether the current fee was appropriate.

Based on each Board s review and consideration of the issue, each Board concluded that most closed-end funds do not have fund level breakpoints because closed-end funds generally do not experience substantial growth after the initial public offering. They are typically priced at scale at a fund s inception.

E. Other Factors Deemed Relevant by the Board Members: Each Board, including the Independent Board Members, also took into account other ancillary or fall-out benefits that BlackRock or its affiliates may derive from their respective relationships with its Fund, both tangible and intangible, such as BlackRock s ability to leverage its investment professionals who manage other portfolios and risk management personnel, an increase in BlackRock s profile in the investment advisory community, and the engagement of BlackRock s affiliates as service providers to the Fund, including for administrative, securities lending and cash management services. Each Board also considered BlackRock s overall operations and its efforts to expand the scale of, and improve the quality of, its operations. Each Board also noted that BlackRock may use and benefit from third party research obtained by soft dollars generated by certain registered fund transactions to assist in managing all or a number of its other client accounts.

In connection with its consideration of the Agreement for its Fund, each Board also received information regarding BlackRock s brokerage and soft dollar practices. Each Board received reports from BlackRock which included information on brokerage commissions and trade execution practices throughout the year.

Each Board noted the competitive nature of the closed-end fund marketplace, and that shareholders are able to sell their Fund shares in the secondary market if they believe that the Fund stees and expenses are too high or if they are dissatisfied with the performance of the Fund.

Each Board also considered the various notable initiatives and projects BlackRock performed in connection with its closed-end fund product line. These initiatives included the redemption of AMPS for the BlackRock closed-end funds with AMPS outstanding; developing equity shelf programs; efforts to eliminate product overlap with fund mergers; ongoing services to manage leverage that has become increasingly complex; periodic evaluation of share repurchases and other support initiatives for certain BlackRock funds; and continued communications efforts with shareholders, fund analysts and financial advisers. With respect to the latter, the Independent Board Members noted BlackRock s continued commitment to supporting the secondary market for the common shares of its closed-end funds through a comprehensive secondary market communication program designed to raise investor and analyst awareness and understanding of closed-end funds. BlackRock s support services included, among other things: continuing communications concerning the redemption efforts related to AMPS; sponsoring and participating in conferences; communicating with closed-end fund analysts covering the BlackRock funds throughout the year; providing marketing and product updates for the closed-end funds; and maintaining and enhancing its closed-end fund website.

Conclusion

Each Board, including the Independent Board Members, unanimously approved the continuation of the Agreement between the Manager and its Fund for a one-year term ending June 30, 2018. Based upon its evaluation of all of the aforementioned factors in their totality, as well as other information, each Board, including the Independent Board Members, was satisfied that the terms of the Agreement for its Fund were fair and reasonable and in the best interest of the Fund and its shareholders. In arriving at its decision to approve the Agreement for its Fund, each Board did not identify any single factor or group of factors as, all-important or controlling, but considered all factors together, and different Board Members may have attributed different weights to the various factors considered. The Independent Board Members were also assisted by the advice of independent legal counsel in making this determination. The contractual fee arrangements for each Fund reflect the results of several years of review by the Fund s Board Members and predecessor Board Members, and discussions between such Board Members (and predecessor Board Members) and BlackRock. As a result, the Board Members conclusions may be based in part on their consideration of these arrangements in prior years.

72 ANNUAL REPORT JULY 31, 2017

Automatic Dividend Reinvestment Plans

Pursuant to each Fund s Dividend Reinvestment Plan (the Reinvestment Plan), Common Shareholders are automatically enrolled to have all distributions of dividends and capital gains and other distributions reinvested by Computershare Trust Company, N.A. (the Reinvestment Plan Agent) in the respective Fund s Common Shares pursuant to the Reinvestment Plan. Shareholders who do not participate in the Reinvestment Plan will receive all distributions in cash paid by check and mailed directly to the shareholders of record (or if the shares are held in street name or other nominee name, then to the nominee) by the Reinvestment Plan Agent, which serves as agent for the shareholders in administering the Reinvestment Plan.

After the Funds declare a dividend or determine to make a capital gain or other distribution, the Reinvestment Plan Agent will acquire shares for the participants—accounts, depending upon the following circumstances, either (i) through receipt of unissued but authorized shares from the Funds (newly issued shares) or (ii) by purchase of outstanding shares on the open market or on the Funds primary exchange (open-market purchases). If, on the dividend payment date, the net asset value per share (NAV) is equal to or less than the market price per share plus estimated brokerage commissions (such condition often referred to as a market premium), the Reinvestment Plan Agent will invest the dividend amount in newly issued shares acquired on behalf of the participants. The number of newly issued shares to be credited to each participant is account will be determined by dividing the dollar amount of the dividend by the NAV on the date the shares are issued. However, if the NAV is less than 95% of the market price on the dividend payment date, the dollar amount of the dividend will be divided by 95% of the market price on the dividend payment date, the NAV is greater than the market price per share plus estimated brokerage commissions (such condition often referred to as a market discount), the Reinvestment Plan Agent will invest the dividend amount in open-market purchases, or if the market discount shifts to a market premium during the purchase period, the Reinvestment Plan Agent will invest any un-invested portion in newly issued shares. Investments in newly issued shares made in this manner would be made pursuant to the same process described above and the date of issue for such newly issued shares will substitute for the dividend payment date.

You may elect not to participate in the Reinvestment Plan and to receive all dividends in cash by contacting the Reinvestment Plan Agent, at the address set forth below.

Participation in the Reinvestment Plan is completely voluntary and may be terminated or resumed at any time without penalty by notice if received and processed by the Reinvestment Plan Agent prior to the dividend record date. Additionally, the Reinvestment Plan Agent seeks to process notices received after the record date but prior to the payable date and such notices often will become effective by the payable date. Where late notices are not processed by the applicable payable date, such termination or resumption will be effective with respect to any subsequently declared dividend or other distribution.

The Reinvestment Plan Agent s fees for the handling of the reinvestment of distributions will be paid by each Fund. However, each participant will pay a pro rata share of brokerage commissions incurred with respect to the Reinvestment Plan Agent s open market purchases in connection with the reinvestment of all distributions. The automatic reinvestment of all distributions will not relieve participants of any U.S. federal, state or local income tax that may be payable on such dividends or distributions.

Each Fund reserves the right to amend or terminate the Reinvestment Plan. There is no direct service charge to participants in the Reinvestment Plan. However, each Fund reserves the right to amend the Reinvestment Plan to include a service charge payable by the participants. Participants in MPA that request a sale of shares are subject to a \$2.50 sales fee and a \$0.15 per share fee. Per share fees include any applicable brokerage commissions the Reinvestment Plan Agent is required to pay. Participants in MUC, MUJ, MFT and MIY that request a sale of shares are subject to a \$0.02 per share sold brokerage commission. All correspondence concerning the Reinvestment Plan should be directed to Computershare Trust Company, N.A., through the internet at http://www.computershare.com/blackrock, or in writing to Computershare, P.O. Box 505000, Louisville, KY 40233, Telephone:(800) 699-1236.

Overnight correspondence should be directed to the Reinvestment Plan Agent at Computershare, 462 South 4th Street, Suite 1600, Louisville, KY 40202.

ANNUAL REPORT JULY 31, 2017 73

Officers and Directors

Name, Address ¹ and Year of Birth	Position(s) Held with the Fund	Length of Time Served ³	Principal Occupation(s) During Past Five Years	Number of BlackRock- Advised Registered Investment Companies (RICs) Consisting of Investment Portfolios (Portfolios) Overseen ⁴	Public Company fand Other Investment Company Directorships Held During Past Five Years
Independent Director Richard E. Cavanagh	s ² Chair of the Board and Director	Since 2007	Director, The Guardian Life Insurance Company of America since 1998; Board Chair, Volunteers of America (a not-for-profit organization) since 2015 (board member since 2009); Director, Arch Chemical (chemical and allied products) from 1999 to 2011; Trustee, Educational Testing Service from 1997 to 2009 and Chairman thereof from 2005 to 2009; Senior Advisor, The Fremont Group since 2008 and Director thereof since 1996; Faculty Member/Adjunct Lecturer, Harvard University since 2007; President and Chief Executive Officer, The Conference Board, Inc. (global business research organization) from 1995 to 2007.	75 RICs consisting of 75 Portfolios	None
Karen P. Robards	Vice Chair of the Board and Director	Since 2007	Principal of Robards & Company, LLC (consulting and private investing) since 1987; Co-founder and Director of the Cooke Center for Learning and Development (a not-for-profit organization) since 1987; Investment Banker at Morgan Stanley from 1976 to 1987.	75 RICs consisting of 75 Portfolios	Greenhill & Co., Inc.; AtriCure, Inc. (medical devices) from 2000 until 2017
Michael J. Castellano 1946	Director	Since 2011	Chief Financial Officer of Lazard Group LLC from 2001 to 2011; Chief Financial Officer of Lazard Ltd from 2004 to 2011; Director, Support Our Aging Religious (non-profit) from 2009 to June 2015 and since 2017; Director, National Advisory Board of Church Management at Villanova University since 2010; Trustee, Domestic Church Media Foundation since 2012; Director, CircleBlack Inc. (financial technology company) since 2015.	75 RICs consisting of 75 Portfolios	None
Cynthia L. Egan 1955	Director	Since 2016	Advisor, U.S. Department of the Treasury from 2014 to 2015; President, Retirement Plan Services for T. Rowe Price Group, Inc. from 2007 to 2012; executive positions within Fidelity Investments from 1989 to 2007.		Unum (insurance); The Hanover Insurance Group (insurance); Envestnet (investment platform) from 2013 until 2016
Frank J. Fabozzi 1948	Director	Since 2007	Editor of and Consultant for The Journal of Portfolio Management since 2006; Professor of Finance, EDHEC Business School since 2011; Visiting Professor, Princeton University from 2013 to 2014 and since 2016; Professor in the Practice of Finance and Becton Fellow, Yale University School of Management from 2006 to 2011.	75 RICs consisting of 75 Portfolios	None
Jerrold B. Harris 1942	Director	Since 2007	Trustee, Ursinus College from 2000 to 2012; Director, Ducks Unlimited Canada (conservation) since 2015; Director, Waterfowl Chesapeake (conservation) since 2014; Director, Ducks Unlimited, Inc. since 2013; Director, Troemner LLC (scientific equipment) from 2000 to 2016; Director of Delta Waterfowl Foundation from 2010 to 2012; President and Chief Executive Officer, VWR Scientific Products Corporation from 1990 to 1999.	75 RICs consisting of 75 Portfolios	BlackRock Capital Investment Corp. (business development company)

R. Glenn Hubbard 1958	Director	Since 2007	Dean, Columbia Business School since 2004; Faculty member, Columbia Business School since 1988.	75 RICs consisting of 75 Portfolios	ADP (data and information services); Metropolitan Life Insurance Company (insurance)
W. Carl Kester 1951	Director	Since 2007	George Fisher Baker Jr. Professor of Business Administration, Harvard Business School since 2008, Deputy Dean for Academic Affairs from 2006 to 2010, Chairman of the Finance Unit, from 2005 to 2006, Senior Associate Dean and Chairman of the MBA Program from 1999 to 2005; Member of the faculty of Harvard Business School since 1981.	75 RICs consisting of 75 Portfolios	None
Catherine A. Lynch 1961	Director	Since 2016	Chief Executive Officer, Chief Investment Officer and various other positions, National Railroad Retirement Investment Trust from 2003 to 2016; Associate Vice President for Treasury Management, The George Washington University from 1999 to 2003; Assistant Treasurer, Episcopal Church of America from 1995 to 1999.	75 RICs consisting of 75 Portfolios	None

JULY 31, 2017

74

ANNUAL REPORT

Officers and Directors (continued)

Officer)

				Number of BlackRock-	
				Advised Registered	
				Investment Companies	
				(RICs) Consisting	Public Company ^{of} and Other Investment
				Investment Portfolios	Company Directorships Held
Name, Address ¹ and Year of Birth	Position(s) Held with the Fund	Length of Time Served ³	Principal Occupation(s) During Past Five Years	(Portfolios) Overseen ⁴	During Past Five Years
Interested Directors ⁵					
Barbara G. Novick	Director	Since 2014	Vice Chairman of BlackRock, Inc. since 2006; Chair of BlackRock s Government Relations Steering Committee since	101 RICs consisting e of 219 Portfolios	None
1960			2009; Head of the Global Client Group of BlackRock, Inc. from 1988 to 2008.		
John M. Perlowski	Director, President	Since 2015 (Director);	Managing Director of BlackRock, Inc. since 2009; Head of BlackRock Global Fund & Accounting Services since 2009;	128 RICs consisting of 317 Portfolios	None
1964	and Chief Executive Officer	Since 2011 (President and Chief Executive	Managing Director and Chief Operating Officer of the Global Product Group at Goldman Sachs Asset Management, L.P. from 2003 to 2009; Treasurer of Goldman Sachs Mutual Funds from 2003 to 2009 and Senior Vice President thereof		

from 2007 to 2009; Director of Goldman Sachs Offshore

Funds from 2002 to 2009: Advisory Director of Family Resource Network (charitable foundation) since 2009.

¹ The address of each Director is c/o BlackRock, Inc., 55 East 52nd Street, New York, NY 10055.

² Each Independent Director will serve until his or her successor is elected and qualifies, or until his or her earlier death, resignation, retirement or removal, or until December 31 of the year in which he or she turns 75. The maximum age limitation may be waived as to any Director by action of a majority of the Directors upon finding of good cause therefor.

³ Following the combination of Merrill Lynch Investment Managers, L.P. (MLIM) and BlackRock, Inc. (BlackRock) in September 2006, the various legacy MLIM and legacy BlackRock fund boards were realigned and consolidated into three new fund boards in 2007. As a result, although the chart shows certain Independent Directors as joining the Board in 2007, each Director first became a member of the boards of other legacy MLIM or legacy BlackRock funds as follows: Richard E. Cavanagh, 1994; Frank J. Fabozzi, 1988; Jerrold B. Harris, 1999; R. Glenn Hubbard, 2004; W. Carl Kester, 1995 and Karen P. Robards, 1998.

⁴ For purposes of this chart, RICs refers to investment companies registered under the 1940 Act and Portfolios refers to the investment programs of the BlackRock-advised funds. The Closed-End Complex is comprised of [# RICS from RICs/Ports] RICs. Ms. Novick and Mr. Perlowski are also board members of certain complexes of BlackRock registered open-end funds. Ms. Novick is also a board member of the BlackRock Equity-Liquidity Complex and Mr. Perlowski is also a board member of the BlackRock Equity-Bond Complex and the BlackRock Equity-Liquidity Complex.

⁵ Ms. Novick and Mr. Perlowski are both interested persons, as defined in the 1940 Act, of the Fund based on their positions with BlackRock and its affiliates. Ms. Novick and Mr. Perlowski are also board members of certain complexes of BlackRock registered

open-end funds. Ms. Novick is also a board member of the BlackRock Equity-Liquidity Complex and Mr. Perlowski is also a board member of the BlackRock Equity-Bond Complex and the BlackRock Equity-Liquidity Complex. Interested Directors serve until their resignation, removal or death, or until December 31 of the year in which they turn 72. The maximum age limitation may be waived as to any Director by action of a majority of the Directors upon a finding of good cause therefor.

ANNUAL REPORT JULY 31, 2017 75

Officers and Directors (concluded)

Name, Address ¹ and Year of Birth	Position(s) Held with the Fund	Length of Time Served as an Officer	Principal Occupation(s) During Past Five Years
Officers Who Are No	ot Directors ²		
Jonathan Diorio	Vice President	Since 2015	Managing Director of BlackRock, Inc. since 2015; Director of BlackRock, Inc. from 2011 to 2015; Director of Deutsche Asset & Wealth Management from 2009 to 2011.
1980			
Neal J. Andrews	Chief Financial Officer	Since 2007	Managing Director of BlackRock, Inc. since 2006; Senior Vice President and Line of Business Head of Fund Accounting and Administration at PNC Global Investment Servicing (U.S.) Inc. from 1992 to 2006.
1966	Officer		
Jay M. Fife 1970	Treasurer	Since 2007	Managing Director of BlackRock, Inc. since 2007; Director of BlackRock, Inc. in 2006; Assistant Treasurer of the MLIM and Fund Asset Management, L.P. advised funds from 2005 to 2006; Director of MLIM Fund Services Group from 2001 to 2006.
Charles Park	Chief Compliance	Since 2014	Anti-Money Laundering Compliance Officer for the BlackRock-advised Funds in the Equity-Bond Complex, the Equity-Liquidity Complex and the Closed-End Complex from 2014 to 2015; Chief
1967	Officer		Compliance Officer of BlackRock Advisors, LLC and the BlackRock-advised Funds in the Equity-Bond Complex, the Equity-Liquidity Complex and the Closed-End Complex since 2014; Principal of and Chief Compliance Officer for iShares® Delaware Trust Sponsor LLC since 2012 and BlackRock Fund Advisors (BFA) since 2006; Chief Compliance Officer for the BFA-advised iSharesxchange traded funds since 2006; Chief Compliance Officer for BlackRock Asset Management International Inc. since 2012.
Janey Ahn	Secretary	Since 2012	Director of BlackRock, Inc. since 2009; Assistant Secretary of the funds in the Closed-End Complex from 2008 to 2012.
1975			

¹ The address of each Officer is c/o BlackRock, Inc., 55 East 52nd Street, New York, NY 10055.

As of the date of this report:

The portfolio managers of MUJ are Phillip Soccio and Ted Jaeckel.

Investment Adviser	Accounting Agent and Custodian	Agent and VMTP Redemption	Independent Registered Public Accounting Firm	Address of the Funds
BlackRock Advisors, LLC	State Street Bank and	and Paying Agent	Deloitte & Touche LLP	100 Bellevue Parkway
Wilmington, DE 19809	Trust Company	The Bank of New York Mellon	Deloine de l'ouelle EEI	Wilmington, DE 19809
	Boston, MA 02111	New York, NY 10286	Boston, MA 02116	
	Transfer Agent	VRDP Liquidity Providers	Legal Counsel	
	Computershare Trust Company, N.A.	Citibank, N.A. ¹	Skadden, Arps, Slate, Meagher & Flom LLP	
	Canton, MA 02021	New York, NY 10179	Boston, MA 02116	

Bank of America, N.A.²

 $^{^{2}}$ Officers of the Fund serve at the pleasure of the Board.

New York, NY 10036

VRDP Remarketing Agents

Citigroup Global Markets Inc.¹

New York, NY 10179

Merrill Lynch, Pierce, Fenner & Smith Incorporated²

New York, NY 10036

- 1 For MIY and MPA.
- ² For MUJ.

76 ANNUAL REPORT JULY 31, 2017

Additional Information

Proxy Results

The Annual Meeting of Shareholders was held on July 25, 2017 for shareholders of record on May 30, 2017, to elect director nominees for each Fund. There were no broker non-votes with regard to any of the Funds.

M	Michael J. Castellano			ard E. Cavanaş Votes	, ,			
	Votes						Votes	
Votes For			Votes For	Withheld		Votes For	Withheld	
MUC 38,127,74			38,026,975	830,332		38,170,142	687,165	
MUJ 27,790,27	,		27,553,399	958,026		27,720,023	791,401	
MIY 26,342,37	,		26,341,406	1,669,034		26,350,554	1,659,886	
20,0 12,0	1,000,070		20,5 .1, .00	Votes		20,550,55	1,000,000	
	Votes						Votes	
	Against	Abstain		Against	Abstain		Against	Abstain
MFT 7,894,69		68,961	7,852,579	121,208	68,961	7,845,350	130,886	66,512
MPA 11,577,36		40,322	11,564,277	366,744	44,885	11,710,254	205,633	60,019
7 7-	Frank J. Fabozzi ¹			rold B. Harris		, ,	lenn Hubbard	
	Tank J. Pabozzi		JCI	Votes		K. O	icim mubbar	
	Votes						Votes	
Votes Fo			Votes For	Withheld		Votes For	Votes Withheld	
MUC 2,54			38.060.092	797,215		38,024,624	832,683	
MUJ 2,32			27,773,179	738,246		27,637,313	874,112	
MIY 2,31			26,321,357	1,689,083		26,324,108	1,686,332	
WII 1 2,31	9 0		20,321,337	Votes		20,324,106	1,000,332	
	* * .			Votes			.	
	Votes	41.4.1		A •	41.4.		Votes	41.4.1.
NATURE 5.0	Against	Abstain	7.052.627	Against	Abstain	7.012.424	Against	Abstain
MFT 56		0	7,852,637	121,149	68,962	7,812,434	144,982	85,332
MPA 82		0	11,539,308	395,310	41,289	11,593,701	315,748	66,458
	W. Carl Kester ¹		Catherine A. Lynch Votes			Barbara G. Novick		
				votes				
	Votes						Votes	
Votes For			Votes For	Withheld		Votes For	Withheld	
MUC 2,54			37,936,533	920,774		38,026,126	831,181	
MUJ 2,37			27,699,731	811,694		27,749,466	761,959	
MIY 2,31			26,381,431	1,629,009		26,380,493	1,629,947	
	Votes	43 4 4		Votes			Votes	
MET	Against	Abstain	7.040.012	Against	Abstain	7.014.005	Against	Abstain
MFT 56		0	7,849,013	124,774	68,961	7,814,805	154,122	73,821
MPA 82	6 0 ohn M. Perlowsk	0	11,729,350	203,746 en P. Robards	42,811	11,739,373	186,473	50,061
J	omi M. Periowsk	1	Kar	Votes				
	T .7. 4			Votes				
V-4 E-	Votes		V-4 E	XX24LL-13				
Wotes For 37,986,02			Votes For 38,128,994	Withheld 728,313				
			27,679,105					
				832,320 1,664,618				
MIY 26,393,67	1,616,769		26,345,822	1,004,018 Votes				
				votes				
	Votes							
	Against	Abstain		Against	Abstain			
MFT 7,875,39		69,943	7,835,268	134,570	72,910			
MPA 11,727,81	3 199,556	48,538	11,533,981	399,341	42,585			

¹ Voted on by holders of preferred shares only.

Fund Certification

Certain Funds are listed for trading on the NYSE and have filed with the NYSE their annual chief executive officer certification regarding compliance with the NYSE s listing standards. The Funds filed with the SEC the certification of its chief executive officer and chief financial officer required by section 302 of the Sarbanes-Oxley Act.

ANNUAL REPORT JULY 31, 2017 77

Additional Information (continued)

Dividend Policy

Each Fund s dividend policy is to distribute all or a portion of its net investment income to its shareholders on a monthly basis. In order to provide shareholders with a more stable level of distributions, the Funds may at times pay out less than the entire amount of net investment income earned in any particular month and may at times in any particular month pay out such accumulated but undistributed income in addition to net investment income earned in that month. As a result, the distributions paid by the Funds for any particular month may be more or less than the amount of net investment income earned by the Funds during such month. The Funds current accumulated but undistributed net investment income, if any, is disclosed in the Statements of Assets and Liabilities, which comprises part of the financial information included in this report.

General Information

The Funds do not make available copies of their Statements of Additional Information because the Funds—shares are not continuously offered, which means that the Statement of Additional Information of each Fund has not been updated after completion of the respective Fund—s offerings and the information contained in each Fund—s Statement of Additional Information may have become outdated.

During the period, there were no material changes in the Funds investment objectives or policies or to the Funds charters or by-laws that would delay or prevent a change of control of the Funds that were not approved by the shareholders or in the principal risk factors associated with investment in the Funds. Except as disclosed on page 76, there have been no changes in the persons who are primarily responsible for the day-to-day management of the Funds portfolios.

Effective September 26, 2016, BlackRock implemented a new methodology for calculating effective duration for BlackRock s municipal bond portfolios. The new methodology replaces the model previously used by BlackRock to evaluate municipal bond duration and is a common indicator of an investment s sensitivity to interest rate movements. The new methodology is applied to the Funds duration reported for any periods after September 26, 2016.

Quarterly performance, semi-annual and annual reports, current net asset value and other information regarding the Funds, including each Fund s effective duration and additional information about the new methodology, may be found on BlackRock s website, which can be accessed at http://www.blackrock.com. Any reference to BlackRock s website in this report is intended to allow investors public access to information regarding the Funds and does not, and is not intended to, incorporate BlackRock s website in this report.

Electronic Delivery

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

To enroll in electronic delivery:

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

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

Householding

The Funds will mail only one copy of shareholder documents, including annual and semi-annual reports and proxy statements, to shareholders with multiple accounts at the same address. This practice is commonly called householding and is intended to reduce expenses and eliminate duplicate mailings of shareholder documents. Mailings of your shareholder documents may be householded indefinitely unless you instruct us otherwise. If you do not want the mailing of these documents to be combined with those for other members of your household, please call the Funds at (800) 882-0052.

Availability of Quarterly Schedule of Investments

The Funds file their complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-Q. The Funds Forms N-Q are available on the SEC s website at http://www.sec.gov and may also be reviewed and copied at the SEC s Public Reference Room in Washington, D.C. Information on the operation of the Public Reference Room or how to access documents on the SEC s website without charge may be obtained by calling (800) SEC-0330. The Funds Forms N-Q may also be obtained upon request and without charge by calling (800) 882-0052.

78 ANNUAL REPORT JULY 31, 2017

Additional Information (concluded)

General Information (concluded)

Availability of Proxy Voting Policies and Procedures

A description of the policies and procedures that the Funds use to determine how to vote proxies relating to portfolio securities is available upon request and without charge (1) by calling (800) 882-0052; (2) at http://www.blackrock.com; and (3) on the SEC s website at http://www.sec.gov.

Availability of Proxy Voting Record

Information about how the Funds voted proxies relating to securities held in the Funds portfolios during the most recent 12-month period ended June 30 is available upon request and without charge (1) at http://www.blackrock.com; or by calling (800) 882-0052; and (2) on the SEC s website at http://www.sec.gov.

Availability of Fund Updates

BlackRock will update performance and certain other data for the Funds on a monthly basis on its website in the Closed-end Funds section of http://www.blackrock.com as well as certain other material information as necessary from time to time. Investors and others are advised to check the website for updated performance information and the release of other material information about the Funds. This reference to BlackRock s website is intended to allow investors public access to information regarding the Funds and does not, and is not intended to, incorporate BlackRock s website in this report.

BlackRock Privacy Principles

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

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

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

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

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

ANNUAL REPORT JULY 31, 2017 79

This report is intended for current holders. It is not a prospectus. Past performance results shown in this report should not be considered a representation of future performance. The Funds have leveraged their Common Shares, which creates risks for Common Shareholders, including the likelihood of greater volatility of net asset value and market price of the Common Shares, and the risk that fluctuations in short-term interest rates may reduce the Common Shares yield. Statements and other information herein are as dated and are subject to change.

MQUAL5-7/17-AR

- Item 2 Code of Ethics The registrant (or the Fund) has adopted a code of ethics, as of the end of the period covered by this report, applicable to the registrant s principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. During the period covered by this report, the code of ethics was amended to clarify an inconsistency in to whom persons covered by the code should report suspected violations of the code. The amendment clarifies that such reporting should be made to BlackRock s General Counsel, and retains the alternative option of anonymous reporting following whistleblower policies. Other non-material changes were also made in connection with this amendment. During the period covered by this report, there have been no waivers granted under the code of ethics. The registrant undertakes to provide a copy of the code of ethics to any person upon request, without charge, by calling 1-800-882-0052, option 4.
- Item 3 Audit Committee Financial Expert The registrant's board of directors (the board of directors), has determined that (i) the registrant has the following audit committee financial experts serving on its audit committee and (ii) each audit committee financial expert is independent:

Michael Castellano

Frank J. Fabozzi

W. Carl Kester

Catherine A. Lynch

Karen P. Robards

The registrant s board of directors has determined that W. Carl Kester and Karen P. Robards qualify as financial experts pursuant to Item 3(c)(4) of Form N-CSR.

Prof. Kester has a thorough understanding of generally accepted accounting principles, financial statements and internal control over financial reporting as well as audit committee functions. Prof. Kester has been involved in providing valuation and other financial consulting services to corporate clients since 1978. Prof. Kester s financial consulting services present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the registrant s financial statements.

Ms. Robards has a thorough understanding of generally accepted accounting principles, financial statements and internal control over financial reporting as well as audit committee functions. Ms. Robards has been Principal of Robards & Company, a financial advisory firm, since 1987. Ms. Robards was formerly an investment banker for more than 10 years where she was responsible for evaluating and assessing the performance of companies based on their financial results. Ms. Robards has over 30 years of experience analyzing financial statements. She also is a member of the audit committee of one publicly held company and a non-profit organization.

Under applicable securities laws, a person determined to be an audit committee financial expert will not be deemed an expert for any purpose, including without limitation for the purposes of Section 11 of the Securities Act of 1933, as a result of being designated or identified as an audit committee financial expert. The designation or identification as an audit committee financial expert does not impose on such person any duties, obligations, or liabilities greater than the duties, obligations, and liabilities imposed on such person as a member of the audit committee and board of directors in the absence of such designation or identification. The designation or identification of a person as an

audit committee financial expert does not affect the duties, obligations, or liability of any other member of the audit committee or board of directors.

Item 4 Principal Accountant Fees and Services

ınd

The following table presents fees billed by Deloitte & Touche LLP (D&T) in each of the last two fiscal years for the services rendered to the Fund:

	(a) Audit Fees		(b) Audit-Related Fees ¹ (c)		(c) Ta	ax Fees ²	(d) All O	(d) All Other Fees	
	Current	Previous	Current	Previous	Current	Previous	Current	Previous	
Entity	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Yea	
<u>Name</u>	End	End	End	End	End	End	End	End	
lackRock									
uniYield									
vestment	\$31,990	\$31,990	\$0	\$0	\$10,812	\$10,812	\$0	\$0	
uality									
_									

The following table presents fees billed by D&T that were required to be approved by the registrant s audit committee (the Committee) for services that relate directly to the operations or financial reporting of the Fund and that are rendered on behalf of BlackRock Advisors, LLC (Investment Adviser or BlackRock) and entities controlling, controlled by, or under common control with BlackRock (not including any sub-adviser whose role is primarily portfolio management and is subcontracted with or overseen by another investment adviser) that provide ongoing services to the Fund (Affiliated Service Providers):

	Current Fiscal Year End	Previous Fiscal Year End
(b) Audit-Related Fees ¹	\$0	\$0
(c) Tax Fees ²	\$0	\$0
(d) All Other Fees ³	\$2,129,000	\$2,154,000

¹ The nature of the services includes assurance and related services reasonably related to the performance of the audit or review of financial statements not included in Audit Fees, including accounting consultations, agreed-upon procedure reports, attestation reports, comfort letters, out-of-pocket expenses and internal control reviews not required by regulators.

(e)(1) Audit Committee Pre-Approval Policies and Procedures:

² The nature of the services includes tax compliance and/or tax preparation, including services relating to the filing or amendment of federal, state or local income tax returns, regulated investment company qualification reviews, taxable income and tax distribution calculations.

³ Non-audit fees of \$2,129,000 and \$2,154,000 for the current fiscal year and previous fiscal year, respectively, were paid to the Fund s principal accountant in their entirety by BlackRock, in connection with services provided to the Affiliated Service Providers of the Fund and of certain other funds sponsored and advised by BlackRock or its affiliates for a service organization review and an accounting research tool subscription. These amounts represent aggregate fees paid by BlackRock and were not allocated on a per fund basis.

The Committee has adopted policies and procedures with regard to the pre-approval of services. Audit, audit-related and tax compliance services provided to the registrant on an annual basis require specific pre-approval by the Committee. The Committee also must approve other non-audit services provided to the registrant and those non-audit services provided to the Investment Adviser and Affiliated Service Providers that relate directly to the operations and the financial reporting of the registrant. Certain of these non-audit services that the Committee believes are (a) consistent with the SEC s auditor independence rules and (b) routine and recurring services that will not impair the independence of the independent accountants may be approved by the Committee without consideration on a specific case-by-case basis (general pre-approval). The term of any general pre-approval is 12 months from the date of the pre-approval, unless the Committee provides for a different period. Tax or other non-audit services provided to the registrant which have a direct

impact on the operations or financial reporting of the registrant will only be deemed pre-approved provided that any individual project does not exceed \$10,000 attributable to the registrant or \$50,000 per project. For this purpose, multiple projects will be aggregated to determine if they exceed the previously mentioned cost levels.

Any proposed services exceeding the pre-approved cost levels will require specific pre-approval by the Committee, as will any other services not subject to general pre-approval (e.g., unanticipated but permissible services). The Committee is informed of each service approved subject to general pre-approval at the next regularly scheduled in-person board meeting. At this meeting, an analysis of such services is presented to the Committee for ratification. The Committee may delegate to the Committee Chairman the authority to approve the provision of and fees for any specific engagement of permitted non-audit services, including services exceeding pre-approved cost levels.

(e)(2) None of the services described in each of Items 4(b) through (d) were approved by the Committee pursuant to the de minimis exception in paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X.

(f) Not Applicable

(g) The aggregate non-audit fees, defined as the sum of the fees shown under Audit-Related Fees, Tax Fees and All Other Fees, paid to the accountant for services rendered by the accountant to the registrant, the Investment Adviser and the Affiliated Service Providers were:

	Current Fiscal	Previous Fiscal
Entity Name	Year End	Year End
BlackRock MuniYield	\$10,812	\$10.812
Investment Quality Fund	\$10,012	\$10,612

Additionally, the amounts billed by D&T in connection with services provided to the Affiliated Service Providers of the Fund and of other funds sponsored or advised by BlackRock or its affiliates during the current and previous fiscal years for a service organization review and an accounting research tool subscription were:

Current Fiscal	<u>Previous Fiscal</u>
Year End	Year End
\$2,129,000	\$2,154,000

These amounts represent aggregate fees paid by BlackRock and were not allocated on a per fund basis.

(h) The Committee has considered and determined that the provision of non-audit services that were rendered to the Investment Adviser, and the Affiliated Service Providers that were not pre-approved pursuant to paragraph (c)(7)(ii) of Rule 2-01 of Regulation S-X is compatible with maintaining the principal accountant s independence.

Item 5 Audit Committee of Listed Registrants

(a) The following individuals are members of the registrant s separately-designated standing audit committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934 (15 U.S.C. 78c(a)(58)(A)):

Michael Castellano

Frank J. Fabozzi

W. Carl Kester

Catherine A. Lynch

Karen P. Robards

(b) Not Applicable

Item 6 Investments

- (a) The registrant s Schedule of Investments is included as part of the Report to Stockholders filed under Item 1 of this Form.
- (b) Not Applicable due to no such divestments during the semi-annual period covered since the previous Form N-CSR filing.
- Item 7 Disclosure of Proxy Voting Policies and Procedures for Closed-End Management Investment Companies The board of directors has delegated the voting of proxies for the Fund s portfolio securities to the Investment Adviser pursuant to the Investment Adviser s proxy voting guidelines. Under these guidelines, the Investment Adviser will vote proxies related to Fund securities in the best interests of the Fund and its stockholders. From time to time, a vote may present a conflict between the interests of the Fund s stockholders, on the one hand, and those of the Investment Adviser, or any affiliated person of the Fund or the Investment Adviser, on the other. In such event, provided that the Investment Adviser s Equity Investment Policy Oversight Committee, or a sub-committee thereof (the Oversight Committee) is aware of the real or potential conflict or material non-routine matter and if the Oversight Committee does not reasonably believe it is able to follow its general voting guidelines (or if the particular proxy matter is not addressed in the guidelines) and vote impartially, the Oversight Committee may retain an independent fiduciary to advise the Oversight Committee on how to vote or to cast votes on behalf of the Investment Adviser s clients. If the Investment Adviser determines not to retain an independent fiduciary, or does not desire to follow the advice of such independent fiduciary, the Oversight Committee shall determine how to vote the proxy after consulting with the Investment Adviser s Portfolio Management Group and/or the Investment Adviser s Legal and Compliance Department and concluding that the vote cast is in its client s best interest notwithstanding the conflict. A copy of the Fund s Proxy Voting Policy and Procedures are attached as Exhibit 99.PROXYPOL. Information on how the Fund voted proxies relating to portfolio securities during the most recent 12-month period ended June 30 is available without charge, (i) at www.blackrock.com and (ii) on the SEC s website at http://www.sec.gov.

Item 8 Portfolio Managers of Closed-End Management Investment Companies

(a)(1) As of the date of filing this Report:

The registrant is managed by a team of investment professionals comprised of Theodore R. Jaeckel, Jr., CFA, Managing Director at BlackRock, and Michael Perilli, Vice President at BlackRock. Each is a member of BlackRock s municipal tax-exempt management group. Each is jointly responsible for the day-to-day management of the registrant s portfolio, which includes setting the registrant s overall investment strategy, overseeing the management of the registrant and/or selection of its investments. Messrs. Jaeckel and Perilli have been members of the registrant s portfolio management team since 2006 and 2016, respectively.

Portfolio Manager	Biography
Theodore R. Jaeckel, Jr., CFA	Managing Director of BlackRock since 2006; Managing Director of Merrill Lynch
	Investment Managers, L.P. (MLIM) from 2005 to 2006; Director of MLIM from
	1997 to 2005.
Michael Perilli	Vice President of BlackRock since 2014; Associate of BlackRock from 2008 to
	2014.

(a)(2) As of July 31, 2017:

	(ii) Number	of Other Accounts	(iii) Number of Other Accounts and					
	and As	and Assets by Account Type			Assets for Which Advisory Fee is			
				P	erformance-Based			
	Other	Other Pooled		Other	Other Pooled			
(i) Name of	Registered	Investment	Other	Registered	Investment	Othe		

(i) Name of Portfolio Manager	Registered Investment	Pooled Investment Vehicles	Other Accounts	Registered Investment	Investment Vehicles	Other Accounts
	Companies	venicies		Companies		
Theodore R. Jaeckel, Jr., CFA	38	0	0	0	0	0
	\$27.97 Billion	\$0	\$0	\$0	\$0	\$0
Michael Perilli	9	0	0	0	0	0
	\$1.96 Billion	\$0	\$0	\$0	\$0	\$0

(iv) Portfolio Manager Potential Material Conflicts of Interest

BlackRock has built a professional working environment, firm-wide compliance culture and compliance procedures and systems designed to protect against potential incentives that may favor one account over another. BlackRock has adopted policies and procedures that address the allocation of investment opportunities, execution of portfolio transactions, personal trading by employees and other potential conflicts of interest that are designed to ensure that all client accounts are treated equitably over time. Nevertheless, BlackRock furnishes investment management and advisory services to numerous clients in addition to the Fund, and BlackRock may, consistent with applicable law,

make investment recommendations to other clients or accounts (including accounts which are hedge funds or have performance or higher fees paid to BlackRock, or in which portfolio managers have a personal interest in the receipt of such fees), which may be the same as or different from those made to the Fund. In addition, BlackRock, Inc., its affiliates and significant shareholders and any officer, director, shareholder or employee may or may not have an interest in the securities whose purchase and sale BlackRock recommends to the Fund. BlackRock, Inc., or any of its affiliates or significant shareholders, or any officer, director, shareholder, employee or any member of their families may take different

actions than those recommended to the Fund by BlackRock with respect to the same securities. Moreover, BlackRock may refrain from rendering any advice or services concerning securities of companies of which any of BlackRock, Inc. s (or its affiliates or significant shareholders) officers, directors or employees are directors or officers, or companies as to which BlackRock, Inc. or any of its affiliates or significant shareholders or the officers, directors and employees of any of them has any substantial economic interest or possesses material non-public information. Certain portfolio managers also may manage accounts whose investment strategies may at times be opposed to the strategy utilized for a fund. It should also be noted that a portfolio manager may be managing hedge fund and/or long only accounts, or may be part of a team managing hedge fund and/or long only accounts, subject to incentive fees. Such portfolio managers may therefore be entitled to receive a portion of any incentive fees earned on such accounts. Currently, the portfolio managers of this Fund are not entitled to receive a portion of incentive fees of other accounts.

As a fiduciary, BlackRock owes a duty of loyalty to its clients and must treat each client fairly. When BlackRock purchases or sells securities for more than one account, the trades must be allocated in a manner consistent with its fiduciary duties. BlackRock attempts to allocate investments in a fair and equitable manner among client accounts, with no account receiving preferential treatment. To this end, BlackRock, Inc. has adopted policies that are intended to ensure reasonable efficiency in client transactions and provide BlackRock with sufficient flexibility to allocate investments in a manner that is consistent with the particular investment discipline and client base, as appropriate.

(a)(3) As of July 31, 2017:

Portfolio Manager Compensation Overview

The discussion below describes the portfolio managers compensation as of July 31, 2017.

BlackRock s financial arrangements with its portfolio managers, its competitive compensation and its career path emphasis at all levels reflect the value senior management places on key resources. Compensation may include a variety of components and may vary from year to year based on a number of factors. The principal components of compensation include a base salary, a performance-based discretionary bonus, participation in various benefits programs and one or more of the incentive compensation programs established by BlackRock.

Base compensation. Generally, portfolio managers receive base compensation based on their position with the firm.

Discretionary Incentive Compensation. Discretionary incentive compensation is a function of several components: the performance of BlackRock, Inc., the performance of the portfolio manager s group within BlackRock, the investment performance, including risk-adjusted returns, of the firm s assets under management or supervision by that portfolio manager relative to predetermined benchmarks, and the individual s performance and contribution to the overall performance of these portfolios and BlackRock. In most cases, these benchmarks are the same as the benchmark or benchmarks against which the performance of the Funds or other accounts managed by the portfolio managers are measured. Among other things, BlackRock s Chief

Investment Officers make a subjective determination with respect to each portfolio manager s compensation based on the performance of the Funds and other accounts managed by each portfolio manager relative to the various benchmarks. Performance of fixed income funds is measured on a pre-tax and/or after-tax basis over various time periods including 1-, 3- and 5- year periods, as applicable. With respect to these portfolio managers, such benchmarks for the Fund and other accounts are: a combination of market-based indices (e.g., Standard & Poor s Municipal Bond Index), certain customized indices and certain fund industry peer groups.

Distribution of Discretionary Incentive Compensation. Discretionary incentive compensation is distributed to portfolio managers in a combination of cash, deferred BlackRock, Inc. stock awards, and/or deferred cash awards that notionally track the return of certain BlackRock investment products.

Typically, the cash portion of the discretionary incentive compensation, when combined with base salary, represents more than 60% of total compensation for the portfolio managers.

Portfolio managers generally receive deferred BlackRock, Inc. stock awards as part of their discretionary incentive compensation. Paying a portion of discretionary incentive compensation in the form of deferred BlackRock, Inc. stock puts compensation earned by a portfolio manager for a given year at risk based on BlackRock s ability to sustain and improve its performance over future periods. Deferred BlackRock, Inc. stock awards are generally granted in the form of BlackRock, Inc. restricted stock units that vest ratably over a number of years and, once vested, settle in BlackRock, Inc. common stock. In some cases, additional deferred BlackRock, Inc. stock may be granted to certain key employees as part of a long-term incentive award to aid in retention, align their interests with long-term shareholder interests and motivate performance. Such equity awards are generally granted in the form of BlackRock, Inc. restricted stock units that vest pursuant to the terms of the applicable plan and, once vested, settle in BlackRock, Inc. common stock. With the exception of Mr. Perilli, the portfolio manager of this Fund has deferred BlackRock, Inc. stock awards.

For some portfolio managers, discretionary incentive compensation is also distributed in the form of deferred cash awards that notionally track the returns of select BlackRock investment products they manage. Providing a portion of discretionary incentive compensation in deferred cash awards that notionally track the BlackRock investment products they manage provides direct alignment with investment product results. Deferred cash awards vest ratably over a number of years and, once vested, settle in the form of cash. Any portfolio manager who is either a managing director or director at BlackRock with compensation above a specified threshold is eligible to participate in the deferred compensation program.

Other Compensation Benefits. In addition to base salary and discretionary incentive compensation, portfolio managers may be eligible to receive or participate in one or more of the following:

Incentive Savings Plans BlackRock, Inc. has created a variety of incentive savings plans in which BlackRock, Inc. employees are eligible to participate, including a 401(k) plan, the BlackRock Retirement Savings Plan (RSP), and the BlackRock Employee Stock Purchase Plan (ESPP). The employer contribution components of the RSP include a company match equal to 50%

of the first 8% of eligible pay contributed to the plan capped at \$5,000 per year, and a company retirement contribution equal to 3-5% of eligible compensation up to the Internal Revenue Service limit (\$270,000 for 2017). The RSP offers a range of investment options, including registered investment companies and collective investment funds managed by the firm. BlackRock, Inc. contributions follow the investment direction set by participants for their own contributions or, absent participant investment direction, are invested into a target date fund that corresponds to, or is closest to, the year in which the participant attains age 65. The ESPP allows for investment in BlackRock, Inc. common stock at a 5% discount on the fair market value of the stock on the purchase date. Annual participation in the ESPP is limited to the purchase of 1,000 shares of common stock or a dollar value of \$25,000 based on its fair market value on the purchase date. All of the eligible portfolio managers are eligible to participate in these plans.

(a)(4) Beneficial Ownership of Securities As of July 31, 2017.

Portfolio Manager Dollar Range of Equity

Securities of the Fund Beneficially Owned

Theodore R. Jaeckel, Jr., CFA None

Michael Perilli None

(b) Not Applicable

Item 9 Purchases of Equity Securities by Closed-End Management Investment Company and Affiliated Purchasers Not Applicable due to no such purchases during the period covered by this report.

Item 10 Submission of Matters to a Vote of Security Holders There have been no material changes to these procedures.

Item 11 Controls and Procedures

- (a) The registrant s principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant s disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the 1940 Act)) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.
- (b) There were no changes in the registrant s internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the second fiscal quarter of the period covered by this report that have materially affected, or are reasonably likely to materially affect, the registrant s internal control over financial reporting.

Item 12 Exhibits attached hereto (a)(1) Code of Ethics See Item 2

9

- (a)(2) Certifications Attached hereto
- (a)(3) Not Applicable
- (b) Certifications Attached hereto

10

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BlackRock MuniYield Investment Quality Fund

By: /s/ John M. Perlowski John M. Perlowski

Chief Executive Officer (principal executive officer) of

BlackRock MuniYield Investment

Quality Fund

Date: October 10, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of
BlackRock MuniYield Investment Quality
Fund

Date: October 10, 2017

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock MuniYield Investment Quality
Fund

Date: October 10, 2017