

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

Form N-CSRS

July 30, 2018

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED

MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-22467

Kayne Anderson Midstream/Energy Fund, Inc.

(Exact name of registrant as specified in charter)

811 Main Street, 14th Floor, Houston, Texas
(Address of principal executive offices)

77002
(Zip code)

David Shladovsky, Esq.

KA Fund Advisors, LLC, 811 Main Street, 14th Floor, Houston, Texas 77002

(Name and address of agent for service)

Registrant's telephone number, including area code: (713) 493-2020

Date of fiscal year end: November 30, 2018

Date of reporting period: May 31, 2018

Form N-CSR is to be used by management investment companies to file reports with the Commission not later than 10 days after the transmission to stockholders of any report that is required to be transmitted to stockholders under Rule 30e-1 under the Investment Company Act of 1940 (17 CFR 270.30e-1). The Commission may use the information provided on Form N-CSR in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR unless the Form displays a currently valid Office

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of Management and Budget (OMB) control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. § 3507.

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Item 1. Reports to Stockholders.

The report of Kayne Anderson Midstream/Energy Fund, Inc. (the Registrant) to stockholders for the semi-annual period ended May 31, 2018 is attached below.

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Midstream/Energy Fund

KMF Semi-Annual Report

May 31, 2018

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This report of Kayne Anderson Midstream/Energy Fund, Inc. (the Fund) contains forward-looking statements as defined under the U.S. federal securities laws. Generally, the words believe, expect, intend, estimate, anticipate, project, will and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to materially differ from the Fund's historical experience and its present expectations or projections indicated in any forward-looking statement. These risks include, but are not limited to, changes in economic and political conditions; regulatory and legal changes; MLP industry risk; leverage risk; valuation risk; interest rate risk; tax risk; and other risks discussed in the Fund's filings with the Securities and Exchange Commission (SEC). You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. The Fund undertakes no obligation to publicly update or revise any forward-looking statements made herein. There is no assurance that the Fund's investment objectives will be attained.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

Fund Overview

Kayne Anderson Midstream/Energy Fund, Inc. is a non-diversified, closed-end fund. We commenced operations on November 24, 2010. Our shares of common stock are listed on the New York Stock Exchange under the symbol KMF.

Our investment objective is to provide a high level of total return with an emphasis on making quarterly cash distributions to our stockholders. We seek to achieve that investment objective by investing at least 80% of our total assets in the securities of companies in the Midstream/Energy Sector, consisting of (a) Midstream MLPs, (b) Midstream Companies, (c) Other MLPs and (d) Other Energy Companies. We anticipate that the majority of our investments will consist of investments in Midstream MLPs and Midstream Companies. Please see the Glossary of Key Terms for a description of these investment categories and for the meaning of capitalized terms not otherwise defined herein.

As of May 31, 2018, we had total assets of \$443 million, net assets applicable to our common stockholders of \$309 million (net asset value of \$14.02 per share), and 22.0 million shares of common stock outstanding. As of May 31, 2018, we held \$405 million in equity investments and \$22 million in debt investments.

Recent Events

Proposed Merger with Kayne Anderson Energy Total Return Fund, Inc.

On February 15, 2018, KA Fund Advisors, LLC (Kafa) announced the proposed merger of Kayne Anderson Energy Total Return Fund, Inc. (KYE) with and into Kayne Anderson Midstream/Energy Fund, Inc. (the Fund or KMF)(the Reorganization). Subject to KYE stockholder approval, KYE common stockholders will be issued KMF common stock, and KMF will acquire substantially all the assets and liabilities of KYE.

The exchange ratio will be based on the relative NAVs per share of each fund immediately prior to the closing of the Reorganization. As of May 31, 2018, KMF s NAV per share was \$14.02, and KYE s was \$10.26. For illustrative purposes, if these were the NAVs on the day prior to closing of the Reorganization, then KYE stockholders would be issued approximately 0.73 shares of KMF for each share of KYE. It is currently expected that the merger will be completed in the fiscal quarter ending in August 2018, subject to obtaining stockholder approval, compliance with all regulatory requirements and satisfaction of customary closing conditions. The Reorganization is expected to qualify as a tax-free reorganization for federal income tax purposes, and as a result, the Reorganization is not expected to be taxable to stockholders of either KMF or KYE.

The Board of Directors of KMF and KYE determined that the proposed Reorganization is in the best interests of each fund and its stockholders. The funds have similar investment strategies and portfolios, and the combined fund will pursue an investment objective of obtaining a high total return, with an emphasis on making cash distributions, by investing in Midstream MLPs, Midstream Companies and other Energy Companies.

On June 28, 2018, KYE announced that its special meeting of stockholders was adjourned to July 17, 2018 and on that date the meeting was subsequently adjourned to July 31, 2018. KYE stockholders are being asked to vote on the Reorganization.

A Frequently Asked Questions document regarding the Reorganization can be found at www.kaynefunds.com. More information on the Reorganization is contained in the definitive joint proxy statement/prospectus filed with the Securities and Exchange Commission (the SEC) on May 30, 2018 and mailed to KMF and KYE stockholders.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

Results of Operations For the Three Months Ended May 31, 2018

Investment Income. Investment income totaled \$0.3 million for the quarter and consisted primarily of net dividends and distributions and interest income on our investments. We received \$7.1 million of dividends and distributions, of which \$7.6 million was treated as return of capital. Return of capital was increased by \$2.2 million due to 2017 tax reporting information that we received in fiscal 2018. Interest income was \$0.8 million. We also received \$0.9 million of paid-in-kind dividends during the quarter, which are not included in investment income, but are reflected as an unrealized gain.

Operating Expenses. Operating expenses totaled \$3.1 million, including \$1.3 million of investment management fees, \$1.0 million of interest expense, \$0.4 million of preferred stock distributions and \$0.4 million of other operating expenses (including non-cash write-off of shelf offering costs of \$0.04 million). Interest expense includes \$0.2 million of non-cash amortization of debt issuance costs.

Net Investment Loss. Our net investment loss totaled \$2.8 million.

Net Realized Losses. We had net realized losses of \$4.5 million, which included \$0.1 million of net realized gains from option activity.

Net Change in Unrealized Gains. We had a net increase in unrealized gains of \$27.0 million. The net increase consisted of \$27.1 million of unrealized gains from investments and \$0.1 million of unrealized losses from option activity.

Net Increase in Net Assets Resulting from Operations. We had an increase in net assets resulting from operations of \$19.7 million. This increase was comprised of net investment loss of \$2.8 million, net realized losses of \$4.5 million and a net increase in unrealized gains of \$27.0 million, as noted above.

Distributions to Common Stockholders

We pay quarterly distributions to our common stockholders, funded generally by net distributable income (NDI) generated from our portfolio investments. NDI is the amount of income received by us from our portfolio investments less operating expenses, subject to certain adjustments as described below. NDI is not a financial measure under the accounting principles generally accepted in the United States of America (GAAP). Refer to the Reconciliation of NDI to GAAP section below for a reconciliation of this measure to our results reported under GAAP.

Income from portfolio investments includes (a) cash dividends and distributions, (b) paid-in-kind dividends received (i.e., stock dividends), (c) interest income from debt securities and commitment fees from private investments in public equity (PIPE investments) and (d) net premiums received from the sale of covered calls.

Operating expenses include (a) investment management fees paid to our investment adviser (Kafa), (b) other expenses (mostly comprised of fees paid to other service providers), (c) accrual for estimated excise taxes (if any) and (d) interest expense and preferred stock distributions.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****MANAGEMENT DISCUSSION****(UNAUDITED)****Net Distributable Income (NDI)**

(amounts in millions, except for per share amounts)

| | Three Months Ended May 31, 2018 |
|--|--|
| Distributions and Other Income from Investments | |
| Dividends ⁽¹⁾ | \$ 7.1 |
| Paid-In-Kind Dividends ⁽¹⁾ | 0.9 |
| Interest and Other Income | 0.8 |
| Net Premiums Received from Call Options Written | 0.1 |
| Total Distributions and Other Income from Investments | 8.9 |
| Expenses | |
| Investment Management Fee | (1.3) |
| Other Expenses | (0.3) |
| Interest Expense | (0.9) |
| Preferred Stock Distributions | (0.4) |
| Net Distributable Income (NDI) | \$ 6.0 |
| Weighted Shares Outstanding | 22.0 |
| NDI per Weighted Share Outstanding | \$ 0.27 |
| Adjusted NDI per Weighted Share Outstanding⁽²⁾ | \$ 0.25 |
| Distributions paid per Common Share⁽³⁾ | \$ 0.30 |

- (1) See Note 2 – Significant Accounting Policies to the Financial Statements for additional information regarding paid-in-kind and non-cash dividends and distributions.
- (2) Adjusted NDI excludes distributions from Macquarie Infrastructure Corporation and SemGroup Corporation attributable to the first quarter of fiscal 2018 (\$0.4 million in aggregate). Both company's distributions had ex-dividend dates in early March 2018, and were included in Adjusted NDI for the first quarter.
- (3) The distribution of \$0.30 per share for the second quarter of fiscal 2018 was paid on July 13, 2018. Payment of future distributions is subject to Board of Directors approval, as well as meeting the covenants of our debt agreements and terms of our preferred stock. Because our quarterly distributions are funded primarily by NDI generated from our portfolio investments, the Board of Directors, in determining our quarterly distribution to common stockholders, gives a significant amount of consideration to the NDI and Adjusted NDI generated in the current quarter, as well as the NDI that our portfolio is expected to generate over the next twelve months. The

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Board of Directors also considers other factors, including but not limited to, realized and unrealized gains generated by the portfolio.

Following the completion of the Reorganization, KMF intends to begin paying distributions on a monthly basis beginning in September 2018.

Reconciliation of NDI to GAAP

The difference between distributions and other income from investments in the NDI calculation and total investment income as reported in our Statement of Operations is reconciled as follows:

GAAP recognizes that a significant portion of the cash distributions received from MLPs is characterized as a return of capital and therefore excluded from investment income, whereas the NDI calculation includes the return of capital portion of such distributions.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

NDI includes the value of paid-in-kind dividends and distributions whereas such amounts are not included as investment income for GAAP purposes, but rather are recorded as unrealized gains upon receipt.

NDI includes commitment fees from PIPE investments, whereas such amounts are generally not included in investment income for GAAP purposes, but rather are recorded as a reduction to the cost of the investment.

Certain of our investments in debt securities were purchased at a discount or premium to the par value of such security. When making such investments, we consider the security's yield to maturity, which factors in the impact of such discount (or premium). Interest income reported under GAAP includes the non-cash accretion of the discount (or amortization of the premium) based on the effective interest method. When we calculate interest income for purposes of determining NDI, in order to better reflect the yield to maturity, the accretion of the discount (or amortization of the premium) is calculated on a straight-line basis to the earlier of the expected call date or the maturity date of the debt security.

We may sell covered call option contracts to generate income or to reduce our ownership of certain securities that we hold. In some cases, we are able to repurchase these call option contracts at a price less than the call premium that we received, thereby generating a profit. The premium we receive from selling call options, less (i) the amount that we pay to repurchase such call option contracts and (ii) the amount by which the market price of an underlying security is above the strike price at the time a new call option is written (if any), is included in NDI. For GAAP purposes, premiums received from call option contracts sold are not included in investment income. See Note 2 Significant Accounting Policies for a full discussion of the GAAP treatment of option contracts.

The treatment of expenses included in NDI also differs from what is reported in the Statement of Operations as follows:

The non-cash amortization or write-offs of capitalized debt issuance costs and preferred stock offering costs related to our financings is included in interest expense and distributions on preferred stock for GAAP purposes, but is excluded from our calculation of NDI.

NDI also includes recurring payments (or receipts) on interest rate swap contracts or the amortization of termination payments on interest rate swap contracts entered into in anticipation of an offering of unsecured notes (Notes) or mandatory redeemable preferred stock (MRP Shares). The termination payments on interest rate swap contracts are amortized over the term of the Notes or MRP Shares issued. For GAAP purposes, these amounts are included in the realized gains/losses section of the Statement of Operations.

Under GAAP, excise taxes are accrued when probable and estimable. For NDI, we exclude excise tax that is unrelated to the current fiscal period.

For GAAP purposes, offering costs incurred related to the issuance of common stock reduce paid-in capital when stock is issued. Certain costs related to registration statements or shelf offerings may be written off once the registration statement or prospectus usefulness has expired. The non-cash amortization or write-off of these offering costs is included in operating expense for GAAP purposes, but is excluded from our calculation of NDI.

Liquidity and Capital Resources

At May 31, 2018, we had total leverage outstanding of \$126 million, which represented 28% of total assets. At quarter end, total leverage was comprised of \$91 million of Notes and \$35 million of MRP Shares. At May 31, 2018, we did not have any borrowings outstanding under our unsecured revolving credit facility (the Credit Facility) or our unsecured revolving term loan (the Term Loan), and we had \$11 million of cash and cash equivalents. As of July 20, 2018, we had no borrowings outstanding under our Credit Facility or Term Loan, and we had \$1 million of cash and cash equivalents.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

Our Credit Facility has a total commitment of \$75 million and matures on November 9, 2018. The interest rate on outstanding loan balances may vary between LIBOR plus 1.60% and LIBOR plus 2.25%, depending on our asset coverage ratios. We pay a fee of 0.30% per annum on any unused amounts of the Credit Facility.

Our Term Loan has a total commitment of \$35 million and matures on July 25, 2019. Borrowings under the Term Loan have an interest rate of LIBOR plus 1.50%. Amounts borrowed under the Term Loan may be repaid and subsequently borrowed. We pay a fee of 0.25% per annum on any unused amount of the Term Loan.

At May 31, 2018, we had \$91 million of Notes outstanding that mature between 2021 and 2023 and we had \$35 million of MRP Shares outstanding that are subject to mandatory redemption in 2021.

At May 31, 2018, our asset coverage ratios under the Investment Company Act of 1940, as amended (the 1940 Act), were 478% for debt and 345% for total leverage (debt plus preferred stock). Our target asset coverage ratio with respect to our debt is 430%. At times we may be above or below this target depending on market conditions as well as certain other factors, including our target total leverage asset coverage ratio of 320% and the basic maintenance amount as stated in our rating agency guidelines.

As of May 31, 2018, our total leverage consisted entirely of fixed rate obligations. At such date, the weighted average interest/dividend rate on our total leverage was 3.93%.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****PORTFOLIO SUMMARY****(UNAUDITED)****Portfolio of Long-Term Investments by Category⁽¹⁾****May 31, 2018****November 30, 2017****Top 10 Holdings by Issuer**

| Holding | Category⁽¹⁾ | Percent of Long-Term Investments as of | |
|--|-------------------------------|---|--------------------------|
| | | May 31, 2018 | November 30, 2017 |
| 1. ONEOK, Inc. | Midstream Company | 10.5% | 7.8% |
| 2. The Williams Companies, Inc. ⁽²⁾ | Midstream Company | 8.1 | 6.0 |
| 3. Targa Resources Corp. | Midstream Company | 8.1 | 7.1 |
| 4. Plains GP Holdings, L.P. ⁽³⁾ | Midstream Company | 8.0 | 6.6 |
| 5. Pembina Pipeline Corporation | Midstream Company | 4.6 | 1.7 |
| 6. Energy Transfer Partners, L.P. | Midstream MLP | 4.4 | 3.8 |
| 7. KNOT Offshore Partners LP | Midstream Company | 3.8 | 3.7 |
| 8. Kinder Morgan, Inc. | Midstream Company | 3.8 | 1.1 |
| 9. MPLX LP | Midstream MLP | 3.7 | 3.6 |
| 10. GasLog Partners LP | Midstream Company | 3.6 | 3.8 |

- (1) See Glossary of Key Terms for definitions. Midstream Company & MLP Affiliate category includes Midstream Companies engaged in marine transportation (13% as of May 31, 2018 and 16% as of November 30, 2017).
- (2) On May 17, 2018, The Williams Companies, Inc. (WMB) and Williams Partners L.P. (WPZ) announced an agreement under which WMB will acquire all common units of WPZ in a stock-for-unit transaction. As of May 31, 2018 and November 30, 2017, the Fund did not own any WPZ units.
- (3) Our investment includes our holdings of Plains GP Holdings, L.P. (PAGP) and our interest in Plains AAP, L.P. (PAGP-AAP). Our ownership of PAGP-AAP is exchangeable on a one-for-one basis into either PAGP shares or Plains All American Pipeline, L.P. units at our option.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****MAY 31, 2018****(amounts in 000 s, except number of option contracts)****(UNAUDITED)**

| Description | No. of Shares/Units | Value |
|---|------------------------|----------|
| Long-Term Investments 138.3% | | |
| Equity Investments⁽¹⁾ 131.3% | | |
| United States 118.6% | | |
| Midstream Companies⁽²⁾ 82.3% | | |
| Capital Product Partners L.P. Class B Units ⁽³⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾ | 606 | \$ 4,800 |
| Enbridge Energy Management, L.L.C. ⁽⁷⁾⁽⁸⁾ | 1,629 | 15,476 |
| GasLog Partners LP ⁽⁵⁾ | 636 | 15,545 |
| Golar LNG Partners LP ⁽⁵⁾ | 534 | 8,962 |
| Höegh LNG Partners LP ⁽⁵⁾ | 507 | 8,774 |
| Kinder Morgan, Inc. | 975 | 16,265 |
| KNOT Offshore Partners LP ⁽⁵⁾ | 781 | 16,405 |
| ONEOK, Inc. ⁽⁹⁾ | 658 | 44,850 |
| Plains GP Holdings, L.P. ⁽⁵⁾⁽¹⁰⁾ | 703 | 17,262 |
| Plains GP Holdings, L.P. Plains AAP, L.P. ⁽⁵⁾⁽¹⁰⁾⁽¹¹⁾ | 690 | 16,942 |
| SemGroup Corporation | 246 | 6,220 |
| Tallgrass Energy GP, LP ⁽⁵⁾⁽¹²⁾ | 604 | 12,992 |
| Targa Resources Corp. | 714 | 34,733 |
| The Williams Companies, Inc. ⁽¹³⁾ | 1,296 | 34,800 |
| | | 254,026 |
| Midstream MLPs⁽²⁾⁽¹⁴⁾ 34.3% | | |
| Andeavor Logistics LP | 103 | 4,406 |
| BP Midstream Partners LP | 155 | 3,314 |
| Buckeye Partners, L.P. ⁽¹⁰⁾ | 164 | 5,907 |
| Buckeye Partners, L.P. Class C Units ⁽³⁾⁽⁴⁾⁽⁷⁾⁽¹⁰⁾⁽¹⁵⁾ | 182 | 5,849 |
| Cheniere Energy Partners, L.P. | 19 | 666 |
| Crestwood Equity Partners LP | 132 | 4,419 |
| DCP Midstream, LP | 224 | 9,372 |
| Energy Transfer Partners, L.P. | 986 | 18,727 |
| Enterprise Products Partners L.P. | 378 | 10,929 |
| EQT Midstream Partners, LP | 34 | 1,881 |
| Global Partners LP | 284 | 4,936 |
| Magellan Midstream Partners, L.P. | 45 | 3,159 |
| MPLX LP | 439 | 15,771 |
| Noble Midstream Partners LP | 13 | 645 |
| Oasis Midstream Partners LP | 14 | 261 |
| Phillips 66 Partners LP | 39 | 2,020 |
| Shell Midstream Partners, L.P. | 45 | 1,016 |
| Summit Midstream Partners, LP | 234 | 3,794 |
| TC PipeLines, LP | 89 | 2,172 |
| Western Gas Partners, LP | 130 | 6,694 |

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****MAY 31, 2018****(amounts in 000 s, except number of option contracts)****(UNAUDITED)**

| Description | No. of Shares/Units | Value | | |
|--|--------------------------|--------------------------|-----------------------------|--------------|
| Other Energy Companies 2.0% | | | | |
| Marathon Petroleum Corporation | 6 | \$ 459 | | |
| NextEra Energy Partners, LP | 73 | 3,264 | | |
| Phillips 66 | 4 | 489 | | |
| Valero Energy Corporation | 4 | 521 | | |
| Viper Energy Partners LP ⁽¹⁶⁾ | 45 | 1,453 | | |
| | | 6,186 | | |
| Total United States (Cost \$346,931) | | 366,150 | | |
| Canada 12.7% | | | | |
| Midstream Companies⁽²⁾ 12.7% | | | | |
| Enbridge Inc. ⁽⁸⁾ | 345 | 10,716 | | |
| Pembina Pipeline Corporation | 566 | 19,687 | | |
| TransCanada Corporation | 215 | 8,989 | | |
| Total Canada (Cost \$39,935) | | 39,392 | | |
| Total Equity Investments (Cost \$386,866) | | 405,542 | | |
| | Interest Rate | Maturity Date | Principal Amount | Value |
| Debt Instruments 7.0% | | | | |
| United States 5.4% | | | | |
| Upstream 5.4% | | | | |
| California Resources Corporation ⁽³⁾⁽¹⁰⁾ | 8.000% | 12/15/22 | \$ 7,525 | 6,679 |
| Eclipse Resources Corporation | 8.875 | 7/15/23 | 9,100 | 8,599 |
| Jones Energy Holdings, LLC | 9.250 | 3/15/23 | 2,600 | 1,625 |
| Total United States (Cost \$17,323) | | | | 16,903 |
| Canada 1.6% | | | | |
| Upstream 1.6% | | | | |
| Jupiter Resources Inc. ⁽³⁾ (Cost \$9,534) | 8.500 | 10/1/22 | 11,480 | 4,822 |
| Total Debt Investments (Cost \$26,857) | | | | 21,725 |
| Total Long-Term Investments (Cost \$413,723) | | | | 427,267 |

| | No. of Shares/Units | Value |
|---|------------------------|---------|
| Short-Term Investment 2.8% | | |
| Money Market Fund 2.8% | | |
| JPMorgan 100% U.S. Treasury Securities Money Market Fund Capital Shares, 1.62% ⁽⁷⁾ (Cost \$8,687) | 8,687 | 8,687 |
| Total Investments 141.1% (Cost \$422,410) | | 435,954 |

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****MAY 31, 2018****(amounts in 000 s, except number of option contracts)****(UNAUDITED)**

| | Strike Price | Expiration Date | No. of Contracts | Notional Amount⁽¹⁸⁾ | Value |
|---|---------------------|------------------------|-------------------------|---------------------------------------|-------------------|
| Liabilities | | | | | |
| Call Option Contracts Written⁽¹⁹⁾ | | | | | |
| United States | | | | | |
| Midstream Company | | | | | |
| ONEOK, Inc. | \$ 70.00 | 7/20/18 | 350 | \$ 2,386 | \$ (42) |
| ONEOK, Inc. | 72.50 | 7/20/18 | 350 | 2,386 | (17) |
| Total Call Option Contracts Written (Premiums Received \$51) | | | | | (59) |
| Debt | | | | | (91,000) |
| Mandatory Redeemable Preferred Stock at Liquidation Value | | | | | (35,000) |
| Other Liabilities in Excess of Other Assets | | | | | (1,060) |
| Net Assets Applicable to Common Stockholders | | | | | \$ 308,835 |

- (1) Unless otherwise noted, equity investments are common units/common shares.
- (2) Refer to the [Glossary of Key Terms](#) for the definitions of Midstream Companies and Midstream MLPs.
- (3) The Fund's ability to sell this security is subject to certain legal or contractual restrictions. As of May 31, 2018, the aggregate value of restricted securities held by the Fund was \$39,092 (8.8% of total assets), which included \$28,443 of Level 2 securities and \$10,649 of Level 3 securities. See Note 7 [Restricted Securities](#).
- (4) Fair valued security. See Notes 2 and 3 in Notes to Financial Statements.
- (5) This company is structured like an MLP, but is not treated as a publicly-traded partnership for regulated investment company ([RIC](#)) qualification purposes.
- (6) Class B Units are convertible on a one-for-one basis into common units of Capital Product Partners L.P. ([CPLP](#)) and are senior to the common units in terms of liquidation preference and priority of distributions (liquidation preference of \$9.00 per unit). The Class B Units

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pay quarterly cash distributions and are convertible at any time at the option of the holder. The Class B Units paid a distribution of \$0.21375 per unit for the second quarter.

- (7) Dividends are paid-in-kind.
- (8) On May 17, 2018, Enbridge Inc. (ENB) announced it has made proposals to the respective boards of directors of its sponsored vehicles, Spectra Energy Partners, LP (SEP), Enbridge Energy Partners, L.P. (EEP), Enbridge Energy Management, L.L.C. (EEQ) and Enbridge Income Fund Holdings Inc. (ENF), to acquire, with ENB stock, all of the outstanding equity securities of those sponsored vehicles not beneficially owned by ENB.
- (9) Security or a portion thereof is segregated as collateral on option contracts written.
- (10) The Fund believes that it is an affiliate of Buckeye Partners, L.P. (BPL), Plains AAP, L.P. (PAGP-AAP) and Plains GP Holdings, L.P. (PAGP). The Fund does not believe that it is an affiliate of California Resources Corporation. See Note 5 Agreements and Affiliations.
- (11) The Fund's ownership of PAGP-AAP is exchangeable on a one-for-one basis into either PAGP shares or Plains All American Pipeline, L.P. (PAA) units at the Fund's option. The Fund values its PAGP-AAP investment on an as exchanged basis based on the higher public market value of either PAGP or PAA. As of May 31, 2018, the Fund's PAGP-AAP investment is valued at PAGP's closing price. See Notes 3 and 7 in Notes to Financial Statements.
- (12) On June 30, 2018, Tallgrass Energy GP, LP (TEGP) and Tallgrass Energy Partners, LP (TEP) completed their previously-announced stock-for-unit merger. TEGP acquired all TEP common units, and following completion of the merger, TEGP changed its name to Tallgrass Energy, LP (TGE).

See accompanying notes to financial statements.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

SCHEDULE OF INVESTMENTS

MAY 31, 2018

(amounts in 000 s, except number of option contracts)

(UNAUDITED)

- (13) On May 17, 2018, The Williams Companies, Inc. (WMB) and Williams Partners L.P. (WPZ) announced an agreement under which WMB will acquire all common units of WPZ in an all stock-for-unit merger.
- (14) Unless otherwise noted, securities are treated as a publicly-traded partnership for RIC qualification purposes. To qualify as a RIC for tax purposes, the Fund may directly invest up to 25% of its total assets in equity and debt securities of entities treated as publicly-traded partnerships. The Fund had 23.9% of its total assets invested in publicly-traded partnerships at May 31, 2018. It is the Fund's intention to be treated as a RIC for tax purposes.
- (15) On March 2, 2018, the Fund purchased, in a private placement, Class C Units from BPL. The BPL Class C Units are similar in all respects to the common units except that BPL has elected to pay distributions in-kind in additional BPL Class C Units instead of cash. The paid-in-kind BPL Class C Units are issued at a 12.5% discount to the volume weighted average price (VWAP) for the ten (10) days ending the day before the distribution is declared. The BPL Class C Units will convert on a one-for-one basis to BPL common units no later than March 2, 2020.
- (16) On May 10, 2018, Viper Energy Partners LP (VNOM) changed its tax status from that of a pass-through partnership to a taxable entity via a check the box election.
- (17) The rate indicated is the current yield as of May 31, 2018.
- (18) The notional amount of call option contracts written is the product of (a) the number of contracts written, (b) 100 (each contract entitles the option holder to 100 units/shares) and (c) the market price of the underlying security as of May 31, 2018.
- (19) Security is non-income producing.

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF ASSETS AND LIABILITIES****MAY 31, 2018****(amounts in 000 s, except share and per share amounts)****(UNAUDITED)****ASSETS**

| | |
|--|----------------|
| Investments, at fair value: | |
| Non-affiliated (Cost \$369,666) | \$ 381,307 |
| Affiliated (Cost \$44,057) | 45,960 |
| Short-term investments (Cost \$8,687) | 8,687 |
| Total investments (Cost \$422,410) | 435,954 |
| Cash | 2,000 |
| Deposits with brokers | 313 |
| Receivable for securities sold | 2,653 |
| Interest, dividends and distributions receivable (Cost \$1,156) | 1,154 |
| Deferred credit facility and term loan offering costs and other assets | 513 |
| Total Assets | 442,587 |

LIABILITIES

| | |
|---|----------------|
| Payable for securities purchased | 6,124 |
| Investment management fee payable | 453 |
| Accrued directors' fees and expenses | 88 |
| Call option contracts written (Premiums received \$51) | 59 |
| Accrued expenses and other liabilities | 1,609 |
| Notes | 91,000 |
| Unamortized notes issuance costs | (361) |
| Mandatory redeemable preferred stock, \$25.00 liquidation value per share (1,400,000 shares issued and outstanding) | 35,000 |
| Unamortized mandatory redeemable preferred stock issuance costs | (220) |
| Total Liabilities | 133,752 |

| | |
|---|-------------------|
| NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS | \$ 308,835 |
|---|-------------------|

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS CONSIST OF

| | |
|---|-----------|
| Common stock, \$0.001 par value (22,034,170 shares issued and outstanding and, 198,600,000 shares authorized) | \$ 22 |
| Paid-in capital | 445,109 |
| Accumulated net investment income less distributions not treated as tax return of capital | (25,365) |
| Accumulated net realized losses less distributions not treated as tax return of capital | (124,462) |
| Net unrealized gains | 13,531 |

| | |
|---|-------------------|
| NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS | \$ 308,835 |
|---|-------------------|

| | |
|---|-----------------|
| NET ASSET VALUE PER COMMON SHARE | \$ 14.02 |
|---|-----------------|

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF OPERATIONS**

(amounts in 000 s)

(UNAUDITED)

| | For the Three Months Ended May 31, 2018 | For the Six Months Ended May 31, 2018 |
|--|---|---|
| INVESTMENT INCOME | | |
| Income | | |
| Dividends and distributions: | | |
| Non-affiliated investments | \$ 6,446 | \$ 12,513 |
| Affiliated investments | 624 | 1,249 |
| Money market mutual funds | 14 | 25 |
| Total dividends and distributions (after foreign taxes withheld of \$81 and \$143, respectively) | 7,084 | 13,787 |
| Return of capital | (7,623) | (12,409) |
| Net dividends and distributions | (539) | 1,378 |
| Interest income | 802 | 1,917 |
| Total Investment Income | 263 | 3,295 |
| Expenses | | |
| Investment management fees | 1,310 | 2,702 |
| Professional fees | 107 | 227 |
| Directors' fees and expenses | 88 | 186 |
| Administration fees | 46 | 94 |
| Insurance | 26 | 53 |
| Reports to stockholders | 17 | 47 |
| Custodian fees | 16 | 33 |
| Other expenses | 68 | 134 |
| Total Expenses before interest expense and preferred distributions | 1,678 | 3,476 |
| Interest expense and amortization of offering costs | 1,055 | 2,113 |
| Distributions on mandatory redeemable preferred stock and amortization of offering costs | 374 | 746 |
| Total Expenses | 3,107 | 6,335 |
| Net Investment Loss | (2,844) | (3,040) |
| REALIZED AND UNREALIZED GAINS (LOSSES) | | |
| Net Realized Gains (Losses) | | |
| Investments non-affiliated | (4,580) | (7,294) |
| Foreign currency transactions | (5) | (3) |
| Options | 51 | 147 |
| Net Realized Losses | (4,534) | (7,150) |
| Net Change in Unrealized Gains (Losses) | | |

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| | | |
|---|------------------|------------------|
| Investments non-affiliated | 24,156 | 16,964 |
| Investments affiliated | 2,958 | 3,447 |
| Foreign currency translations | 2 | |
| Options | (35) | (8) |
| Net Change in Unrealized Gains | 27,081 | 20,403 |
| Net Realized and Unrealized Gains | 22,547 | 13,253 |
| NET INCREASE IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS RESULTING FROM OPERATIONS | \$ 19,703 | \$ 10,213 |

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF CHANGES IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS**

(amounts in 000 s, except share amounts)

| | For the Six Months Ended May 31, 2018 (Unaudited) | For the Fiscal Year Ended November 30, 2017 |
|--|--|--|
| OPERATIONS | | |
| Net investment income (loss) ⁽¹⁾ | \$ (3,040) | \$ 3,163 |
| Net realized gains (losses) | (7,150) | 19,067 |
| Net change in unrealized gains (losses) | 20,403 | (65,299) |
| Net Increase (Decrease) in Net Assets Resulting from Operations | 10,213 | (43,069) |
| DIVIDENDS AND DISTRIBUTIONS TO COMMON STOCKHOLDERS ⁽¹⁾ | | |
| Dividends | (13,221) ⁽²⁾ | (609) ⁽³⁾ |
| Distributions - return of capital | (2) | (28,036) ⁽³⁾ |
| Dividends and Distributions to Common Stockholders | (13,221) | (28,645) |
| Total Decrease in Net Assets Applicable to Common Stockholders | (3,008) | (71,714) |
| NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS | | |
| Beginning of period | 311,843 | 383,557 |
| End of period | \$ 308,835 | \$ 311,843 |

(1) Distributions on the Fund's mandatory redeemable preferred stock (MRP Shares) are treated as an operating expense under GAAP and are included in the calculation of net investment income (loss). See Note 2 - Significant Accounting Policies. Distributions in the amount of \$711 paid to holders of MRP Shares during the six months ended May 31, 2018 are characterized as dividend income (a portion of which may be eligible to be treated as qualified dividend income) until after the end of the fiscal year when the Fund can determine its earnings and profits for the full fiscal year, which include gains and losses on the sale of securities for the remainder of the fiscal year. The final tax character may differ substantially from this preliminary information. Distributions in the amount of \$1,421 paid to holders of MRP Shares for the fiscal year ended November 30, 2017 were characterized as dividends. A portion of the distributions characterized as dividends for the fiscal year ended November 30, 2017 was eligible to be treated as qualified dividend income. This characterization is based on the Fund's earnings and profits.

(2) Distributions paid to common stockholders for the six months ended May 31, 2018 are characterized as dividend income (a portion of which may be eligible to be treated as qualified dividend income) until after the end of the fiscal year when the Fund can determine its earnings and profits for the full fiscal year, which include gains and losses on the sale of securities for the remainder of the fiscal year. The final tax character may differ substantially from this preliminary information.

(3) Distributions paid to common stockholders for the fiscal year ended November 30, 2017 were characterized as either dividends (a portion of which was eligible to be treated as qualified dividend income) or distributions (long term capital gains or return of capital). This characterization is based on the Fund's earnings and profits.

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF CASH FLOWS****FOR THE SIX MONTHS ENDED MAY 31, 2018****(amounts in 000 s)****(UNAUDITED)**

| CASH FLOWS FROM OPERATING ACTIVITIES | |
|---|-----------------|
| Net increase in net assets resulting from operations | \$ 10,213 |
| Adjustments to reconcile net increase in net assets resulting from operations to net cash provided by operating activities: | |
| Return of capital distributions | 12,409 |
| Net realized losses (excluding foreign currency transactions) | 7,147 |
| Net change in unrealized gains (excluding foreign currency translations) | (20,403) |
| Accretion of bond discounts, net | (276) |
| Purchase of long-term investments | (69,527) |
| Proceeds from sale of long-term investments | 77,543 |
| Purchase of short-term investments | (8,656) |
| Increase in deposits with brokers | (65) |
| Increase in receivable for securities sold | (2,378) |
| Decrease in interest, dividends and distributions receivable | 740 |
| Amortization of deferred debt offering costs | 316 |
| Amortization of mandatory redeemable preferred stock offering costs | 35 |
| Increase in other assets | (43) |
| Increase in payable for securities purchased | 5,992 |
| Decrease in investment management fee payable | (10) |
| Increase in premiums received on call option contracts written | 51 |
| Increase in accrued directors' fees and expenses | 4 |
| Increase in accrued expenses and other liabilities | 129 |
| Net Cash Provided by Operating Activities | 13,221 |
| CASH FLOWS FROM FINANCING ACTIVITIES | |
| Cash distributions paid to common stockholders | (13,221) |
| Net Cash Used in Financing Activities | (13,221) |
| NET DECREASE IN CASH | |
| CASH BEGINNING OF PERIOD | 2,000 |
| CASH END OF PERIOD | \$ 2,000 |

Supplemental disclosure of cash flow information:

During the six months ended May 31, 2018, interest paid related to debt obligations was \$1,773.

During the six months ended May 31, 2018, the Fund received \$1,505 of paid-in-kind dividends. See Note 2 Significant Accounting Policies.

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****FINANCIAL HIGHLIGHTS**

(amounts in 000 s, except share and per share amounts)

| | For the Six Months Ended May 31, 2018 (Unaudited) | For the Fiscal Year Ended November 30, | |
|---|---|---|------------|
| | | 2017 | 2016 |
| Per Share of Common Stock⁽¹⁾ | | | |
| Net asset value, beginning of period | \$ 14.15 | \$ 17.41 | \$ 17.56 |
| Net investment income (loss) ⁽²⁾ | (0.14) | 0.14 | (0.07) |
| Net realized and unrealized gains (losses) | 0.61 | (2.10) | 1.43 |
| Total income (loss) from operations | 0.47 | (1.96) | 1.36 |
| Common dividends – dividend income ⁽³⁾ | (0.60) | (0.03) | (1.50) |
| Common distributions – long-term capital gain ⁽³⁾ | | | |
| Common distributions – return of capital ⁽⁴⁾ | | (1.27) | |
| Total dividends and distributions – common | (0.60) | (1.30) | (1.50) |
| Effect of shares issued in reinvestment of distributions | | | (0.01) |
| Effect of issuance of common stock | | | |
| Effect of common stock repurchased | | | |
| Net asset value, end of period | \$ 14.02 | \$ 14.15 | \$ 17.41 |
| Market value per share of common stock, end of period | \$ 13.13 | \$ 12.88 | \$ 15.33 |
| Total investment return based on common stock market value ⁽⁵⁾ | 6.5% ⁽⁶⁾ | (8.7)% | 12.7% |
| Total investment return based on net asset value ⁽⁷⁾ | 3.5% ⁽⁶⁾ | (11.7)% | 12.7% |
| Supplemental Data and Ratios⁽⁸⁾ | | | |
| Net assets applicable to common stockholders, end of period | \$ 308,835 | \$ 311,843 | \$ 383,557 |
| Ratio of expenses to average net assets | | | |
| Management fees ⁽⁹⁾ | 1.8% | 1.7% | 1.8% |
| Other expenses | 0.5 | 0.4 | 0.5 |
| Subtotal | 2.3 | 2.1 | 2.3 |
| Interest expense and distributions on mandatory redeemable preferred stock ⁽²⁾ | 1.8 | 1.7 | 3.8 |
| Management fee waiver | | | |
| Excise taxes | | | |
| Total expenses | 4.1% | 3.8% | 6.1% |
| Ratio of net investment income (loss) to average net assets ⁽²⁾ | (2.0)% | 0.9% | (0.5)% |
| Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets | 3.3% ⁽⁶⁾ | (11.9)% | 10.3% |
| Portfolio turnover rate | 16.2% ⁽⁶⁾ | 25.5% | 48.2% |
| Average net assets | \$ 306,885 | \$ 360,869 | \$ 314,015 |
| Notes outstanding, end of period ⁽¹⁰⁾ | \$ 91,000 | \$ 91,000 | \$ 91,000 |

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| | | | | |
|---|------------|----|------------|------------|
| Credit facility outstanding, end of period ⁽¹⁰⁾ | | \$ | | \$ |
| Term loan outstanding, end of period ⁽¹⁰⁾ | | \$ | | \$ 27,000 |
| Mandatory redeemable preferred stock, end of period ⁽¹⁰⁾ | \$ 35,000 | \$ | 35,000 | \$ 35,000 |
| Average shares of common stock outstanding | 22,034,170 | | 22,034,170 | 21,975,582 |
| Asset coverage of total debt ⁽¹¹⁾ | 477.8% | | 481.1% | 454.7% |
| Asset coverage of total leverage (debt and preferred stock) ⁽¹²⁾ | 345.1% | | 347.5% | 350.7% |
| Average amount of borrowings per share of common stock during the period ⁽¹⁾ | \$ 4.22 | \$ | 5.16 | \$ 4.86 |

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****FINANCIAL HIGHLIGHTS**

(amounts in 000 s, except share and per share amounts)

| | For the Fiscal Year Ended November 30, | | |
|---|---|------------|------------|
| | 2015 | 2014 | 2013 |
| Per Share of Common Stock⁽¹⁾ | | | |
| Net asset value, beginning of period | \$ 39.51 | \$ 35.75 | \$ 29.01 |
| Net investment income (loss) ⁽²⁾ | 0.30 | (0.01) | (0.06) |
| Net realized and unrealized gains (losses) | (18.42) | 5.61 | 8.61 |
| | | | |
| Total income (loss) from operations | (18.12) | 5.60 | 8.55 |
| | | | |
| Common dividends dividend income ⁽³⁾ | (1.68) | (1.57) | (1.15) |
| Common distributions long-term capital gain ⁽³⁾ | (2.14) | (0.34) | (0.66) |
| Common distributions return of capital ⁽⁴⁾ | | | |
| | | | |
| Total dividends and distributions common | (3.82) ⁽⁴⁾ | (1.91) | (1.81) |
| | | | |
| Effect of shares issued in reinvestment of distributions | (0.01) | (0.02) | |
| Effect of issuance of common stock | | | |
| Effect of common stock repurchased | | 0.09 | |
| | | | |
| Net asset value, end of period | \$ 17.56 | \$ 39.51 | \$ 35.75 |
| | | | |
| Market value per share of common stock, end of period | \$ 15.46 | \$ 35.82 | \$ 32.71 |
| | | | |
| Total investment return based on common stock market value ⁽⁵⁾ | (50.2)% | 15.3% | 23.5% |
| Total investment return based on net asset value ⁽⁷⁾ | (48.7)% | 16.4% | 30.5% |
| Supplemental Data and Ratios⁽⁸⁾ | | | |
| Net assets applicable to common stockholders, end of period | \$ 380,478 | \$ 854,257 | \$ 788,057 |
| Ratio of expenses to average net assets | | | |
| Management fees ⁽⁹⁾ | 1.9% | 1.7% | 1.8% |
| Other expenses | 0.2 | 0.2 | 0.2 |
| | | | |
| Subtotal | 2.1 | 1.9 | 2.0 |
| Interest expense and distributions on mandatory redeemable preferred stock ⁽²⁾ | 2.5 | 1.7 | 1.8 |
| Management fee waiver | | | |
| Excise taxes | 0.4 | | 0.1 |
| | | | |
| Total expenses | 5.0% | 3.6% | 3.9% |
| | | | |
| Ratio of net investment income (loss) to average net assets ⁽²⁾ | 1.0% | (0.0)% | (0.2)% |
| Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets | (58.3)% | 14.0% | 25.9% |
| Portfolio turnover rate | 45.3% | 45.3% | 49.1% |
| Average net assets | \$ 672,534 | \$ 887,585 | \$ 726,248 |
| Notes outstanding, end of period ⁽¹⁰⁾ | \$ 185,000 | \$ 235,000 | \$ 205,000 |
| Credit facility outstanding, end of period ⁽¹⁰⁾ | \$ | \$ | \$ 50,000 |
| Term loan outstanding, end of period ⁽¹⁰⁾ | \$ | \$ 46,000 | \$ |
| Mandatory redeemable preferred stock, end of period ⁽¹⁰⁾ | \$ 70,000 | \$ 105,000 | \$ 65,000 |

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| | | | |
|---|------------|------------|------------|
| Average shares of common stock outstanding | 21,657,943 | 21,897,671 | 21,969,288 |
| Asset coverage of total debt ⁽¹⁾ | 343.5% | 441.4% | 434.5% |
| Asset coverage of total leverage (debt and preferred stock) ⁽¹²⁾ | 249.2% | 321.3% | 346.3% |
| Average amount of borrowings per share of common stock during the period ⁽¹⁾ | \$ 11.16 | \$ 12.84 | \$ 10.51 |

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****FINANCIAL HIGHLIGHTS**

(amounts in 000 s, except share and per share amounts)

| | For the Fiscal Year Ended | | For the Period November 24, 2010 ⁽¹³⁾ through November 30, 2010 |
|---|---------------------------|------------|--|
| | November 30, | | |
| | 2012 | 2011 | |
| Per Share of Common Stock⁽¹⁾ | | | |
| Net asset value, beginning of period | \$ 25.94 | \$ 23.80 | \$ 23.83 ⁽¹⁴⁾ |
| Net investment income (loss) ⁽²⁾ | 0.17 | 0.29 | (0.02) |
| Net realized and unrealized gains (losses) | 4.64 | 3.12 | (0.01) |
| Total income (loss) from operations | 4.81 | 3.41 | (0.03) |
| Common dividends dividend income ⁽³⁾ | (1.30) | (1.20) | |
| Common distributions long-term capital gains ⁽³⁾ | (0.41) | | |
| Common distributions return of capital ⁽⁴⁾ | | | |
| Total dividends and distributions common | (1.71) | (1.20) | |
| Effect of shares issued in reinvestment of distributions | (0.03) | (0.04) | |
| Effect of issuance of common stock | | (0.03) | |
| Effect of common stock repurchased | | | |
| Net asset value, end of period | \$ 29.01 | \$ 25.94 | \$ 23.80 |
| Market value per share of common stock, end of period | \$ 28.04 | \$ 22.46 | \$ 25.00 |
| Total investment return based on common stock market value ⁽⁵⁾ | 33.3% | (5.5)% | 0.0% ⁽⁶⁾ |
| Total investment return based on net asset value ⁽⁷⁾ | 19.4% | 14.7% | (0.1)% ⁽⁶⁾ |
| Supplemental Data and Ratios⁽⁸⁾ | | | |
| Net assets applicable to common stockholders, end of period | \$ 635,226 | \$ 562,044 | \$ 452,283 |
| Ratio of expenses to average net assets | | | |
| Management fees ⁽⁹⁾ | 1.7% | 1.6% | 1.3% |
| Other expenses | 0.3 | 0.3 | 0.3 ⁽¹⁵⁾ |
| Subtotal | 2.0 | 1.9 | 1.6 |
| Interest expense and distributions on mandatory redeemable preferred stock ⁽²⁾ | 1.8 | 1.3 | |
| Management fee waiver | | (0.3) | (0.3) |
| Excise taxes | | | |
| Total expenses | 3.8% | 2.9% | 1.3% |
| Ratio of net investment income (loss) to average net assets ⁽²⁾ | 0.6% | 1.1% | (1.3)% ⁽¹⁵⁾ |
| Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets | 16.8% | 13.4% | (0.1)% ⁽⁶⁾ |
| Portfolio turnover rate | 67.6% | 74.1% | 0.0% ⁽⁶⁾ |
| Average net assets | \$ 620,902 | \$ 537,044 | \$ 452,775 |

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| | | | |
|---|------------|------------|------------|
| Notes outstanding, end of period ⁽¹⁰⁾ | \$ 165,000 | \$ 115,000 | \$ |
| Credit facility outstanding, end of period ⁽¹⁰⁾ | \$ 48,000 | \$ 45,000 | \$ |
| Term loan outstanding, end of period ⁽¹⁰⁾ | \$ | \$ | \$ |
| Mandatory redeemable preferred stock, end of period ⁽¹⁰⁾ | \$ 65,000 | \$ 35,000 | \$ |
| Average shares of common stock outstanding | 21,794,596 | 21,273,512 | 19,004,000 |
| Asset coverage of total debt ⁽¹¹⁾ | 428.7% | 473.2% | |
| Asset coverage of total leverage (debt and preferred stock) ⁽¹²⁾ | 328.5% | 388.2% | |
| Average amount of borrowings per share of common stock during the period ⁽¹⁾ | \$ 8.85 | \$ 6.50 | |

See accompanying notes to financial statements.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

FINANCIAL HIGHLIGHTS

(amounts in 000 s, except share and per share amounts)

- (1) Based on average shares of common stock outstanding.
- (2) Distributions on the Fund's MRP Shares are treated as an operating expense under GAAP and are included in the calculation of net investment income (loss). See Note 2 Significant Accounting Policies.
- (3) The actual characterization of the distributions made during the six months ended May 31, 2018 will not be determinable until after the end of the fiscal year when the Fund can determine its actual earnings and profits for the full fiscal year (which include gains and losses on the sale of securities for the remainder of the fiscal year) and may differ substantially from this preliminary information. The information presented for each of the other periods is a characterization of the total distributions paid to the common stockholders as either dividend income (a portion of which was eligible to be treated as qualified dividend income) or distributions (long-term capital gains or return of capital) and is based on the Fund's earnings and profits.
- (4) Includes special distribution of \$1.80 per share paid in July 2015.
- (5) Total investment return based on market value is calculated assuming a purchase of common stock at the market price on the first day and a sale at the current market price on the last day of the period reported. The calculation also assumes reinvestment of distributions at actual prices pursuant to the Fund's dividend reinvestment plan.
- (6) Not annualized.
- (7) Total investment return based on net asset value is calculated assuming a purchase of common stock at the net asset value on the first day and a sale at the net asset value on the last day of the period reported. The calculation also assumes reinvestment of distributions at actual prices pursuant to the Fund's dividend reinvestment plan.
- (8) Unless otherwise noted, ratios are annualized.
- (9) Ratio reflects total management fee before waiver, if any.
- (10) Principal/liquidation value.

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- (11) Calculated pursuant to section 18(a)(1)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by Notes (principal value) or any other senior securities representing indebtedness and MRP Shares (liquidation value) divided by the aggregate amount of Notes and any other senior securities representing indebtedness. Under the 1940 Act, the Fund may not declare or make any distribution on its common stock nor can it incur additional indebtedness if at the time of such declaration or incurrence its asset coverage with respect to senior securities representing indebtedness would be less than 300%. For purposes of this test, the Credit Facility and the Term Loan are considered senior securities representing indebtedness.

- (12) Calculated pursuant to section 18(a)(2)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by Notes (principal value), any other senior securities representing indebtedness and MRP Shares divided by the aggregate amount of Notes, any other senior securities representing indebtedness and MRP Shares (liquidation value). Under the 1940 Act, the Fund may not declare or make any distribution on its common stock nor can it issue additional preferred stock if at the time of such declaration or issuance, its asset coverage with respect to all senior securities would be less than 200%. In addition to the limitations under the 1940 Act, the Fund, under the terms of its MRP Shares, would not be able to declare or pay any distributions on its common stock if such declaration would cause its asset coverage with respect to all senior securities to be less than 225%. For purposes of these asset coverage ratio tests, the Credit Facility and the Term Loan are considered senior securities representing indebtedness.

- (13) Commencement of operations.

- (14) Initial public offering price of \$25.00 per share less underwriting discounts of \$1.125 per share and offering costs of \$0.05 per share.

- (15) For purposes of annualizing other expenses of the Fund, professional fees and reports to stockholders are fees associated with the annual audit and annual report and therefore have not been annualized.

See accompanying notes to financial statements.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

NOTES TO FINANCIAL STATEMENTS

(amounts in 000 s, except number of option contracts, share and per share amounts)

(UNAUDITED)

1. Organization

Kayne Anderson Midstream/Energy Fund, Inc. (the Fund or KMF) was organized as a Maryland corporation on August 26, 2010 and commenced operations on November 24, 2010. The Fund is registered under the Investment Company Act of 1940, as amended (the 1940 Act), as a non-diversified, closed-end investment management company. The Fund's investment objective is to provide a high level of return with an emphasis on making quarterly cash distributions to its stockholders. The Fund seeks to achieve that investment objective by investing at least 80% of its total assets in the securities of companies in the Midstream/Energy Sector, consisting of (a) Midstream MLPs, (b) Midstream Companies, (c) Other MLPs and (d) Other Energy Companies. The Fund's shares of common stock are listed on the New York Stock Exchange, Inc. (NYSE) under the symbol KMF.

On February 15, 2018, KA Fund Advisors, LLC (KAFA) announced that the Board of Directors of Kayne Anderson Midstream/Energy Fund, Inc. (KMF) and the Board of Directors of Kayne Anderson Energy Total Return Fund, Inc. (KYE) approved the proposed merger of KYE with and into KMF (the Reorganization). Information on the Reorganization is contained in the definitive joint proxy statement/prospectus filed with the Securities and Exchange Commission (the SEC) on May 30, 2018 and sent to KMF and KYE stockholders. Subject to KYE stockholder approval, KYE common stockholders will be issued KMF common stock, and KMF will acquire substantially all the assets and liabilities of KYE at an exchange ratio based on the relative Net Asset Value (NAV) per share of each fund immediately prior to the closing of the Reorganization. See Note 14 Subsequent Events.

2. Significant Accounting Policies

The following is a summary of the significant accounting policies that the Fund uses to prepare its financial statements in accordance with accounting principles generally accepted in the United States of America (GAAP). The Fund is an investment company and follows accounting and reporting guidance of the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 946 Financial Services Investment Companies.

A. Use of Estimates The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of income and expenses during the period. Actual results could differ materially from those estimates.

B. Cash and Cash Equivalents Cash and cash equivalents include short-term, liquid investments with an original maturity of three months or less and include money market fund accounts.

C. Calculation of Net Asset Value The Fund determines its net asset value on a daily basis and reports its net asset value on its website. Net asset value is computed by dividing the value of the Fund's assets (including accrued interest and distributions), less all of its liabilities (including accrued expenses, distributions payable and any indebtedness) and the liquidation value of any outstanding preferred stock, by the total number of common shares outstanding.

D. Investment Valuation Readily marketable portfolio securities listed on any exchange other than the NASDAQ Stock Market, Inc. (NASDAQ) are valued, except as indicated below, at the last sale price on the business day as of which such value is being determined. If there has been no sale on such day, the securities are valued at the mean of the most recent bid and ask prices on such day. Securities admitted to trade on the NASDAQ are valued at the NASDAQ official closing price. Portfolio securities traded on more than one securities exchange are valued at the last sale price on the business day as of which such value is being determined at the close of the exchange representing the principal market for such securities.

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Equity securities traded in the over-the-counter market, but excluding securities admitted to trading on the NASDAQ, are valued at the closing bid prices. Debt securities that are considered bonds are valued by using the

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mean of the bid and ask prices provided by an independent pricing service or, if such prices are not available or in the judgment of Kafa such prices are stale or do not represent fair value, by an independent broker. For debt securities that are considered bank loans, the fair market value is determined by using the mean of the bid and ask prices provided by the agent or syndicate bank or principal market maker. When price quotes for securities are not available, or such prices are stale or do not represent fair value in the judgment of Kafa, fair market value will be determined using the Fund's valuation process for securities that are privately issued or otherwise restricted as to resale.

Exchange-traded options and futures contracts are valued at the last sales price at the close of trading in the market where such contracts are principally traded or, if there was no sale on the applicable exchange on such day, at the mean between the quoted bid and ask price as of the close of such exchange.

The Fund holds securities that are privately issued or otherwise restricted as to resale. For these securities, as well as any security for which (a) reliable market quotations are not available in the judgment of Kafa, or (b) the independent pricing service or independent broker does not provide prices or provides a price that in the judgment of Kafa is stale or does not represent fair value, each shall be valued in a manner that most fairly reflects fair value of the security on the valuation date. Unless otherwise determined by the Board of Directors, the following valuation process is used for such securities:

Investment Team Valuation. The applicable investments are valued by senior professionals of Kafa who are responsible for the portfolio investments. The investments will be valued monthly, with new investments valued at the time such investment was made.

Investment Team Valuation Documentation. Preliminary valuation conclusions will be determined by senior management of Kafa. Such valuations and supporting documentation are submitted to the Valuation Committee (a committee of the Fund's Board of Directors) and the Board of Directors on a quarterly basis.

Valuation Committee. The Valuation Committee meets to consider the valuations submitted by Kafa at the end of each quarter. Between meetings of the Valuation Committee, a senior officer of Kafa is authorized to make valuation determinations. All valuation determinations of the Valuation Committee are subject to ratification by the Board of Directors at its next regular meeting.

Valuation Firm. Quarterly, a third-party valuation firm engaged by the Board of Directors reviews the valuation methodologies and calculations employed for these securities, unless the aggregate fair value of such security is less than 0.1% of total assets.

Board of Directors Determination. The Board of Directors meets quarterly to consider the valuations provided by Kafa and the Valuation Committee and ratify valuations for the applicable securities. The Board of Directors considers the report provided by the third-party valuation firm in reviewing and determining in good faith the fair value of the applicable portfolio securities.

As of May 31, 2018, the Fund held 3.5% of its net assets applicable to common stockholders (2.4% of total assets) in securities that were fair valued pursuant to the procedures adopted by the Board of Directors (Level 3 securities). The aggregate fair value of these securities at May 31, 2018 was \$10,649. See Note 3 Fair Value and Note 7 Restricted Securities.

E. Derivative Financial Instruments The Fund may utilize derivative financial instruments in its operations.

Interest rate swap contracts. The Fund may use hedging techniques such as interest rate swaps to mitigate potential interest rate risk on a portion of the Fund's leverage. Such interest rate swaps would principally be used to protect the Fund against higher costs on its leverage resulting from increases in interest rates. The Fund does not hedge any interest rate risk associated with portfolio holdings. Interest rate transactions the Fund may use for

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hedging purposes may expose it to certain risks that differ from the risks associated with its portfolio holdings. A decline in interest rates may result in a decline in the value of the swap contracts, which, everything else being held constant, would result in a decline in the net assets of the Fund. In addition, if the counterparty to an interest rate swap defaults, the Fund would not be able to use the anticipated net receipts under the interest rate swap to offset its cost of financial leverage.

Interest rate swap contracts are recorded at fair value with changes in value during the reporting period, and amounts accrued under the agreements, included as unrealized gains or losses in the Statement of Operations. Monthly cash settlements under the terms of the interest rate swap agreements or termination payments are recorded as realized gains or losses in the Statement of Operations. The Fund generally values its interest rate swap contracts based on dealer quotations, if available, or by discounting the future cash flows from the stated terms of the interest rate swap agreement by using interest rates currently available in the market. See Note 8 Derivative Financial Instruments.

Option contracts. The Fund is also exposed to financial market risks including changes in the valuations of its investment portfolio. The Fund may purchase or write (sell) call options. A call option on a security is a contract that gives the holder of the option, in return for a premium, the right to buy from the writer of the option the security underlying the option at a specified exercise price at any time during the term of the option.

The Fund would realize a gain on a purchased call option if, during the option period, the value of such securities exceeded the sum of the exercise price, the premium paid and transaction costs; otherwise the Fund would realize either no gain or a loss on the purchased call option. The Fund may also purchase put option contracts. If a purchased put option is exercised, the premium paid increases the cost basis of the securities sold by the Fund.

The Fund may also write (sell) call options with the purpose of generating realized gains or reducing its ownership of certain securities. If the Fund writes a call option on a security, the Fund has the obligation upon exercise of the option to deliver the underlying security upon payment of the exercise price. The Fund will only write call options on securities that the Fund holds in its portfolio (*i.e.*, covered calls).

When the Fund writes a call option, an amount equal to the premium received by the Fund is recorded as a liability and is subsequently adjusted to the current fair value of the option written. Premiums received from writing options that expire unexercised are treated by the Fund on the expiration date as realized gains from investments. If the Fund repurchases a written call option prior to its exercise, the difference between the premium received and the amount paid to repurchase the option is treated as a realized gain or loss. If a call option is exercised, the premium is added to the proceeds from the sale of the underlying security in determining whether the Fund has realized a gain or loss. The Fund, as the writer of an option, bears the market risk of an unfavorable change in the price of the security underlying the written option. See Note 8 Derivative Financial Instruments.

F. Security Transactions Security transactions are accounted for on the date the securities are purchased or sold (trade date). Realized gains and losses are calculated using the specific identification cost basis method for GAAP purposes. For tax purposes, the Fund utilizes the average cost method to compute the adjusted tax cost basis of its MLP securities.

G. Return of Capital Estimates Dividends and distributions received from the Fund's investments are comprised of income and return of capital. Payments made by MLPs (and other entities treated as partnerships for federal income tax purposes) are categorized as distributions and payments made by corporations are categorized as dividends. At the time such dividends and distributions are received, the Fund estimates the amount of such payments that is considered investment income and the amount that is considered a return of capital. The Fund estimates that 94% of distributions received from its MLP investments were return of capital distributions. This estimate is adjusted to actual in the subsequent fiscal year when tax reporting information related to the Fund's MLP investments is received. Such estimates for MLPs and other investments are based on historical information available from each investment and other industry sources.

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On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Reform Bill) was signed into law. The Tax Reform Bill permits immediate expensing of qualified capital expenditures for the next five years, and as a result, the Fund's portfolio companies may pass through more deductions which may result in a higher portion of distributions received to be characterized as return of capital.

The return of capital portion of the distributions is a reduction to investment income that results in an equivalent reduction in the cost basis of the associated investments and increases net realized gains (losses) and net change in unrealized gains (losses). If the distributions received by the Fund exceed its cost basis (*i.e.* its cost basis has been reduced to zero), the distributions are treated as realized gains.

The Fund includes all distributions received on its Statement of Operations and reduces its investment income by (i) the estimated return of capital and (ii) the distributions in excess of cost basis, if any. For the three and six months ended May 31, 2018, the Fund estimated \$7,623 and \$12,409, respectively, of return of capital and there were no distributions that were in excess of cost basis.

In accordance with GAAP, the return of capital cost basis reductions for the Fund's MLP investments are limited to the total amount of the cash distributions received from such investments. For income tax purposes, the cost basis reductions for the Fund's MLP investments typically exceed cash distributions received from such investments due to allocated losses from these investments.

The following table sets forth the Fund's estimated return of capital portion of the distributions received from its investments.

| | For the Three Months Ended May 31, 2018 | For the Six Months Ended May 31, 2018 |
|--|--|--|
| Dividends from investments | \$ 4,677 | \$ 8,893 |
| Distributions from investments | 2,488 | 5,037 |
| Total dividends and distributions from investments (before foreign taxes withheld of \$81 and \$143, respectively) | \$ 7,165 | \$ 13,930 |
| Dividends % return of capital | 104% | 82% |
| Distributions % return of capital | 110% | 101% |
| Total dividends and distributions % return of capital | 106% | 89% |
| Return of capital attributable to net realized gains (losses) | \$ 1,358 | \$ 1,389 |
| Return of capital attributable to net change in unrealized gains (losses) | 6,265 | 11,020 |
| Total return of capital | \$ 7,623 | \$ 12,409 |

For the three and six months ended May 31, 2018, the Fund estimated the return of capital portion of distributions received to be \$5,377 (75%) and \$10,163 (73%), respectively. These amounts were increased by \$2,246 due to 2017 tax reporting information received by the Fund in fiscal 2018. As a result, the return of capital percentages for the three and six months ended May 31, 2018 were 106% and 89%, respectively.

H. *Investment Income* The Fund records dividends and distributions on the ex-dividend date. Interest income is recognized on the accrual basis, including amortization of premiums and accretion of discounts. When investing in securities with payment in-kind interest, the Fund will accrue interest income during the life of the security even though it will not be receiving cash as the interest is accrued. To the extent that interest income to be received is not expected to be realized, a reserve against income is established.

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Many of the debt securities that the Fund holds were purchased at a discount or premium to the par value of the security. The non-cash accretion of a discount to par value increases interest income while the non-cash amortization of a premium to par value decreases interest income. The accretion of a discount and amortization of a premium are based on the effective interest method. The amount of these non-cash adjustments can be found in the Fund's Statement of Cash Flows. The non-cash accretion of a discount increases the cost basis of the debt security, which results in an offsetting unrealized loss. The non-cash amortization of a premium decreases the cost basis of the debt security, which results in an offsetting unrealized gain. To the extent that par value is not expected to be realized, the Fund discontinues accruing the non-cash accretion of the discount to par value of the debt security.

The Fund may receive paid-in-kind and non-cash dividends and distributions in the form of additional units or shares from its investments. For paid-in-kind dividends, the additional units are not reflected in investment income during the period received, but are recorded as unrealized gains upon receipt. Non-cash distributions are reflected in investment income because the Fund has the option to receive its distribution in cash or in additional shares or units of the security.

During the three and six months ended May 31, 2018, the Fund received the following paid-in-kind dividends. There were no non-cash distributions received during the three or six months ended May 31, 2018 from any of the Fund's investments.

| | For the Three Months Ended May 31, 2018 | For the Six Months Ended May 31, 2018 |
|--------------------------------------|--|--|
| Buckeye Partners, L.P. Class C Units | \$ 222 | \$ 222 |
| Enbridge Energy Management, L.L.C. | 644 | 1,283 |
| Total paid-in-kind dividends | \$ 866 | \$ 1,505 |

I. Distributions to Stockholders Distributions to common stockholders are recorded on the ex-dividend date. Distributions to holders of MRP Shares are accrued on a daily basis as described in Note 12 Preferred Stock. As required by the Distinguishing Liabilities from Equity topic of the FASB Accounting Standards Codification (ASC 480), the Fund includes the accrued distributions on its MRP Shares as an operating expense due to the fixed term of this obligation. For tax purposes the payments made to the holders of the Fund's MRP Shares are treated as dividends or distributions.

The characterization of the distributions paid to holders of MRP Shares and common stock as either dividend income (eligible to be treated as qualified dividend income) or distributions (long-term capital gains or return of capital) is determined after the end of the fiscal year based on the Fund's actual earnings and profits and, therefore, the characterization may differ from preliminary estimates.

J. Partnership Accounting Policy The Fund records its pro-rata share of the income (loss) to the extent of distributions it has received, allocated from the underlying partnerships and adjusts the cost basis of the underlying partnerships accordingly. These amounts are included in the Fund's Statement of Operations.

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K. Taxes It is the Fund's intention to continue to be treated as and to qualify each year for special tax treatment afforded a regulated investment company (RIC) under Subchapter M of the Internal Revenue Code of 1986, as amended (the Code). As long as the Fund meets certain requirements that govern its sources of income, diversification of assets and timely distribution of earnings to stockholders, the Fund will not be subject to U.S. federal income tax.

The Fund must pay distributions equal to 90% of its investment company taxable income (ordinary income and short-term capital gains) to qualify as a RIC and it must distribute all of its taxable income (ordinary income, short-term capital gains and long-term capital gains) to avoid federal income taxes. The Fund will be subject to

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federal income tax on any undistributed portion of income. For purposes of the distribution test, the Fund may elect to treat as paid on the last day of its taxable year all or part of any distributions that are declared after the end of its taxable year if such distributions are declared before the due date of its tax return, including any extensions (August 15th). See Note 6 Taxes.

All RICs are subject to a non-deductible 4% excise tax on income that is not distributed on a timely basis in accordance with the calendar year distribution requirements. To avoid the tax, the Fund must distribute during each calendar year an amount at least equal to the sum of (i) 98% of its ordinary income for the calendar year, (ii) 98.2% of its net capital gains for the one-year period ending on November 30, the last day of our taxable year, and (iii) undistributed amounts from previous years on which the Fund paid no U.S. federal income tax. A distribution will be treated as paid during the calendar year if it is paid during the calendar year or declared by the Fund in October, November or December, payable to stockholders of record on a date during such months and paid by the Fund during January of the following year. Any such distributions paid during January of the following year will be deemed to be received by stockholders on December 31 of the year the distributions are declared, rather than when the distributions are actually received.

The Fund will be liable for the excise tax on the amount by which it does not meet the distribution requirement and will accrue an excise tax liability at the time that the liability is estimable and probable.

Dividend income received by the Fund from sources within Canada is subject to a 15% foreign withholding tax. Interest income on Canadian corporate debt obligations should generally be exempt from withholding tax on interest, with a few exceptions (e.g., a profit participating debt interest).

The Accounting for Uncertainty in Income Taxes Topic of the FASB Accounting Standards Codification (ASC 740) defines the threshold for recognizing the benefits of tax-return positions in the financial statements as more-likely-than-not to be sustained by the taxing authority and requires measurement of a tax position meeting the more-likely-than-not criterion, based on the largest benefit that is more than 50% likely to be realized.

The Fund utilizes the average cost method to compute the adjusted tax cost basis of its MLP securities.

The Fund's policy is to classify interest and penalties associated with underpayment of federal and state income taxes, if any, as income tax expense on its Statement of Operations. Tax years subsequent to fiscal year 2014 remain open and subject to examination by federal and state tax authorities.

Currently, the Fund does not believe the Tax Reform Bill will have a material impact on it given its intention to continue to qualify as a RIC, which is generally not subject to U.S. federal income tax. The Tax Reform Bill includes a limitation on the deductibility of net interest expense. To the extent the Fund's deductions are limited in any given year, the Fund will be able to utilize such deductions in future periods if it has sufficient taxable income.

L. Foreign Currency Translations The books and records of the Fund are maintained in U.S. dollars. Foreign currency amounts are translated into U.S. dollars on the following basis: (i) market value of investment securities, assets and liabilities at the rate of exchange as of the valuation date; and (ii) purchases and sales of investment securities, income and expenses at the relevant rates of exchange prevailing on the respective dates of such transactions.

The Fund does not isolate that portion of gains and losses on investments in equity and debt securities which is due to changes in the foreign exchange rates from that which is due to changes in market prices of equity and debt securities. Accordingly, realized and unrealized foreign currency gains and losses with respect to such securities are included in the reported net realized and unrealized gains and losses on investment transactions balances.

Net realized foreign exchange gains or losses represent gains and losses from transactions in foreign currencies and foreign currency contracts, foreign exchange gains or losses realized between the trade date and

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settlement date on security transactions, and the difference between the amounts of interest and dividends recorded on the Fund's books and the U.S. dollar equivalent of such amounts on the payment date.

Net unrealized foreign exchange gains or losses represent the difference between the cost of assets and liabilities (other than investments) recorded on the Fund's books from the value of the assets and liabilities (other than investments) on the valuation date.

M. Indemnifications Under the Fund's organizational documents, its officers and directors are indemnified against certain liabilities arising out of the performance of their duties to the Fund. In addition, in the normal course of business, the Fund enters into contracts that provide general indemnification to other parties. The Fund's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Fund that have not yet occurred, and may not occur. However, the Fund has not had prior claims or losses pursuant to these contracts and expects the risk of loss to be remote.

N. Offering and Debt Issuance Costs Offering costs incurred by the Fund related to the issuance of its common stock reduce additional paid-in-capital when the stock is issued. Costs incurred by the Fund related to the issuance of its debt (revolving credit facility, term loan or notes) or its preferred stock are capitalized and amortized over the period the debt or preferred stock is outstanding.

For the purpose of calculating the Fund's asset coverage ratios pursuant to the 1940 Act, deferred issuance costs are not deducted from the carrying value of Notes and MRP Shares.

3. Fair Value

The Fair Value Measurement Topic of the FASB Accounting Standards Codification (ASC 820) defines fair value as the price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants under current market conditions at the measurement date. As required by ASC 820, the Fund has performed an analysis of all assets and liabilities measured at fair value to determine the significance and character of all inputs to their fair value determination. Inputs are the assumptions, along with considerations of risk, that a market participant would use to value an asset or a liability. In general, observable inputs are based on market data that is readily available, regularly distributed and verifiable that the Fund obtains from independent, third-party sources. Unobservable inputs are developed by the Fund based on its own assumptions of how market participants would value an asset or a liability.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into the following three broad categories.

Level 1 Valuations based on quoted unadjusted prices for identical instruments in active markets traded on a national exchange to which the Fund has access at the date of measurement.

Level 2 Valuations based on quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets. Level 2 inputs are those in markets for which there are few transactions, the prices are not current, little public information exists or instances where prices vary substantially over time or among brokered market makers.

Level 3 Model derived valuations in which one or more significant inputs or significant value drivers are unobservable. Unobservable inputs are those inputs that reflect the Fund's own assumptions that market participants would use to price the asset or liability based on the best available information.

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The following table presents the Fund's assets and liabilities measured at fair value on a recurring basis at May 31, 2018, and the Fund presents these assets and liabilities by security type and description on its Schedule of Investments. Note that the valuation levels below are not necessarily an indication of the risk or liquidity associated with the underlying investment.

| | Total | Quoted Prices in Active Markets (Level 1) | Prices with Other Observable Inputs (Level 2) | Unobservable Inputs (Level 3) |
|----------------------------------|------------|--|---|-------------------------------------|
| Assets at Fair Value | | | | |
| Equity investments | \$ 405,542 | \$ 377,951 | \$ 16,942 ⁽¹⁾ | \$ 10,649 |
| Debt investments | 21,725 | | 21,725 | |
| Short-term investments | 8,687 | 8,687 | | |
| Total assets at fair value | \$ 435,954 | \$ 386,638 | \$ 38,667 | \$ 10,649 |
| Liabilities at Fair Value | | | | |
| Call option contracts written | \$ 59 | \$ | \$ 59 | \$ |

(1) The Fund's investment in Plains AAP, L.P. (PAGP-AAP) is exchangeable on a one-for-one basis into either Plains GP Holdings, L.P. (PAGP) shares or Plains All American Pipeline, L.P. (PAA) units at the Fund's option. The Fund values its PAGP-AAP investment on an as-exchanged basis based on the higher public market value of either PAGP or PAA. As of May 31, 2018, the Fund's PAGP-AAP investment is valued at PAGP's closing price. The Fund categorizes its investment as a Level 2 security for fair value reporting purposes. For the six months ended May 31, 2018, there were no transfers between Level 1 and Level 2.

As of May 31, 2018, the Fund had Notes outstanding with aggregate principal amount of \$91,000 and 1,400,000 shares of MRP Shares outstanding with a total liquidation value of \$35,000. The Notes and MRP Shares were issued in private placements to institutional investors and are not listed on any exchange or automated quotation system. See Note 11 Notes and Note 12 Preferred Stock. As a result, the Fund categorizes the Notes and MRP Shares as Level 3 securities and determines the fair value of these instruments based on estimated market yields and credit spreads for comparable instruments with similar maturity, terms and structure.

The Fund records the Notes and MRP Shares on its Statement of Assets and Liabilities at principal amount or liquidation value. As of May 31, 2018, the estimated fair values of these leverage instruments are as follows.

| Security | Principal Amount/ Liquidation Value | Fair Value |
|------------|---|---------------|
| Notes | \$ 91,000 | \$ 90,700 |
| MRP Shares | \$ 35,000 | \$ 34,600 |

The following tables present the Fund's assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the three and six months ended May 31, 2018.

| Three Months Ended May 31, 2018 | | Equity |
|--|-------------------|---------------|
| Balance | February 28, 2018 | \$ 4,770 |
| Purchases | | 7,500 |
| Issuances | | 222 |
| Transfers out to Level 1 and 2 | | |
| Realized gains (losses) | | |
| Unrealized gains (losses), net | | (1,843) |
| Balance | May 31, 2018 | \$ 10,649 |

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| Six Months Ended May 31, 2018 | | Equity Investments |
|--------------------------------------|-------------------|-------------------------------|
| Balance | November 30, 2017 | \$ 4,752 |
| Purchases | | 7,500 |
| Issuances | | 222 |
| Transfers out to Level 1 and 2 | | |
| Realized gains (losses) | | |
| Unrealized gains (losses), net | | (1,825) |
| Balance | May 31, 2018 | \$ 10,649 |

The purchase of \$7,500 relates to the Fund's investments in Buckeye Partners, L.P. (BPL), Class C Units that was made on March 2, 2018. The issuance of \$222 relates to additional BPL Class C Units received from BPL during May 2018.

The \$1,843 and \$1,825 of net unrealized losses for the three and six months ended May 31, 2018, respectively, relate to investments that are still held at the end of the reporting period and the Fund includes these unrealized gains (losses) on the Statement of Operations Net Change in Unrealized Gains (Losses).

Valuation Techniques and Unobservable Inputs

The Fund has a PIPE investment in Buckeye Partners, L.P. Unless otherwise determined by the Board of Directors, the Fund values its private investments in public equity (PIPE) investments that are convertible into or otherwise will become publicly-tradeable (*e.g.*, through subsequent registration or expiration of a restriction on trading) based on the market value of the publicly-traded security less a discount. This discount is initially equal to the discount negotiated at the time the Fund agrees to a purchase price. To the extent that such securities are convertible or otherwise become publicly traded within a time frame that may be reasonably determined, this discount will be amortized on a straight line basis over such estimated time frame.

The Fund also owns Class B Units of Capital Product Partners L.P. (CPLP). The Class B Units are convertible on a one-for-one basis into common units and are senior to the underlying common units in terms of liquidation preference and priority of distributions. The Fund's Board of Directors has determined that it is appropriate to value the Class B Units using a convertible pricing model. This model takes into account the attributes of the Class B Units, including the preferred dividend, conversion ratio and call features, to determine the estimated value of such units. In using this model, the Fund estimates (i) the credit spread for CPLP's Class B Units, which is based on credit spreads for comparable companies for CPLP and (ii) the expected volatility for CPLP's common units, which is based on CPLP's historical volatility. The Fund applies a discount to the value derived from the convertible pricing model to account for an expected discount in market prices for CPLP's convertible securities relative to the values calculated using the pricing model. If this resulting price per Class B Unit is less than the public market price for CPLP's common units at such time, the public market price for CPLP's common unit will be used for the Class B Units.

Due to the inherent uncertainty of determining the fair value of investments that do not have a readily available market value, the fair value of the Fund's investments may fluctuate from period to period. Additionally, the fair value of the Fund's investments may differ from the values that would have been used had a ready market existed for such investments and may differ materially from the values that the Fund may ultimately realize.

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The following table summarizes the significant unobservable inputs that the Fund used to value its portfolio investments categorized as Level 3 as of May 31, 2018:

Quantitative Table for Valuation Techniques

| Assets at Fair Value | Fair Value | Valuation Technique | Unobservable Inputs | Range | | |
|--|------------------|--|------------------------------|-------|-------|---------|
| | | | | Low | High | Average |
| BPL valued based on a discount to market value | \$ 5,849 | - Discount to publicly-traded securities | - Current discount | 11.0% | 11.0% | 11.0% |
| CPLP valued based on pricing model | \$ 4,800 | - Convertible pricing model | - Credit spread | 6.0% | 6.5% | 6.3% |
| | | | - Volatility | 27.5% | 37.5% | 32.5% |
| | | | - Discount for marketability | 10.0% | 10.0% | 10.0% |
| Total | \$ 10,649 | | | | | |

4. Concentration of Risk

The Fund's investments are concentrated in the energy sector. The focus of the Fund's portfolio within the energy sector may present more risks than if the Fund's portfolio were broadly diversified across numerous sectors of the economy. A downturn in the energy sector would have a larger impact on the Fund than on an investment company that does not focus on the energy sector. The performance of securities in the energy sector may lag the performance of other industries or the broader market as a whole. Additionally, to the extent that the Fund invests a relatively high percentage of its assets in the securities of a limited number of issuers, the Fund may be more susceptible than a more widely diversified investment company to any single economic, political or regulatory occurrence. At May 31, 2018, the Fund had the following investment concentrations:

| Category | Percent of Long-Term Investments |
|---|----------------------------------|
| Securities of Energy Companies ⁽¹⁾ | 100.0% |
| Equity securities | 94.9% |
| Debt securities | 5.1% |
| Securities of MLPs ⁽¹⁾ | 24.8% |
| Largest single issuer | 10.5% |
| Restricted securities | 9.1% |

(1) Refer to the Glossary of Key Terms for the definitions of Energy Companies and MLPs.

5. Agreements and Affiliations

A. *Administration Agreement* The Fund has an administration and accounting agreement with Ultimus Fund Solutions, LLC (Ultimus) that may be amended from time to time. Pursuant to the agreement, Ultimus will provide certain administrative and accounting services for the Fund. The agreement has automatic one-year renewals unless earlier terminated by either party as provided under the terms of the agreement.

B. *Investment Management Agreement* The Fund has entered into an investment management agreement with KA Fund Advisors, LLC (KAFA) under which KAFA, subject to the overall supervision of the Fund s Board of Directors, manages the day-to-day operations of, and provides investment advisory services to, the Fund. On March 27, 2018, the Fund renewed its investment management agreement with KAFA for a period of one year. The investment management agreement will expire on March 31, 2019 and may be renewed annually thereafter upon approval of the Fund s Board of Directors (including a majority of the Fund s directors who are not interested persons of the Fund, as such term is defined in the 1940 Act). For providing these services, KAFA receives an investment management fee from the Fund. For the six months ended May 31, 2018, the Fund paid management fees at an annual rate of 1.25% of the average monthly total assets of the Fund.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

NOTES TO FINANCIAL STATEMENTS

(amounts in 000 s, except number of option contracts, share and per share amounts)

(UNAUDITED)

For purposes of calculating the management fee, the average total assets for each monthly period are determined by averaging the total assets at the last business day of that month with the total assets at the last business day of the prior month. The total assets of the Fund shall be equal to its average monthly gross asset value (which includes assets attributable to the Fund's use of debt and preferred stock), minus the sum of the Fund's accrued and unpaid dividends and distributions on any outstanding common stock and accrued and unpaid dividends and distributions on any outstanding preferred stock and accrued liabilities (other than liabilities associated with borrowing or leverage by the Fund). Liabilities associated with borrowing or leverage include the principal amount of any debt issued by the Fund, the liquidation preference of any outstanding preferred stock, and other liabilities from other forms of borrowing or leverage such as short positions and put or call options held or written by the Fund.

C. Portfolio Companies From time to time, the Fund may control or may be an affiliate of one or more of its portfolio companies, as each of these terms is defined in the 1940 Act. In general, under the 1940 Act, the Fund would be presumed to control a portfolio company if the Fund and its affiliates owned 25% or more of its outstanding voting securities and would be an affiliate of a portfolio company if the Fund and its affiliates owned 5% or more of its outstanding voting securities. The 1940 Act contains prohibitions and restrictions relating to transactions between investment companies and their affiliates (including the Fund's investment adviser), principal underwriters and affiliates of those affiliates or underwriters.

The Fund believes that there are several factors that determine whether or not a security should be considered a voting security in complex structures such as limited partnerships of the kind in which the Fund invests. The Fund also notes that the Securities and Exchange Commission (the SEC) staff has issued guidance on the circumstances under which it would consider a limited partnership interest to constitute a voting security. Under most partnership agreements, the management of the partnership is vested in the general partner, and the limited partners, individually or collectively, have no rights to manage or influence management of the partnership through such activities as participating in the selection of the managers or the board of the limited partnership or the general partner. As a result, the Fund believes that many of the limited partnership interests in which it invests should not be considered voting securities. However, it is possible that the SEC staff may consider the limited partner interests the Fund holds in certain limited partnerships to be voting securities. If such a determination were made, the Fund may be regarded as a person affiliated with and controlling the issuer(s) of those securities for purposes of Section 17 of the 1940 Act.

In making such a determination as to whether to treat any class of limited partnership interests the Fund holds as a voting security, the Fund considers, among other factors, whether or not the holders of such limited partnership interests have the right to elect the board of directors of the limited partnership or the general partner. If the holders of such limited partnership interests do not have the right to elect the board of directors, the Fund generally has not treated such security as a voting security. In other circumstances, based on the facts and circumstances of those partnership agreements, including the right to elect the directors of the general partner, the Fund has treated those securities as voting securities. If the Fund does not consider the security to be a voting security, it will not consider such partnership to be an affiliate unless the Fund and its affiliates own more than 25% of the outstanding securities of such partnership. Additionally, certain partnership agreements give common unitholders the right to elect the partnership's board of directors, but limit the amount of voting securities any limited partner can hold to no more than 4.9% of the partnership's outstanding voting securities (*i.e.*, any amounts held in excess of such limit by a limited partner do not have voting rights). In such instances, the Fund does not consider itself to be an affiliate if it owns more than 5% of such partnership's common units.

There is no assurance that the SEC staff will not consider that other limited partnership securities that the Fund owns and does not treat as voting securities are, in fact, voting securities for the purposes of Section 17 of the 1940 Act. If such determination were made, the Fund will be required to abide by the restrictions on control or affiliate transactions as proscribed in the 1940 Act. The Fund or any portfolio company that it controls, and

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(amounts in 000 s, except number of option contracts, share and per share amounts)

(UNAUDITED)

its affiliates, may from time to time engage in certain of such joint transactions, purchases, sales and loans in reliance upon and in compliance with the conditions of certain exemptive rules promulgated by the SEC. The Fund cannot make assurances, however, that it would be able to satisfy the conditions of these rules with respect to any particular eligible transaction, or even if the Fund were allowed to engage in such a transaction, that the terms would be more or as favorable to the Fund or any company that it controls as those that could be obtained in an arm's length transaction. As a result of these prohibitions, restrictions may be imposed on the size of positions that may be taken for the Fund or on the type of investments that it could make.

As of May 31, 2018, the Fund believes that Buckeye Partners, L.P. (BPL) meets the criteria described above and is therefore considered an affiliate of the Fund.

Plains AAP, L.P., and Plains GP Holdings, L.P. Robert V. Sinnott is Co-Chairman of Kayne Anderson Capital Advisors, L.P. (KACALP), the managing member of KAFA. Mr. Sinnott also serves as a director of PAA GP Holdings LLC, which is the general partner of Plains GP Holdings, L.P. (PAGP). Members of senior management of KACALP and KAFA and various affiliated funds managed by KACALP own PAGP shares, PAA units and interests in Plains AAP, L.P. (PAGP-AAP). The Fund believes that it is an affiliate of PAGP and PAGP-AAP under the 1940 Act by virtue of (i) the Fund's and other affiliated Kayne Anderson funds' ownership interest in PAGP and PAGP-AAP and (ii) Mr. Sinnott's participation on the board of PAA GP Holdings LLC.

California Resources Corporation Mr. Sinnott serves as a director of California Resources Corporation (CRC). The Fund's investment in CRC is not a voting security, and as such, the Fund does not believe that it is an affiliate of CRC. Despite Mr. Sinnott's participation on the board of CRC, the Fund does not believe that it is an affiliate of CRC because the Fund's and other Kayne Anderson funds' aggregate ownership does not meet the criteria described above, and because the Fund's investment in CRC is not a voting security.

The following table summarizes the Fund's investments in affiliates as of and for the three and six months ended May 31, 2018:

| Investment ⁽¹⁾ | No. of Shares/Units ⁽²⁾ (in 000 s) | Value | Dividends/ Distributions Received | | Net Change in Unrealized Gains (Losses) | |
|---------------------------|---|-------|---|------------------------|---|------------------------|
| | | | Three Months Ended | Six Months Ended | Three Months Ended | Six Months Ended |
| Buckeye Partners, L.P. | | | | | | |