

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

Form N-CSR

January 29, 2016

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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, 2015

Date of reporting period: November 30, 2015

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.

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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 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 fiscal year ended November 30, 2015 is attached below.

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Midstream/Energy Fund

KMF Annual Report

November 30, 2015

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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.

LETTER TO STOCKHOLDERS

January 22, 2016

Dear Fellow Stockholders:

This is the most difficult letter I have written since the Fund's inception, in part due to the worst downturn I have seen in my 32 years in the energy business and in part because the market continues to change so rapidly. In just the first three weeks of January, we have seen the MLP market decline 30% and then rally 19% from its lows. This volatility is both unbelievable and unprecedented. I can say with certainty that, with respect to the energy market, this downturn is far, far worse than the financial crisis of 2008-2009.

While fiscal 2015 was an extremely challenging year for midstream MLPs, Midstream Companies and the broader energy space, we firmly believed that 2016 would be a year when market sentiment started to reflect the improving fundamentals. Unfortunately, the beginning of fiscal 2016 has seen an acceleration of the challenges we saw in 2015. Low crude oil prices, the removal of Iranian sanctions and concerns about the health of China and the broader global economy have resulted in weakness in the broader equity markets (the Dow Jones Industrial Average is currently off to one of the worst starts of any year on record). As we write this letter, crude oil prices are trading near \$30 per barrel, down more than 70% over the last 18 months, and natural gas prices are trading near \$2.00 per Mcf. Weak commodity prices have created strong headwinds for exploration & production companies and, more importantly for the Fund, have created extremely negative sentiment among energy investors generally and midstream investors in particular.

As we will explain in this letter, while we think the energy sectors in which the Fund invests have been oversold, these sectors do face certain challenges. In particular, there are legitimate questions that investors are now asking about future levels of domestic crude oil and natural gas production, whether MLPs and Midstream Companies will be able to access the capital markets and even the viability of the MLP as a vehicle to finance the continued energy infrastructure build-out in North America. We are respectful of these concerns, but we firmly believe the midstream sector is positioned to deal with these challenges and will be well positioned to benefit from the long-term infrastructure needs created by the Shale Revolution. Before elaborating on these points, we would like to first review the Fund's performance during fiscal 2015, as well as the circumstances that led to the reduction in the Fund's quarterly distribution from \$0.51 per share to \$0.45 per share.

Performance Review

Simply put, it was a terrible year for the Fund. We evaluate our performance based on Net Asset Value Return, which is equal to the change in net asset value per share plus the cash distributions paid during the period, assuming reinvestment through our dividend reinvestment program, as well as Market Return (share price changes plus reinvested dividends). For fiscal 2015, the Fund's Net Asset Value Return was negative 49%, and its Market Return was negative 50%, which reflects both the decline in NAV and a move in our stock price from a 9% discount to NAV to a 12% discount to NAV. This was the Fund's worst fiscal year performance since its inception.

It is always challenging to compare the Fund's performance to a benchmark because the Fund invests in multiple energy-related subsectors. As of November 30, 2015, approximately 71% of the Fund's investments were in MLPs and traditional Midstream Companies. Most of the remainder was invested in Midstream Companies involved in marine transportation (12%) and Energy Debt (12%). During fiscal 2015, we exited the Fund's small positions in upstream and coal MLPs, as well as the Fund's holdings of Canadian Income Trusts. These actions were done in an attempt to high-grade the portfolio, reduce commodity price exposure and increase the Fund's midstream holdings. We continue to believe this strategy was prudent, and results would have been even worse if we had not taken these defensive actions.

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During fiscal 2015, the total return of the Alerian MLP index, or AMZ, was negative 34%. But the poor performance was not limited to MLPs: an index of 21 Midstream Companies that we track also generated a total return of negative 34%. While this performance is disappointing, we believe the Fund's MLP and Midstream Company investments are well positioned to weather the current commodity price environment and will generate very strong returns as market conditions stabilize. Our portfolio of debt securities, which is focused on exploration & production companies (also referred to as Upstream Companies), also performed very poorly. Historically, we sought to minimize the impact of changes in commodity prices on these companies' operations by investing in their debt securities, but the severity of the downturn caused significant credit concerns for these companies. Our debt portfolio is a work in progress—we plan to high-grade the portfolio over the first part of 2016 and focus the portfolio on Upstream Companies that can best withstand this downturn and outperform as commodity prices recover.

As the market declined, we prudently sold securities along the way to raise cash and used a significant portion of that cash to decrease the Fund's leverage. During fiscal 2015, the Fund repaid \$46 million of term-loan borrowings and redeemed \$50 million of notes and \$35 million of mandatory redeemable preferred stock. Needless to say, selling securities with yields that were substantially higher than our leverage costs had a significant impact on our net distributable income, or NDI, and this was one of the major drivers of our decision to reduce the Fund's distribution. Thus far in fiscal 2016, the Fund has redeemed \$79 million of notes and \$10 million of mandatory redeemable preferred stock to manage its leverage levels.

Another factor that impacted our NDI was merger activity in the MLP sector. Over the last 15 months, there have been several significant mergers that were announced or completed. In general, these mergers involved the acquisition of a higher-yielding MLP by a lower-yielding entity. To the extent that the Fund owned the higher-yielding MLP, the merger resulted in a reduction in the distributions received by the Fund. Recent examples of transactions of this kind include: Access Midstream's acquisition of Williams Partners (renamed Williams Partners); Energy Transfer's acquisition of Regency; Crestwood Equity Partners' acquisition of Crestwood Midstream; MPLX's acquisition of MarkWest; and the proposed consolidation of Targa's MLP and general partner. As large holders of each of the acquired MLPs, these transactions have impacted our NDI due to the lower distributions received from the combined entity.

Finally, dividend cuts by Kinder Morgan and Teekay Offshore were another major blow to our outlook for NDI. On December 8, 2015, Kinder Morgan announced a 75% reduction in its dividend, and Teekay Offshore announced an 80% reduction in its dividend shortly thereafter. Kinder Morgan's actions surprised both us and the market, and we have been vocal in our view that investors would have been better served by exploring other financial alternatives in lieu of cutting the dividend. Although we sold an aggregate \$77 million of Kinder Morgan during fiscal 2015 prior to the dividend cut, it was still the Fund's largest investment at the end of fiscal 2015. Given the magnitude of these cuts, they had a material impact on the Fund's NDI. Importantly, we do not currently expect to see any additional distribution cuts in any of our significant holdings. However, if market conditions continue to deteriorate, it is possible that some large cap Midstream MLPs or Midstream Companies will reduce their distribution levels. We also believe that many of the companies that have been growing their distributions over the past year will slow or suspend growth during 2016 to rebuild coverage. We expect these companies to consider a variety of financing alternatives (including preferred equity, joint ventures and asset sales) to finance new capital projects. We also expect these companies to reduce their capital spending levels during 2016 in light of the current market conditions.

State of the Market

When we wrote to you last year, crude oil prices were in the \$46 to \$48 per barrel range, a decline of more than 50% from July 2014. Many believed, including us, that prices would recover slowly during the year, but instead, prices fell significantly further during 2015. The decline in crude oil prices, and the non-stop coverage of

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the subject by the financial press, has been by far the single biggest contributor to the extreme negative sentiment among investors in the midstream sector. However, as we have written in previous annual letters, Midstream MLPs and Midstream Companies have much less direct exposure to commodity prices, especially crude oil, than companies in other energy sectors such as exploration & production and oilfield services. Despite this fact, during fiscal 2015, the AMZ fell 38%, and an index of 21 Midstream Companies that we track fell 37%. Kinder Morgan, the largest of all Midstream Companies at the start of fiscal 2015, fell over 70% from May 2015 to mid-January! In contrast, during fiscal 2015, the S&P exploration & production and oilfield services subsector indices fell just 24% and 12%, respectively. There were certainly technical factors that exacerbated the selling pressure among MLPs and Midstream Companies, including open-end mutual fund outflows, sales by closed-end funds to manage leverage, tax-loss selling, aggressive shorting by hedge funds and merger-related selling pressure. Largely as a result of these technical factors, we believe the selling, as often happens in bear markets, has gone beyond what can be justified by the fundamentals of the underlying businesses.

While we believe that the market will continue to experience downward pressure in the first half of the year, we remain convinced that MLPs and Midstream Companies will recover strongly over the next 12-18 months for several reasons. First, we strongly believe that current crude oil prices are simply not sustainable. In last year's letter, we asserted that the downturn in crude oil prices is a classic, self-correcting commodity price cycle, and although we did not get the timing of the recovery right, we still believe in our thesis, as it has been largely playing out as predicted. In particular, demand has responded to low prices (up by almost twice what was predicted at the beginning of 2015) and is expected to continue to grow by approximately 1% - 2% per year. On the supply side, upstream capital investment has declined materially, and as a result, domestic production peaked in April and is now estimated to be down nearly 500,000 barrels per day and projected to be down by at least another 500,000 barrels per day in 2016. This is significant because global oversupply is only estimated to be between 500,000 to 1.5 million barrels per day, depending on the agency making the estimate. At the midpoint, that suggests oversupply of less than 1% on a global market of approximately 96 million barrels per day. In addition to declines in domestic upstream capital expenditures, we have seen substantial delays and deferrals in major upstream projects globally, including long lead time development projects. These delays will change the global supply growth profile for a number of years, and therefore, these developments are perhaps even more significant than the declines in domestic shale production. Ultimately, however, the changes to both domestic and international supply are being driven by the same fundamental reality: the sources of new production that will be required to meet global demand in the medium to long term, whether it be the U.S. shale plays, the Canadian oil sands, the deep water or the Arctic, need crude oil prices well in excess of current levels to be developed economically.

Furthermore, it is worth reiterating that Midstream MLPs and Midstream Companies do not produce energy—they deliver it from producers to consumers, so direct exposure to crude oil prices is minimal. In addition, a substantial portion of the assets owned by Midstream MLPs and Midstream Companies are focused on natural gas transportation and storage, and those assets that are in crude service often have take-or-pay commitments. Accordingly, the cash flows that are most at risk are limited to a smaller subset of MLPs that (i) are commodity sensitive, with cash flows derived from gathering and processing assets that do not have fixed-fee contracts and (ii) are subject to volumetric risk (i.e. do not have take-or-pay contracts).

Among Gathering and Processing MLPs, most have a substantial portion of their cash flows contracted on a fixed-fee basis, often times with either acreage dedications or a minimum volume commitment. For the portion of cash flows that are commodity sensitive, they are primarily exposed to natural gas liquids, or NGL, prices and, to a lesser extent, natural gas prices. NGL prices have been weak, as have natural gas prices. The resulting impact on Gathering and Processing MLPs has caused cash flows to decline at certain MLPs, but certainly not in proportion to the decline in equity prices.

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With respect to volumetric risk, demand is growing for all energy commodities, and domestic natural gas and NGL production are expected to continue to grow over the next 10 years. In fact, the U.S. has become a major exporter of NGLs and will soon be a major exporter of liquefied natural gas. MLPs and Midstream Companies will continue to facilitate (and benefit from) those exports, as well as crude oil exports as they ramp up. Longer-term, we firmly believe that North American production of crude oil will start growing again in order to meet global demand. It has to otherwise we are going to see crude oil prices correct too far to the upside.

We factor all of these dynamics into our models for the MLPs and Midstream Companies in which the Fund invests, and it is important to note that we do not expect aggregate cash flows for Midstream MLPs and Midstream Companies to be down in 2016 relative to either 2015 or 2014 levels. More importantly, for the top 10 constituents in the AMZ (which represent 65% of the index), we expect Distributable Cash Flow per Unit to be higher in 2016 than 2014 for five MLPs, down less than 5% for four MLPs and down between 10-15% for one MLP. This is in stark contrast to the 55% decline that the AMZ has experienced from its 2014 high.

If cash flows of the underlying assets have held up much better than equity prices, then you would expect that valuations have become significantly more attractive, and that is exactly what has happened. During fiscal 2015, the yield of the AMZ increased from 5.7% as of November 30, 2014 to 8.5% as of November 30, 2015. At the same time, the yield on 10-year U.S. Treasury Bonds barely changed, increasing from 2.19% to 2.22%. As a result, the MLP spread to Treasuries increased from 353 basis points to 626 basis points during fiscal 2015. The long-term average for this spread is around 325 basis points, and the current spread to Treasuries now stands at 809 basis points (as of January 22, 2016). During the last 20 years, there have been only six other periods where the spread was over 500 bps, and each turned out to be a very good time to buy MLPs. Furthermore, MLPs also look attractive on traditional valuation metrics such as Enterprise Value to EBITDA multiples (EV/EBITDA) and Price to Distributable Cash Flow per Unit (P/DCF) multiples. Historically, MLPs trade in the 14 to 16 times range on an EV/EBITDA multiple and 16 to 18 times range on a P/DCF multiple. Currently, the top 10 constituents in the AMZ are trading at an average EV/EBITDA multiple of approximately 11 times and an average P/DCF multiple of approximately 11 times.

Nonetheless, despite attractive valuations, sentiment remains negative, as many investors are concerned about the ability of MLPs and Midstream Companies to access capital, and as we noted at the start of this letter, some investors are even questioning whether the MLP model is broken. There is no doubt that the capital markets have become more challenging, but the MLP model has been around for more than 30 years this is not the first time that investors have questioned its viability. In fact, investors had the same concerns in 2008-2009, when the capital markets actually did shut down for a very short period of time. In contrast, we have seen MLPs and Midstream Companies continue to raise money, and we expect quality issuers to be able to continue to access capital markets in 2016. For example, Plains All American Pipeline recently raised \$1.6 billion in preferred equity from institutional investors, including Kayne Anderson. We expect to see additional deals with similar structures for higher quality MLPs and Midstream Companies because, in contrast to 2008-2009, there is an incredible amount of private equity capital on the sidelines looking to make midstream investments. Admittedly, the cost of capital will be higher (and deals for lower quality issuers will be more challenging), but we do not believe that the capital markets will completely shut down for any material amount of time. Today's market conditions are challenging, but we continue to believe the MLP model will remain the structure of choice for midstream assets.

Our investments in Marine Transportation companies are facing the same extreme negative sentiment as the MLP market, in part, because many of them are held by the same investor base. During fiscal 2015, Marine Transportation MLPs generated a total return of negative 36% (based on a market-weighted index of 12 MLPs), and the sector has continued to perform poorly in fiscal 2016, down 45% in less than two months. The recent poor performance has been driven by the distribution cuts by the Teekay MLPs, Teekay Offshore Partners and Teekay LNG Partners, as well as extreme fears about access to capital and the impact of a potential downturn in

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the global economy. It is worth noting that Marine Transportation companies that are protected by multi-year contracts with fixed daily charter rates traded very poorly as well even though the downturn had no impact on operating cash flows. We believe these fears are overdone, and we continue to focus our investments in the Marine Transportation sector on MLPs that have good contract coverage and manageable leverage levels.

In the Energy Debt market, the sharp decline in commodity prices has had a severe impact on the market value of bonds and bank loans for all Energy Companies. In particular, the Fund has focused its investments among the debt of Upstream Companies, and some of these names have been permanently impaired by the duration of the downturn. As alluded to above, we strongly believe that crude oil prices must recover, but we did not get the timing right. As a result, we held onto the fixed income securities of certain Upstream Companies that we believed could weather the storm and whose debt was supported by the underlying value of the assets. Unfortunately, several of these issuers have become distressed as low commodity prices have persisted, and three issuers whose debt we hold have filed for bankruptcy. We are actively repositioning the Fund's portfolio to high-grade its debt holdings focusing on the Upstream Companies best positioned to withstand low prices and outperform as the market recovers. We do see opportunities in this sector, but overall we remain cautious. Given how attractive valuations are for Midstream Companies, it is possible that we will reduce our allocation to Energy Debt during the first six months of fiscal 2016.

Outlook

Over the last several years, we have discussed the Shale Revolution (the development of domestic unconventional reserves) extensively in our annual letters and how it represents a multi-decade, secular growth story. As we have seen, this growth story has had some setbacks, but we continue to believe that both production of and demand for crude oil, natural gas and NGLs will be higher five years from today and that MLPs and Midstream Companies will benefit from this growth. Furthermore, we believe our team is well situated to identify the opportunities and challenges that MLPs and Midstream Companies will face as the Shale Revolution continues to unfold.

The last 15 months have certainly been extremely challenging, and we expect the investing environment to remain challenging for at least the first half of 2016. However, we believe as MLPs and other Midstream Companies report solid results, announce distributions and raise capital for growth projects, confidence in the model will return and sentiment will improve. We believe in this sector and expect very attractive returns over the next three to five years for patient investors with the ability to withstand near-term volatility. As evidence of that conviction, the principals at Kayne Anderson invested \$14 million across all four closed-end funds that we manage during December. This amount was funded, in part, with all of the management fees we received (after tax) during the fourth quarter.

Thank you for your investment in the Fund. We look forward to executing on our business plan of achieving a high level of total returns by investing in MLPs, Midstream Companies and other energy companies. We invite you to visit our website at kaynefunds.com for the latest updates.

Sincerely,

Kevin S. McCarthy

Chairman of the Board of Directors,

President and Chief Executive Officer

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Holding	Category ⁽¹⁾	Percent of Long-Term Investments as of November 30,	
		2015	2014
1. Kinder Morgan, Inc.	Midstream Company	10.1%	15.4%
2. Enbridge Energy Management, L.L.C.	Midstream MLP	8.9	8.1
3. The Williams Companies, Inc. ⁽²⁾	Midstream Company	8.7	8.2
4. Plains GP Holdings, L.P. ⁽³⁾	Midstream Company	5.5	4.7
5. Energy Transfer Partners, L.P. ⁽⁴⁾	Midstream MLP	4.2	2.2
6. ONEOK Partners, L.P.	Midstream MLP	3.9	1.5
7. ONEOK, Inc.	Midstream Company	3.8	3.8
8. Spectra Energy Corp.	Midstream Company	2.8	1.5
9. Dynagas LNG Partners LP	Midstream Company	2.7	1.7
10. KNOT Offshore Partners LP	Midstream Company	2.2	1.4

(1) See Glossary of Key Terms for definitions.

(2) On September 28, 2015, Energy Transfer Equity, L.P. (ETE) announced an agreement to combine with The Williams Companies, Inc. (WMB). As of November 30, 2015, we did not own any ETE units, and at November 30, 2014, our investment in ETE represented 0.4% of long-term investments.

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PORTFOLIO SUMMARY

(UNAUDITED)

- (3) We hold an interest in Plains AAP, L.P. (PAA GP), which controls the general partner of Plains All American, L.P. Our ownership of PAA GP is exchangeable into shares of Plains GP Holdings, L.P. (Plains GP) which trades on the NYSE under the ticker PAGP) on a one-for-one basis at our option. The amounts shown in the table include our current holding of shares of Plains GP as well as our interest in PAA GP.
- (4) On April 30, 2015, Energy Transfer Partners, L.P. (ETP) completed its merger with Regency Energy Partners LP (RGP). As of November 30, 2014, our investments in ETP and RGP represented 5.3% of long-term investments on a combined basis.

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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 November 30, 2015, we had total assets of \$640 million, net assets applicable to our common stock of \$380 million (net asset value of \$17.56 per share), and 21.7 million shares of common stock outstanding. As of November 30, 2015, we held \$530 million in equity investments and \$74 million in debt investments.

Recent Events

On December 17, 2015, our investment advisor, KA Fund Advisors, LLC (Kafa), and its principals announced that they had agreed to purchase newly issued shares of KYN, KYE, KMF, and KED, funded in part with the after-tax management fees received during the fiscal fourth quarter. These purchases totaled \$14 million across all four closed-end funds managed by Kafa, and of this amount, \$1.4 million was invested in KMF. The new shares were purchased at our net asset value as of the close of business on December 18, 2015 (\$10.56 per share) which represents a 2.9% premium to the closing market price.

On December 17, 2015, our Board of Directors elected to reduce our quarterly distribution from \$0.51 per share to \$0.45 per share. Please see Management Discussion Distributions to Common Stockholders for a discussion of the factors that the Board of Directors considers in determining our quarterly distribution.

During the first quarter of fiscal 2016, we redeemed \$79 million of our unsecured notes (Notes) and \$10 million of mandatory redeemable preferred stock (MRP Shares). See Management Discussion Liquidity and Capital Resources.

Results of Operations For the Three Months Ended November 30, 2015

Investment Income. Investment income totaled \$9.5 million for the quarter and consisted primarily of net dividends and distributions and interest income on our investments. We received \$11.6 million of dividends and distributions, of which \$4.4 million was treated as return of capital. Return of capital was decreased by \$1.1 million during the quarter due to 2014 tax reporting information that was received in fiscal 2015. Interest and other income was \$2.3 million. We also received \$1.3 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 \$7.8 million, including \$2.3 million of investment management fees, \$3.1 million of interest expense (including prepayment penalties and accelerated interest of \$0.8 million and non-cash amortization of debt issuance costs of \$0.2 million), \$2.2 million of preferred stock distributions (including prepayment penalties and accelerated dividends of \$0.8 million and non-cash amortization of offering costs of \$0.2 million) and \$0.3 million of other operating expenses.

Net Investment Income. Our net investment income totaled \$1.7 million.

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MANAGEMENT DISCUSSION

(UNAUDITED)

Net Realized Losses. We had net realized losses of \$42.2 million, which included \$0.8 million of net realized gains from option activity.

Net Change in Unrealized Gains. We had a net decrease in unrealized gains of \$114.1 million. The net decrease consisted of \$113.7 million of unrealized losses from investments and \$0.4 million of net unrealized losses from option activity.

Net Decrease in Net Assets Resulting from Operations. We had a decrease in net assets resulting from operations of \$154.6 million. This decrease was comprised of net investment income of \$1.7 million, net realized losses of \$42.2 million and a net decrease in unrealized gains of \$114.1 million, as noted above.

Results of Operations For the Fiscal Year Ended November 30, 2015

Investment Income. Investment income totaled \$40.2 million for the fiscal year and consisted primarily of net dividends and distributions and interest income on our investments. We received \$49.8 million of dividends and distributions, of which \$21.1 million was treated as return of capital. Return of capital was decreased by \$1.1 million during the fiscal year due to 2014 tax reporting information that was received in fiscal 2015. Interest and other income was \$11.5 million. We received \$5.8 million of paid-in-kind dividends during the fiscal year, which are not included in investment income, but are reflected as an unrealized gain.

Operating Expenses. Operating expenses totaled \$33.7 million, including \$12.7 million of investment management fees, \$11.1 million of interest expense (including prepayment penalties and accelerated interest of \$0.8 million and non-cash amortization of debt issuance costs of \$0.7 million), \$5.9 million of preferred stock distributions (including prepayment penalties and accelerated dividends of \$0.8 million and non-cash amortization of offering costs of \$0.3 million), \$2.4 million of excise taxes and \$1.6 million of other operating expenses.

Net Investment Income. Our net investment income totaled \$6.5 million.

Net Realized Losses. We had net realized losses of \$26.7 million, which includes \$4.8 million of net realized gains from option activity.

Net Change in Unrealized Gains. We had a net decrease in unrealized gains of \$372.1 million. The net decrease consisted of \$371.7 million of unrealized losses from investments and \$0.4 million of net unrealized losses from option activity.

Net Decrease in Net Assets Resulting from Operations. We had a decrease in net assets resulting from operations of \$392.3 million. This decrease was comprised of net investment income of \$6.5 million, net realized losses of \$26.7 million and net decrease in unrealized gains of \$372.1 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 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 November 30, 2015	Fiscal Year Ended November 30, 2015
Distributions and Other Income from Investments		
Dividends ⁽¹⁾	\$ 11.6	\$ 49.8
Paid-In-Kind Dividends ⁽¹⁾	1.3	5.8
Interest and Other Income	2.3	11.7
Net Premiums Received from Call Options Written	0.9	5.9
Total Distributions and Other Income from Investments	16.1	73.2
Expenses		
Investment Management Fee	(2.3)	(12.7)
Other Expenses	(0.3)	(1.5)
Excise Taxes		(2.4)
Interest Expense	(2.9)	(10.5)
Preferred Stock Distributions	(2.0)	(5.6)
Net Distributable Income (NDI)	\$ 8.6	\$ 40.5
Weighted Shares Outstanding	21.7	21.7
NDI per Weighted Share Outstanding	\$ 0.397	\$ 1.870
Adjusted NDI per Weighted Share Outstanding⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾	\$ 0.496	\$ 2.086
Distributions paid per Common Share⁽⁶⁾	\$ 0.450	\$ 1.9725
Special Distribution paid per Common Share	\$ 0.000	\$ 1.8000

(1) See Note 2 (Investment Income) to the Financial Statements for additional information regarding paid-in-kind and non-cash dividends and distributions.

(2) For the quarter and fiscal year ended November 30, 2015, Adjusted NDI includes \$0.2 million and \$0.7 million, respectively, of consideration received in two recent mergers that was intended to offset lower quarterly distributions as a result of such transactions (\$0.8 million of total consideration amortized over a 12 month period following completion of these two mergers). The two transactions were the mergers of Access Midstream Partners, L.P. and Williams Partners L.P., and Energy Transfer Partners, L.P. and Regency Energy Partners LP. Because the acquiring entity has deemed part of the merger consideration to be compensation to help offset the lower quarterly distribution that unitholders of the acquired entity would receive after closing, we believe it to be appropriate to include these amounts in Adjusted NDI. This merger consideration is not included in investment income for GAAP purposes, but rather is treated as

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additional consideration when calculating the realized or unrealized gain (loss) that results from the merger transaction.

- (3) Although \$2.4 million of excise taxes were recorded during fiscal year 2015, this tax primarily related to cumulative undistributed income as of November 30, 2014. As a result, we have adjusted the NDI per weighted share outstanding for fiscal 2015 by removing the \$2.4 million of excise tax.
- (4) For the quarter ended November 30, 2015, NDI includes a \$0.6 million write-off of interest income related to our debt investment in Magnum Hunter Resources Corporation. Adjusted NDI for the fourth quarter excludes \$0.4 million of this write-off which is related to interest earned in previous quarters (Adjusted NDI for fiscal 2015 includes the full write off).
- (5) For the quarter ended November 30, 2015, Adjusted NDI excludes the prepayment penalties and accelerated interest related to the redemption of the Series A Notes (\$0.8 million) and the prepayment penalties and accelerated dividends related to the redemption of the Series A MRP Shares (\$0.8 million).

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

- (6) The distribution of \$0.45 per share for the fourth quarter of fiscal 2015 was paid on January 15, 2016. Distributions for fiscal 2015 include the quarterly distributions paid in April 2015, July 2015, October 2015, and January 2016. Distributions for fiscal 2015 do not include the special distribution of \$1.80 per common share paid in July 2015.

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

On December 17, 2015, our Board of Directors elected to reduce our quarterly distribution from \$0.51 per share to \$0.45 per share in light of a decline in our net distributable income for the fourth quarter of fiscal 2015, as well as the Adjusted NDI that we expect our portfolio to generate in fiscal 2016. Our net distributable income has declined over the past twelve months due to a variety of factors. First, there have been a number of mergers involving investments in our portfolio that involved the acquisition of a higher-yielding entity by a lower-yielding entity. These types of transactions result in a lower distribution for holders of the acquired, higher-yielding entity. Secondly, we sold securities over the last twelve months and used a significant portion of the proceeds to redeem Notes and MRP Shares. The benefits of reduced interest and dividends that resulted from reducing our leverage costs were more than offset by the loss of distributions from the securities that were sold to fund those redemptions. In addition, our estimate of Adjusted NDI for fiscal 2016 was negatively impacted by the distribution announcements at Kinder Morgan, Inc. (75% reduction) and Teekay Offshore Partners L.P. (80% reduction) in December 2015. Following these announcements, we became more convinced that management teams will slow their distribution growth rates in 2016, and many will opt for no growth in order to build distribution coverage. Our outlook for Adjusted NDI was also impacted by debt investments where the company recently filed for bankruptcy (American Eagle Energy Corporation, Energy & Exploration Partners, Inc. and Magnum Hunter Resources Corporation). As a result of these bankruptcy filings we are no longer accruing interest income on such investments.

As a regulated investment company (RIC), we are required to distribute all of our income to avoid paying federal income taxes. At November 30, 2014, we had a total of \$73.4 million of undistributed ordinary income and long-term capital gains (collectively, Undistributed Income) on a tax basis. During fiscal 2015, in order to avoid paying federal income taxes, we distributed all of our Undistributed Income through the payment of our regular quarterly common and preferred stock distributions, and on July 17, 2015 we paid a special distribution \$1.80 per common share (a total distribution of \$39.0 million). At November 30, 2015, we did not have any Undistributed Income. See Note 2 Significant Accounting Policies and Note 6 Taxes.

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.

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.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

MANAGEMENT DISCUSSION

(UNAUDITED)

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 shares (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. See Note 6 Taxes.

Liquidity and Capital Resources

At November 30, 2015, we had total leverage outstanding of \$255 million, which represented 40% of total assets and was comprised of \$185 million of Notes and \$70 million of MRP Shares. At November 30, 2015, we did not have any borrowings outstanding under our unsecured revolving credit facility (the Credit Facility) or our unsecured revolving term loan (Term Loan). As of such date, we had \$29 million of cash that was raised through sales of securities in anticipation of leverage repayments in the first quarter of fiscal 2016. As of January 28, 2016, we had no borrowings outstanding under either our Credit Facility or Term Loan, and we had \$54 million of cash.

Our Credit Facility has a total commitment of \$105 million and matures on November 21, 2016. The interest rate on outstanding loan balances may vary between LIBOR plus 1.50% and LIBOR plus 2.15%, depending on our asset coverage ratios. We pay a fee of 0.25% per annum on any unused amounts of the Credit Facility. As a condition precedent to any borrowing under the Credit Facility, our net assets must be in excess of a minimum net asset value threshold determined pursuant to the terms of the Credit Facility. As of January 28, 2016, we were unable to borrow under the Credit Facility because our net asset value was below this threshold (\$390 million). We plan to seek an amendment to our Credit Facility to reduce the minimum threshold amount.

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

Our Term Loan has a total commitment of \$50 million and matures on July 25, 2019. Borrowings under the Term Loan accrue interest at a rate of LIBOR plus 1.30%. We pay a fee of 0.25% per annum on any unused amount of the Term Loan. As a condition precedent to any borrowing under the Term Loan, our net assets must be in excess of a minimum net asset value threshold determined pursuant to the terms of the Term Loan. As of January 28, 2016, we were unable to borrow under the Term Loan because our net asset value was below this threshold (\$488 million). We plan to seek an amendment to our Term Loan to reduce the minimum threshold amount.

At November 30, 2015, we had \$185 million of Notes outstanding. During the fourth quarter of fiscal 2015 and the first quarter of fiscal 2016, we redeemed \$50 million and \$79 million of Notes, respectively, to manage our leverage ratios. The table below sets forth a summary of those redemptions. As of January 28, 2016, we had \$106 million of Notes outstanding that mature between 2018 and 2023.

Date of Redemption	Notes Series	Principal		Rate	Maturity	Redemption Price
		Redeemed	(\$millions)			
9/24/15	A	\$	30	3.93%	3/3/16	100.8%
9/29/15	A		20	3.93	3/3/16	100.7
12/7/15	A		5	3.93	3/3/16	100.6
12/7/15	B		15	4.62	3/3/18	106.7
12/14/15	B		20	4.62	3/3/18	106.5
12/14/15	C		20	4.00	3/22/22	102.0
1/12/16	B		19	4.62	3/3/18	106.4

At November 30, 2015, we had \$70 million of MRP Shares outstanding. During the fourth quarter of fiscal 2015 and December 2015, we redeemed \$35 million and \$10 million of MRP Shares, respectively, to manage our leverage ratios. The table below sets forth a summary of those redemptions. As of January 28, 2016, we had \$60 million of MRP Shares outstanding that are subject to mandatory redemption in 2020 and 2021.

Date of Redemption	MRP Shares Series	Liquidation		Mandatory Redemption Date	Redemption Price	
		Value	Redeemed			
		(\$millions)	Rate			
11/24/15	A	\$	35	5.32%	3/3/18	102.0%
12/24/15	B		10	4.50	3/22/20	102.0

On December 16, 2015, FitchRatings downgraded the rating on our MRP Shares to A from AA and affirmed the existing AAA rating assigned to our Notes.

At November 30, 2015, our asset coverage ratios under the Investment Company Act of 1940, as amended (the 1940 Act), were 344% for debt and 249% for total leverage (debt plus preferred stock). Our long-term target asset coverage ratio with respect to our debt is 400%, but at times we may be above or below our target depending on market conditions as well as certain other factors, including our total leverage asset coverage ratio and the basic maintenance amount as stated in our rating agency guidelines.

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As of November 30, 2015, our total leverage consisted of 100% fixed rate obligations. At such date, the weighted average interest/dividend rate on our total leverage was 4.20%.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****NOVEMBER 30, 2015****(amounts in 000 \$, except numbers of option contracts)**

Description	No. of Shares/Units	Value
Long-Term Investments 158.6%		
Equity Investments⁽¹⁾ 139.3%		
Midstream Company⁽²⁾ 77.4%		
Capital Product Partners L.P. ⁽³⁾	781	\$ 4,917
Capital Product Partners L.P. Class B Units ⁽³⁾⁽⁴⁾⁽⁵⁾	606	4,327
Columbia Pipeline Group, Inc. ⁽⁶⁾	569	10,910
Dynagas LNG Partners LP ⁽³⁾	1,296	16,465
GasLog Partners LP ⁽³⁾	624	11,246
Golar LNG Partners LP ⁽³⁾	814	11,666
Höegh LNG Partners LP ⁽³⁾	238	3,789
Kinder Morgan, Inc.	2,578	60,761
KNOT Offshore Partners LP ⁽³⁾	843	13,397
ONEOK, Inc. ⁽⁷⁾	776	22,862
Plains GP Holdings, L.P. ⁽³⁾⁽⁸⁾	886	10,861
Plains GP Holdings, L.P. ⁽³⁾⁽⁸⁾⁽⁹⁾	1,836	22,513
Spectra Energy Corp.	651	17,043
Tallgrass Energy GP, LP ⁽³⁾	177	3,883
Targa Resources Corp. ⁽⁶⁾⁽¹⁰⁾	273	10,745
Teekay Offshore Partners L.P. ⁽³⁾	621	8,259
VTTI Energy Partners LP ⁽³⁾	384	8,076
The Williams Companies, Inc. ⁽¹¹⁾	1,439	52,618
		294,338
Midstream MLP⁽²⁾⁽¹²⁾ 54.4%		
Arc Logistics Partners LP	483	6,611
Archrock Partners, L.P.	149	2,389
Buckeye Partners, L.P. ⁽⁶⁾	130	8,803
Columbia Pipeline Partners LP	23	346
Crestwood Equity Partners LP	241	4,512
DCP Midstream Partners, LP	385	9,772
Enbridge Energy Management, L.L.C. ⁽¹³⁾⁽¹⁴⁾	2,160	53,874
Energy Transfer Partners, L.P. ⁽⁶⁾⁽¹⁵⁾	670	25,588
EnLink Midstream Partners, LP	491	7,331
Enterprise Products Partners L.P. ⁽¹⁵⁾	466	11,844
EQT Midstream Partners, LP	21	1,421
Global Partners LP	260	6,470
Magellan Midstream Partners, L.P.	25	1,538
MarkWest Energy Partners, L.P. ⁽⁸⁾⁽¹⁶⁾	201	9,630
Midcoast Energy Partners, L.P.	138	1,557
ONEOK Partners, L.P. ⁽⁶⁾⁽⁷⁾	778	23,510
Plains All American Pipeline, L.P. ⁽⁸⁾	232	5,749
Rose Rock Midstream, L.P.	43	902
Shell Midstream Partners, L.P. ⁽⁶⁾	47	1,653
Summit Midstream Partners, LP	72	1,340

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Sunoco Logistics Partners L.P.	152	4,222
Tallgrass Energy Partners, LP	59	2,544
Targa Resources Partners LP ⁽¹⁰⁾	274	6,267
USD Partners LP	119	1,195

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****NOVEMBER 30, 2015****(amounts in 000 s, except numbers of option contracts)**

Description	No. of Shares/Units	Value
Midstream MLP⁽²⁾⁽¹²⁾ (continued)		
Western Gas Partners, LP	114	\$ 5,472
Williams Partners L.P. ⁽¹¹⁾	98	2,676
		207,216
Other Energy Company 7.3%		
Anadarko Petroleum Corporation 7.50% Tangible Equity Units ⁽⁷⁾	140	5,266
Macquarie Infrastructure Company LLC ⁽⁶⁾	154	11,577
Marathon Petroleum Corporation ⁽⁶⁾	42	2,465
Phillips 66 ⁽⁶⁾	48	4,357
Seadrill Partners LLC ⁽³⁾	113	967
Valero Energy Corporation ⁽⁶⁾	46	3,327
		27,959
Other MLP⁽¹²⁾ 0.2%		
Suncoke Energy Partners, L.P.	92	642
Total Equity Investments (Cost \$555,272)		530,155

	Interest Rate	Maturity Date	Principal Amount	Value
Debt Instruments 19.3%				
United States 18.3%				
Upstream 18.3%				
American Eagle Energy Corporation ⁽¹⁸⁾⁽¹⁹⁾	11.000%	9/1/19	\$ 4,800	768
American Energy-Woodford, LLC	12.000	12/30/20	1,050	383
BlackBrush Oil & Gas, L.P.	⁽²⁰⁾	7/30/21	6,800	5,746
California Resources Corporation ⁽²¹⁾	6.000	11/15/24	7,500	4,514
Canbriam Energy Inc.	9.750	11/15/19	9,640	9,495
Chief Oil & Gas LLC	⁽²²⁾	8/8/21	9,609	6,822
Comstock Resources, Inc.	10.000	3/15/20	5,000	2,950
Eclipse Resources Corporation	8.875	7/15/23	10,000	7,050
Energy & Exploration Partners, Inc. ⁽²³⁾	⁽²⁴⁾	1/22/19	990	713
Goodrich Petroleum Corporation	8.875	3/15/18	2,677	857
Goodrich Petroleum Corporation	8.875	3/15/19	1,000	165
Halcón Resources Corporation	13.000	2/15/22	6,825	3,191
Jonah Energy LLC	⁽²⁵⁾	5/29/21	3,000	2,235

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Jones Energy, Inc.	9.250	3/15/23	5,000	3,938
Jupiter Resources Inc.	8.500	10/1/22	10,000	4,250
Magnum Hunter Resources Corporation ⁽¹⁸⁾⁽²⁶⁾	9.750	5/15/20	13,900	5,525
Midstates Petroleum Company, Inc.	10.750	10/1/20	3,500	578
Midstates Petroleum Company, Inc.	9.250	6/1/21	6,750	1,097
Resolute Energy Corporation	8.500	5/1/20	4,900	2,425
Triangle USA Petroleum Corporation	6.750	7/15/22	800	340
Vantage Energy, LLC	(27)	12/31/18	8,862	6,425
				69,467
Total United States (Cost \$120,076)				69,467

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****SCHEDULE OF INVESTMENTS****NOVEMBER 30, 2015****(amounts in 000 s, except numbers of option contracts)**

Description	Interest Rate	Maturity Date	Principal Amount	Value
Canada 1.0%				
Upstream 1.0%				
Athabasca Oil Corporation (Cost \$5,149)	7.500%	11/19/17	(28)	\$ 3,898
Total Debt Investments (Cost \$125,225)				73,365
Total Long-Term Investments (Cost \$680,497)				603,520
	Strike Price	Expiration Date	No. of Contracts	Value
Call Option Contracts Written⁽¹⁸⁾				
Midstream Company				
Columbia Pipeline Group, Inc.	\$ 20.00	12/18/15	650	(21)
Targa Resources Corp.	60.00	12/18/15	150	(2)
Targa Resources Corp.	65.00	12/18/15	150	(2)
				(25)
Midstream MLP				
Buckeye Partners, L.P.	70.00	12/18/15	400	(38)
Energy Transfer Partners, L.P.	45.00	12/18/15	470	(1)
ONEOK Partners, L.P.	35.00	12/18/15	500	(5)
Shell Midstream Partners, L.P.	35.00	12/18/15	400	(62)
				(106)
Other Energy Company				
Macquarie Infrastructure Company LLC	75.00	1/15/16	675	(169)
Macquarie Infrastructure Company LLC	80.00	1/15/16	865	(43)
Marathon Petroleum Corporation	55.00	12/18/15	220	(88)
Marathon Petroleum Corporation	57.50	1/15/16	100	(35)
Marathon Petroleum Corporation	60.00	1/15/16	100	(23)
Phillips 66	100.00	1/15/16	100	(7)
Phillips 66	95.00	1/15/16	100	(19)
Phillips 66	97.50	12/18/15	175	(6)
Phillips 66	97.50	1/15/16	100	(14)
Valero Energy Corporation	72.50	1/15/16	80	(22)
Valero Energy Corporation	75.00	1/15/16	190	(31)
Valero Energy Corporation	77.50	1/15/16	190	(17)
				(474)
Total Call Option Contracts Written (Premiums Received \$602)				(605)

Debt	(185,000)
Mandatory Redeemable Preferred Stock at Liquidation Value	(70,000)
Other Assets in Excess of Other Liabilities	32,563
Net Assets Applicable to Common Stockholders	\$ 380,478

- (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) This company is structured like an MLP, but is not treated as a publicly-traded partnership for regulated investment company (RIC) qualification purposes.
- (4) Fair valued security, restricted from public sale. See Notes 2, 3 and 7 in Notes to Financial Statements.

See accompanying notes to financial statements.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

SCHEDULE OF INVESTMENTS

NOVEMBER 30, 2015

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

- (5) 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. The Class B Units pay quarterly cash distributions and are convertible at any time at the option of the holder. The Class B Units paid a distribution of \$0.21975 per unit for the fourth quarter of fiscal 2015.
- (6) Security or a portion thereof is segregated as collateral on option contracts written.
- (7) Kevin S. McCarthy, the Chief Executive Officer of the Fund, began serving as a director of ONEOK, Inc. during December of 2015. ONEOK, Inc. is the general partner of ONEOK Partners, L.P. The Fund does not believe that it is an affiliate of ONEOK, Inc. or ONEOK, Partners L.P.
- (8) The Fund believes that it is an affiliate of MarkWest Energy Partners, L.P., Plains All American Pipeline, L.P. and Plains GP Holdings, L.P. (Plains GP). See Note 5 Agreements and Affiliations.
- (9) The Fund holds an interest in Plains AAP, L.P. (PAA GP), which controls the general partner of Plains All American, L.P. The Fund s ownership of PAA GP is exchangeable into shares of Plains GP (which trades on the NYSE under the ticker PAGP) on a one-for-one basis at the Fund s option. See Notes 3 and 7 in Notes to Financial Statements.
- (10) On November 3, 2015, Targa Resources Corp. (TRGP) and Targa Resources Partners LP (NGLS) announced that TRGP will acquire all of the outstanding common units of NGLS in an all stock-for-unit transaction at a ratio of 0.62 TRGP common share per common unit of NGLS.
- (11) On September 28, 2015, Energy Transfer Equity, L.P. announced an agreement to combine with The Williams Companies, Inc. (WMB). WMB is the general partner of Williams Partners L.P.
- (12) 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 24.1% of its total assets invested in publicly-traded partnerships at November 30, 2015. It is the Fund s intention to be treated as a RIC for tax purposes.
- (13) Dividends are paid-in-kind.

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- (14) Security is not treated as a publicly-traded partnership for RIC qualification purposes.
- (15) In lieu of cash distributions, the Fund has elected to receive distributions in additional units/stock through the issuer's dividend reinvestment program.
- (16) On December 4, 2015, MarkWest Energy Partners, L.P. (MWE) and MPLX LP (MPLX) completed its merger whereby MWE became a wholly owned subsidiary of MPLX.
- (17) Security is comprised of a prepaid equity purchase contract and a senior amortizing note. Unless settled earlier, each prepaid equity purchase contract will settle on June 7, 2018 for between 0.7159 and 0.8591 Western Gas Equity Partners, LP (WGP) common units (subject to Anadarko Petroleum Corporation's (APC) right to deliver APC common stock in lieu of WGP common units). The Fund receives a quarterly payment of 7.50% per annum on the \$50 per unit stated amount of the security.
- (18) Security is non-income producing.
- (19) On May 8, 2015, American Eagle Corporation (American Eagle) filed voluntary petitions in the United States Bankruptcy Court for the District of Colorado seeking relief under Chapter 11 of the bankruptcy code. On April 2, 2015, American Eagle made a partial interest payment to its noteholders, and the Fund received \$110 as its share of the partial interest payment. As of February 28, 2015, the Fund had \$270 of accrued interest income, and accordingly, the Fund established a \$160 reserve during the second quarter against the portion of the accrued interest income that exceeded the partial interest payment. The Fund is no longer accruing interest income related to its investment in American Eagle.

See accompanying notes to financial statements.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

SCHEDULE OF INVESTMENTS

NOVEMBER 30, 2015

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

- (20) Floating rate second lien secured term loan. Security pays interest at a rate of LIBOR + 650 basis points with a 1.00% LIBOR floor (7.50% as of November 30, 2015).
- (21) Robert V. Sinnott, the Chief Executive Officer of Kayne Anderson Capital Advisors, L.P., serves as a director of California Resources Corporation (CRC). The Fund does not believe that it is an affiliate of CRC.
- (22) Floating rate second lien secured term loan. Security pays interest at a rate of LIBOR + 650 basis points with a 1.00% LIBOR floor (7.50% as of November 30, 2015).
- (23) On December 7, 2015, Energy & Exploration Partners, Inc. (Energy & Exploration) filed voluntary petitions in the United States Bankruptcy Court for the Northern District of Texas (Fort Worth) seeking relief under Chapter 11 of the bankruptcy code. During the first quarter of fiscal 2016, the Fund stopped accruing interest income on this security.
- (24) Floating rate second lien secured term loan. Security pays interest at a rate of LIBOR + 675 basis points with a 1.00% LIBOR floor (7.75% as of November 30, 2015).
- (25) Floating rate second lien secured term loan. Security pays interest at a rate of LIBOR + 650 basis points with a 1.00% LIBOR floor (7.50% as of November 30, 2015).
- (26) On December 15, 2015, Magnum Hunter Resources Corporation (Magnum Hunter) filed voluntary petitions in the United States Bankruptcy Court for the District of Delaware seeking relief under Chapter 11 of the bankruptcy code. During the fourth quarter of fiscal 2015, the Fund stopped accruing income on this security and established a full reserve of \$587 against accrued income that had not been received. The Fund no longer accrues interest income related to its investment in Magnum Hunter.
- (27) Floating rate second lien secured term loan. Security pays interest at a rate of LIBOR + 750 basis points with a 1.00% LIBOR floor (8.50% as of November 30, 2015).
- (28) Principal amount is 6,850 Canadian dollars.

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF ASSETS AND LIABILITIES****NOVEMBER 30, 2015****(amounts in 000 s, except share and per share amounts)**

ASSETS	
Investments, at fair value:	
Non-affiliated (Cost \$641,299)	\$ 554,767
Affiliated (Cost \$39,198)	48,753
Total investments (Cost \$680,497)	603,520
Cash	29,367
Deposits with brokers	261
Receivable for securities sold	1,427
Interest, dividends and distributions receivable (Cost \$2,608)	2,608
Deferred debt and preferred stock offering costs and other assets	2,627
Total Assets	639,810
LIABILITIES	
Investment management fee payable	709
Call option contracts written (Premiums received \$602)	605
Accrued directors' fees and expenses	91
Accrued expenses and other liabilities	2,927
Notes	185,000
Mandatory redeemable preferred stock, \$25.00 liquidation value per share (2,800,000 shares issued and outstanding)	70,000
Total Liabilities	259,332
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	\$ 380,478
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS CONSIST OF	
Common stock, \$0.001 par value (22,141,297 shares issued, 21,663,136 shares outstanding and 197,200,000 shares authorized)	\$ 22
Paid-in capital	471,908
Accumulated net investment income less distributions not treated as tax return of capital	(9,567)
Accumulated net realized gains less distributions not treated as tax return of capital	(4,886)
Net unrealized gains (losses)	(76,999)
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	\$ 380,478
NET ASSET VALUE PER COMMON SHARE	\$ 17.56

See accompanying notes to financial statements.

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****STATEMENT OF OPERATIONS****FOR THE FISCAL YEAR ENDED NOVEMBER 30, 2015****(amounts in 000 s)****INVESTMENT INCOME****Income**

Dividends and distributions:

Non-affiliated investments \$ 45,626

Affiliated investments 4,212

Total dividends and distributions (after foreign taxes withheld of \$225) 49,838

Return of capital (21,090)

Net dividends and distributions 28,748

Interest and other income 11,444

Total Investment Income 40,192

Expenses

Investment management fees 12,735

Professional fees 433

Directors' fees and expenses 368

Administration fees 282

Insurance 153

Reports to stockholders 97

Custodian fees 60

Other expenses 105

Total Expenses before interest expense, preferred distributions and excise taxes 14,233

Interest expense and amortization of offering costs 11,073

Distributions on mandatory redeemable preferred stock and amortization of offering costs 5,941

Excise taxes 2,411

Total Expenses 33,658

Net Investment Income 6,534**REALIZED AND UNREALIZED GAINS (LOSSES)****Net Realized Gains (Losses)**

Investments non-affiliated (33,331)

Investments affiliated 1,888

Foreign currency transactions (82)

Options 4,844

Net Realized Gains (Losses) (26,681)

Net Change in Unrealized Gains (Losses)

Investments non-affiliated (324,388)

Investments affiliated (47,331)

Foreign currency translations	(13)
Options	(425)
Net Change in Unrealized Losses	(372,157)
Net Realized and Unrealized Gains (Losses)	(398,838)
NET DECREASE IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS RESULTING FROM OPERATIONS	\$ (392,304)

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 Fiscal Year Ended November 30,	
	2015	2014
OPERATIONS		
Net investment income (loss) ⁽¹⁾	\$ 6,534	\$ (231)
Net realized gains (losses)	(26,681)	76,869
Net change in unrealized gains (losses)	(372,157)	48,057
Net Increase (Decrease) in Net Assets Resulting from Operations	(392,304)	124,695
DIVIDENDS AND DISTRIBUTIONS TO COMMON STOCKHOLDERS⁽²⁾		
Dividends	(36,440)	(34,315)
Distributions net long-term capital gains	(46,239)	(7,401)
Dividends and Distributions to Common Stockholders	(82,679)	(41,716)
CAPITAL STOCK TRANSACTIONS		
Issuance of 41,203 and 97,252 shares of common stock from reinvestment of dividends and distributions, respectively	1,204	3,220
Common stock purchased under the share repurchase program (519,364 shares)		(19,999)
Net Increase (Decrease) in Net Assets Applicable to Common Stockholders from Capital Stock Transactions	1,204	(16,779)
Total Increase (Decrease) in Net Assets Applicable to Common Stockholders	(473,779)	66,200
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS		
Beginning of year	854,257	788,057
End of year	\$ 380,478	\$ 854,257

(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 \$5,567 paid to holders of MRP Shares for the fiscal year ended November 30, 2015 were characterized as dividends (\$1,982) and as long-term capital gains (\$3,585). Distributions in the amount of \$4,168 paid to holders of MRP Shares for the fiscal year ended November 30, 2014 were characterized as dividends (\$3,228) and as long-term capital gains (\$940). A portion of the distributions characterized as dividends for both fiscal years ended November 30, 2015 and 2014, 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 fiscal years ended November 30, 2015 and 2014 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 FISCAL YEAR ENDED NOVEMBER 30, 2015****(amounts in 000 s)****CASH FLOWS FROM OPERATING ACTIVITIES**

Net decrease in net assets resulting from operations	\$ (392,304)
Adjustments to reconcile net decrease in net assets resulting from operations to net cash provided by operating activities:	
Return of capital distributions	21,090
Net realized losses (excluding foreign currency transactions)	26,599
Net change in unrealized gains (excluding foreign currency translations)	372,144
Accretion of bond discounts, net	(337)
Purchase of long-term investments	(452,202)
Proceeds from sale of long-term investments	664,072
Increase in deposits with brokers	(17)
Decrease in receivable for securities sold	913
Decrease in interest, dividends and distributions receivable	729
Amortization of deferred debt offering costs	711
Amortization of mandatory redeemable preferred stock offering costs	374
Decrease in other assets	758
Decrease in investment management fee payable	(608)
Decrease in premiums received on call option contracts written	(439)
Increase in accrued directors' fees and expenses	39
Decrease in accrued expenses and other liabilities	(1,146)

Net Cash Provided by Operating Activities 240,376

CASH FLOWS FROM FINANCING ACTIVITIES

Decrease in borrowings under term loan	(46,000)
Redemption of notes	(50,000)
Redemption of mandatory redeemable preferred stock	(35,000)
Cash distributions paid to common stockholders	(81,475)

Net Cash Used in Financing Activities (212,475)

NET INCREASE IN CASH 27,901

CASH BEGINNING OF YEAR 1,466

CASH END OF YEAR \$ 29,367

Supplemental disclosure of cash flow information:

Non-cash financing activities not included herein consisted of reinvestment of distributions of \$1,204 pursuant to the Fund's dividend reinvestment plan.

During the fiscal year ended November 30, 2015, interest paid related to debt obligations was \$10,872, and federal excise tax paid was \$2,432.

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During the fiscal year ended November 30, 2015, the Fund received \$10,302 of paid-in-kind and non-cash dividends and distributions. 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 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 ⁽³⁾			
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		0.09	
Effect of common stock repurchased			
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 ⁽⁶⁾	(48.7)%	16.4%	30.5%
Supplemental Data and Ratios⁽⁷⁾			
Net assets applicable to common stockholders, end of period	\$ 380,478	\$ 854,257	\$ 788,057
Ratio of expenses to average net assets			
Management fees ⁽⁸⁾	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	185,000	235,000	205,000
Credit facility outstanding, end of period			50,000
Term loan outstanding, end of period		46,000	
Mandatory redeemable preferred stock, end of period	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 ⁽⁹⁾	343.5%	441.4%	434.5%
Asset coverage of total leverage (debt and preferred stock) ⁽¹⁰⁾	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

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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,		For the Period November 24, 2010 ⁽¹¹⁾ through November 30, 2010
	2012	2011	
Per Share of Common Stock⁽¹⁾			
Net asset value, beginning of period	\$ 25.94	\$ 23.80	\$ 23.83 ⁽¹²⁾
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% ⁽¹³⁾
Total investment return based on net asset value ⁽⁶⁾	19.4%	14.7%	(0.1)% ⁽¹³⁾
Supplemental Data and Ratios⁽⁷⁾			
Net assets applicable to common stockholders, end of period	\$ 635,226	\$ 562,044	\$ 452,283
Ratio of expenses to average net assets			
Management fees ⁽⁸⁾	1.7%	1.6%	1.3%
Other expenses	0.3	0.3	0.3 ⁽¹⁴⁾
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)% ⁽¹⁴⁾
Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets	16.8%	13.4%	(0.1)% ⁽¹³⁾
Portfolio turnover rate	67.6%	74.1%	0.0% ⁽¹³⁾
Average net assets	\$ 620,902	\$ 537,044	\$ 452,775

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Notes outstanding, end of period	165,000	115,000	
Credit facility outstanding, end of period	48,000	45,000	
Term loan outstanding, end of period			
Mandatory redeemable preferred stock, end of period	65,000	35,000	
Average shares of common stock outstanding	21,794,596	21,273,512	19,004,000
Asset coverage of total debt ⁽⁹⁾	428.7%	473.2%	
Asset coverage of total leverage (debt and preferred stock) ⁽¹⁰⁾	328.5%	388.2%	
Average amount of borrowings per share of common stock during the period ⁽¹⁾	\$ 8.85	\$ 6.50	

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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 information presented for each period 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. See Note 6 Taxes.
- (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) 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.
- (7) Unless otherwise noted, ratios are annualized.
- (8) Ratio reflects total management fee before waiver.
- (9) Calculated pursuant to section 18(a)(1)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by unsecured notes (Notes) or any other senior securities representing indebtedness and MRP Shares 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.
- (10) 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, any other senior securities representing indebtedness and MRP Shares divided by the aggregate amount of Notes, any other senior

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securities representing indebtedness and MRP Shares. 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.

- (11) Commencement of operations.
- (12) 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.
- (13) Not annualized.
- (14) 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)

1. Organization

Kayne Anderson Midstream/Energy Fund, Inc. (the Fund) 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.

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 liquidated 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.

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 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 KA Fund Advisors, LLC (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.

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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)

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, shall each 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 November 30, 2015, the Fund held 1.1% of its net assets applicable to common stockholders (0.7% of total assets) in securities that were fair valued pursuant to the procedures adopted by the Board of Directors. The aggregate fair value of these securities at November 30, 2015 was \$4,327. See Note 3 Fair Value and Note 7 Restricted Securities.

E. Repurchase Agreements From time to time, the Fund has agreed to purchase securities from financial institutions subject to the seller's agreement to repurchase them at an agreed-upon time and price (repurchase agreements). The financial institutions with whom the Fund enters into repurchase agreements are banks and broker/dealers which Kafa considers creditworthy. The seller under a repurchase agreement is required to maintain the value of the securities as collateral, subject to the agreement, at not less than the repurchase price plus accrued interest. Kafa monitors daily the mark-to-market of the value of the collateral, and, if necessary, requires the seller to maintain additional securities, so that the value of the collateral is not less than the repurchase price. Default by or bankruptcy of the seller would, however, expose the Fund to possible loss because of adverse market action or delays in connection with the disposition of the underlying securities. As of November 30, 2015, the Fund did not have any repurchase agreements.

F. *Short Sales* A short sale is a transaction in which the Fund sells securities it does not own (but has borrowed) in anticipation of or to hedge against a decline in the market price of the securities. To complete a short sale, the Fund may arrange through a broker to borrow the securities to be delivered to the buyer. The

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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)

proceeds received by the Fund for the short sale are retained by the broker until the Fund replaces the borrowed securities. In borrowing the securities to be delivered to the buyer, the Fund becomes obligated to replace the securities borrowed at their market price at the time of replacement, whatever the price may be.

The Fund's short sales, if any, are fully collateralized. The Fund is required to maintain assets consisting of cash or liquid securities equal in amount to the liability created by the short sale. These assets are adjusted daily to reflect changes in the value of the securities sold short. The Fund is liable for any dividends or distributions paid on securities sold short.

The Fund may also sell short against the box (*i.e.*, the Fund enters into a short sale as described above while holding an offsetting long position in the security which it sold short). If the Fund enters into a short sale against the box, the Fund would segregate an equivalent amount of securities owned as collateral while the short sale is outstanding. During the fiscal year ended November 30, 2015, the Fund did not engage in any short sales.

G. 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 uses for hedging purposes 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

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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.

H. *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. Since the Fund's inception, it has also utilized the specific identification cost basis method for tax purposes. On July 13, 2015, the Fund filed a request with the Internal Revenue Service to change the tax accounting method used to compute the adjusted tax cost basis of its MLP securities to the average cost method. The Fund believes that the IRS will grant the tax accounting method change and the effective date for the change will be December 1, 2014. The tax accounting method change does not change the accounting method utilized for GAAP purposes. See Note 6 Taxes.

I. *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 90% of the MLP distributions received will be treated as a return of capital. Such estimates for MLPs and other investments are based on historical information available from each investment and other industry sources. These estimates may subsequently be revised based on information received from investments after their tax reporting periods are concluded.

The return of capital portion of the distributions is a reduction to investment income, an equivalent reduction in the cost basis of the associated investments and an increase to net realized gains (losses) and net change in unrealized gains (losses). If the cash 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 cash 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 fiscal year ended November 30, 2015, the Fund had \$21,090 of return of capital and there were no cash 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.

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

	For the Fiscal Year Ended November 30, 2015
Dividends from investments	\$ 29,859
Distributions from investments	20,204
Total dividends and distributions from investments (before foreign taxes withheld of \$225)	\$ 50,063
Dividends % return of capital	10%
Distributions % return of capital	89%
Total dividends and distributions % return of capital	42%
Return of capital attributable to net realized gains (losses)	\$ 5,316
Return of capital attributable to net change in unrealized gains (losses)	15,774
Total return of capital	\$ 21,090

For the fiscal year ended November 30, 2015, the Fund estimated the return of capital portion of distributions received to be \$22,180. This amount was decreased by \$1,090 due to 2014 tax reporting information received by the Fund in fiscal 2015. As a result, the return of capital percentage for the fiscal year ended November 30, 2015 was 42%.

J. 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.

During the first quarter of fiscal 2015, the Fund recorded \$270 of accrued interest income related to its investment in American Eagle Corporation (American Eagle). During the second quarter of fiscal 2015, the Fund received a partial interest payment of \$110 and established a \$160 reserve against the portion of the accrued interest income that exceeded this partial payment. Since the end of the first quarter of fiscal 2015, the Fund has not accrued interest income on its investment in American Eagle. During the fourth quarter of fiscal 2015, the Fund established a \$587 reserve against accrued interest income related to its investment in Magnum Hunter Resources Corporation (Magnum Hunter). The Fund no longer accrues interest income related to its investment in Magnum Hunter. As of November 30, 2015, the Fund did not have any other reserve against interest income.

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.

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The Fund receives paid-in-kind and non-cash dividends and distributions in the form of additional units or shares from the investments listed in the table below. In connection with the purchase of units directly from Arc Logistics Partners LP (ARCX) in a private investment in public equity (PIPE investment) transaction, the Fund was entitled to the distribution paid to unitholders of record on May 11, 2015, even though such investment had not closed at such date. Pursuant to the purchase agreement, the purchase price for the ARCX units was reduced by the amount of such dividend, which had the effect of paying such distribution in additional units. 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 fiscal year ended November 30, 2015, the Fund received the following paid-in-kind and non-cash dividends and distributions.

	For the Fiscal Year Ended November 30, 2015
<u>Paid-in-kind dividends</u>	
Arc Logistics Partners LP	\$ 161
Enbridge Energy Management, L.L.C.	5,630
	5,791
<u>Non-cash dividends and distributions</u>	
ARC Resources Ltd.	83
Baytex Energy Corp.	10
Crescent Point Energy Corp.	166
Energy Transfer Partners, L.P.	3,199
Enterprise Products Partners L.P.	952
Gibson Energy Inc.	101
	4,511
Total paid-in-kind and non-cash dividends and distributions	\$ 10,302

K. 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 for the fiscal year ended November 30, 2015 as either dividend income (eligible to be treated as qualified dividend income) or distributions (long-term capital gains or return of capital) will be determined after the end of the fiscal year based on the Fund's actual earnings and profits and, therefore, the characterization may differ from the preliminary estimates.

L. Partnership Accounting Policy The Fund records its pro-rata share of the income (loss) and capital gains (losses), 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.

M. 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

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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 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. During the fiscal year ended November 30, 2015, the Fund incurred \$2,411 of excise tax expense. See Note 6 Taxes.

Dividend income received by the Fund from sources within Canada is subject to a 15% foreign withholding tax. For non-cash dividends received from ARC Resources Ltd., Crescent Point Energy Corp. and Gibson Energy Inc. during the fiscal year ended November 30, 2015, there was no foreign withholding tax. Effective August 2015, Crescent Point Energy Corp. and Gibson Energy Inc. have each suspended their dividend reinvestment plan. 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.

Since the Fund's inception, it has utilized the specific identification tax accounting method to compute the adjusted tax cost basis of its MLP securities and for selection of lots to be sold. On July 13, 2015, the Fund filed a request with the Internal Revenue Service to change the tax accounting method used to compute the adjusted tax cost basis of its MLP securities to the average cost method. See Note 6 Taxes.

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 2011 remain open and subject to examination by federal and state tax authorities.

N. 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.

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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 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.

O. 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.

P. 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 senior notes) or its preferred stock are capitalized and amortized over the period the debt or preferred stock is outstanding.

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.

Accounting Standards Update (ASU) No. 2011-04 Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs amends ASC 820. The amended guidance clarifies the wording used to describe many requirements in accounting literature for fair value measurement and disclosure to establish consistency between U.S. GAAP and International Financial Reporting Standards (IFRSs).

ASU No. 2011-04 requires the inclusion of additional disclosures on assumptions used by the Fund to determine fair value. Specifically, for assets measured at fair value using significant unobservable inputs (Level 3), ASU No. 2011-04 requires that the Fund (i) describe the valuation process, (ii) disclose quantitative information about unobservable inputs and (iii) provide a qualitative discussion about the sensitivity of the fair value measurement to changes in the unobservable inputs and inter-relationships between the inputs.

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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.

The following table presents the Fund's assets and liabilities measured at fair value on a recurring basis at November 30, 2015, and the Fund presents these assets and liabilities by security type and description on its Schedule of Investments or on its Statement of Assets and Liabilities. 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	\$ 530,155	\$ 503,315	\$ 22,513 ⁽¹⁾	\$ 4,327
Debt investments	73,365		73,365	
Total assets at fair value	\$ 603,520	\$ 503,315	\$ 95,878	\$ 4,327
Liabilities at Fair Value				
Call option contracts written	\$ 605	\$	\$ 605	\$

(1) The Fund's investment in Plains AAP, L.P. (PAA GP) is exchangeable into shares of Plains GP Holdings, L.P. (Plains GP) on a one-for-one basis at the Fund's option. Plains GP trades on the NYSE under the ticker PAGP . The Fund values its investment in PAA GP on an as exchanged basis based on the public market value of Plains GP and categorizes its investment as a Level 2 security for fair value reporting purposes.

For the fiscal year ended November 30, 2015, there were no transfers between Level 1 and Level 2.

As of November 30, 2015, the Fund had Notes outstanding with aggregate principal amount of \$185,000 and 2,800,000 shares of MRP Shares outstanding with a total liquidation value of \$70,000. 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

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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 November 30, 2015, the estimated fair values of these leverage instruments are as follows.

Security	Principal Amount/ Liquidation Value	Fair Value
Notes	\$ 185,000	\$ 189,700
MRP Shares	\$ 70,000	\$ 71,000

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The following tables present the Fund's assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the fiscal year ended November 30, 2015.

	Equity Investments
Balance November 30, 2014	\$ 52,527
Purchases	11,667
Issuances	161
Transfers out to Level 1 and 2	(58,997)
Realized gains (losses)	
Unrealized gains (losses), net	(1,031)
Balance November 30, 2015	\$ 4,327

The purchases of \$11,667 relate to the Fund's investment in Arc Logistics Partners LP (ARCX) and Shell Midstream Partners, L.P. (SHLX) that were both made in May 2015. The issuance of \$161 relates to additional units received from ARCX.

The \$58,997 of transfers out relates to the Fund's investments in ARCX, SHLX, and PAA GP. It is the Fund's policy to recognize transfers between levels at the beginning of the period.

ARCX and SHLX became marketable during the third quarter of fiscal 2015 when the respective companies filed effective shelf registrations. PAA GP became marketable during the first quarter of fiscal 2015 when its 15-month lock-up expired.

The \$1,031 of net unrealized losses relate to investments that were still held at November 30, 2015, and the Fund includes these unrealized losses on the Statement of Operations Net Change in Unrealized Gains.

Valuation Techniques and Unobservable Inputs

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 owns Class B Units of Capital Product Partners L.P. (CPLP) that were issued in a private placement. The Class B Units are convertible on a one-for-one basis into common units and are senior to CPLP's 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 companies in a similar line of business as 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 convertible securities relative to the values calculated using pricing models. 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

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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.

The following table summarizes the significant unobservable inputs that the Fund used to value its portfolio investments categorized as Level 3 as of November 30, 2015:

Quantitative Table for Valuation Techniques

Assets at Fair Value	Fair Value	Valuation Technique	Unobservable Inputs	Range		
				Low	High	Average
Equity securities of public companies	4,327	- Convertible pricing model	- Credit spread	9.8%	10.3%	10.0%
			- Volatility	35.0%	40.0%	37.5%
valued based on pricing model			- Discount for marketability	10%	10%	10%

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 November 30, 2015, the Fund had the following investment concentrations:

Category	Percent of Long-Term Investments
Securities of Energy Companies ⁽¹⁾	100.0%
Equity securities	87.8%
Debt securities	12.2%
Securities of MLPs ⁽¹⁾	34.4%
Largest single issuer	10.1%
Restricted securities	14.2%

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

5. Agreements and Affiliations

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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. The investment management agreement expires on March 31, 2016 (the term was recently extended from October 19, 2015 by the Fund's Board of Directors). For providing these services, KAFA receives an investment management fee from the Fund. For the fiscal year ended November 30, 2015, 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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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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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 November 30, 2015, the Fund believes that MarkWest Energy Partners, L.P. (MWE) meets the criteria described above and is therefore considered an affiliate of the Fund. On December 4, 2015, MWE and MPLX LP (MPLX) completed its merger whereby MWE became a wholly owned subsidiary of MPLX. Subsequent to the merger, the Fund does not believe it is an affiliate of MPLX.

Plains GP Holdings, L.P., Plains AAP, L.P. and Plains All American Pipeline, L.P. Robert V. Sinnott is Chief Executive Officer of Kayne Anderson Capital Advisors, L.P. (KACALP), the managing member of KAFA. Mr. Sinnott also serves as a director of (i) PAA GP Holdings LLC, which is the general partner of Plains GP Holdings, L.P. (Plains GP) and (ii) Plains All American GP LLC (Plains All American GP), which controls the general partner of Plains All American Pipeline, L.P. (PAA). Members of senior management of KACALP and KAFA and various affiliated funds managed by KACALP, including the Fund, own shares of Plains GP as well as interests in Plains AAP, L.P. (PAA GP) (which are exchangeable into shares of Plains GP as described in Note 3 Fair Value). The Fund believes that it is an affiliate of Plains GP and PAA under the 1940 Act by virtue of (i) the Fund's and other affiliated Kayne Anderson funds' ownership interest in Plains GP and PAA GP and (ii) Mr. Sinnott's participation on the boards of Plains GP and Plains All American GP.

6. Taxes

It is the Fund's intention to continue to be treated as and to qualify as a RIC under Subchapter M of the Code and distribute all of its taxable income. Accordingly, no provision for federal income taxes is required in the financial statements. See Note 2 Significant Accounting Policies.

Income and capital gain distributions made by RICs often differ from GAAP basis net investment income (loss) and net realized gains (losses). For the Fund, the principal reason for these differences is the return of capital treatment of dividends and distributions from MLPs and certain other of its investments. Net investment income and net realized gains for GAAP purposes may differ from taxable income for federal income tax purposes.

As of November 30, 2015, the principal temporary differences between income for GAAP purposes and taxable income were (a) realized losses that were recognized for GAAP purposes, but disallowed for tax purposes due to wash sale rules; (b) disallowed partnership losses related to the Fund's MLP investments; and (c) other basis adjustments in the Fund's MLPs and other investments.

During the fiscal year ended November 30, 2015, the Fund reclassified \$36,948 from paid-in capital to accumulated net investment income and accumulated capital gains primarily due to distributions in excess of taxable income and the permanent differences between GAAP and tax treatment of the amortization of MRP Shares offering costs and non-deductible excise taxes paid. The Fund also reclassified \$21,593 of accumulated realized losses to accumulated net investment income due to permanent differences between GAAP and tax treatment of certain net realized losses.

The tax basis components of distributable earnings can differ from the amounts reflected in the Statements of Assets and Liabilities due to temporary differences between the carrying amounts of assets and liabilities for

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

financial reporting purposes and the amounts used for income tax purposes. The following table sets forth the components of accumulated income or deficit for the Fund.

	As of November 30, 2015
Unrealized depreciation of investments	\$ (91,458)
Total accumulated income (deficit)	\$ (91,458)

At November 30, 2014, the Fund had \$73,379 of undistributed ordinary income and long-term capital gains (collectively, Undistributed Income). During fiscal 2015, in order to avoid paying federal income taxes, the Fund distributed all of its Undistributed Income through the payment of its regular quarterly common and preferred stock distributions, and on July 17, 2015 the Fund paid a special distribution of \$38,994 or \$1.80 per common share. At November 30, 2015, the Fund did not have any Undistributed Income.

For the fiscal year ended November 30, 2015, the tax character of the total \$82,679 distributions paid to common stock holders was \$36,440 of dividend income and \$46,239 of long-term capital gains, and the tax character of the total \$5,567 distributions paid to holders of MRP Shares was \$1,982 of dividend income and \$3,585 of long-term capital gains.

For the fiscal year ended November 30, 2014, the tax character of the total \$41,716 distributions paid to common stockholders was \$34,315 of dividend income and \$7,401 of long-term capital gains, and the tax character of the total \$4,168 distributions paid to holders of MRP Shares was \$3,228 of dividend income and \$940 of long-term capital gains.

For purposes of determining the tax character of the dividends/distributions to investors, the amounts in excess of the Fund's earnings and profits for federal income tax purposes are treated as a return of capital. Earnings and profits differ from taxable income due principally to adjustments related to the Fund's investments in MLPs.

The Fund is subject to a non-deductible 4% excise tax on income that is not distributed in accordance with the calendar year distribution requirements. As of November 30, 2014, the Fund intended to declare a special distribution prior to the end of calendar 2014 to avoid the excise tax and, as a result, it did not accrue any excise tax for fiscal 2014 as the liability was not probable and estimable. Due to unfavorable market conditions after the Fund's fiscal year end, it determined in early December 2014 not to make a special distribution of income in order to avoid excise tax. As a result, during the fiscal year ended November 30, 2015, the Fund incurred estimated excise taxes of \$2,411. See Note 2 Significant Accounting Policies.

Under the Regulated Investment Company Modernization Act of 2010, any net capital losses recognized after December 31, 2010 may be carried forward indefinitely, and their character is retained as short-term and/or long-term losses.

On July 13, 2015, the Fund filed a request with the Internal Revenue Service (the IRS) to change the tax accounting method used to compute the adjusted tax cost basis of its MLP securities to the average cost method. The two tax accounting methods that are generally used by owners of MLP securities are the average cost method and specific identification method. Since the Fund's inception, based on the advice of its tax adviser, it has utilized the specific identification tax accounting method to compute the adjusted tax cost basis of its MLP securities and for selection of lots to be sold. Although there is varied industry practice and no direct, clear guidance regarding the correct tax accounting method, the Fund has recently come to the conclusion that the average cost method is a more certain tax position.

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The Fund believes that the IRS will grant the tax accounting method change and the effective date for the change will be December 1, 2014. Had the Fund utilized the average cost method since its inception, the Fund would have reported \$20,943 less taxable income than was recognized under the specific identification method.

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

The IRS is expected to allow the Fund to reduce its fiscal 2015 taxable income by this amount. The tax accounting method change does not change the Fund's net asset value. See Note 2 Significant Accounting Policies.

At November 30, 2015, the cost basis of investments for federal income tax purposes was \$694,950, and the premiums received on outstanding option contracts written were \$602. At November 30, 2015, gross unrealized appreciation and depreciation of investments and options for federal income tax purposes were as follows:

Gross unrealized appreciation of investments (including options)	\$ 71,304
Gross unrealized depreciation of investments (including options)	(162,736)
Net unrealized depreciation of investments before foreign currency related translations	(91,432)
Unrealized depreciation on foreign currency related translations	(26)
Net unrealized depreciation of investments	\$ (91,458)

7. Restricted Securities

From time to time, certain of the Fund's investments may be restricted as to resale. For instance, private investments that are not registered under the Securities Act of 1933, as amended (the Securities Act), cannot be offered for public sale in a non-exempt transaction without first being registered. In other cases, certain of the Fund's investments have restrictions such as lock-up agreements that preclude the Fund from offering these securities for public sale.

At November 30, 2015, the Fund held the following restricted investments:

Investment	Acquisition Date	Type of Restriction	Number of Units, Principal (\$) (in 000s)	Cost Basis (GAAP)	Fair Value	Fair Value Per Unit	Percent of Net Assets	Percent of Total Assets
Level 2 Investments								
Equity Investments								
Plains GP Holdings, L.P. ⁽¹⁾								
Partnership Interests	(2)	(3)	1,836	\$ 5,884	\$ 22,513	\$ 12.26	5.9%	3.5%
Senior Notes and Secured Term Loans ⁽⁴⁾								
American Eagle Energy Corporation ⁽⁵⁾	8/13/14	(6)	\$ 4,800	4,759	768	n/a	0.2	0.1
American Energy-Woodford, LLC	9/11/14	(7)	1,050	1,050	383	n/a	0.1	0.1
Athabasca Oil Corporation	(2)	(6)	(8)	5,149	3,898	n/a	1.0	0.6
BlackBrush Oil & Gas, L.P.	(2)	(7)	6,800	6,724	5,746	n/a	1.5	0.9
Canbriam Energy Inc.	(2)	(7)	9,640	9,711	9,495	n/a	2.5	1.5
Chief Oil & Gas LLC	(2)	(7)	9,609	9,239	6,822	n/a	1.8	1.0
Comstock Resources, Inc.	(2)	(6)	5,000	5,004	2,950	n/a	0.8	0.5
Eclipse Resources Corporation	(2)	(6)	10,000	9,656	7,050	n/a	1.9	1.1
Energy & Exploration Partners, Inc. ⁽⁵⁾	12/22/14	(7)	990	746	713	n/a	0.2	0.1

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Goodrich Petroleum Corporation	9/25/15	(6)	2,677	2,677	857	n/a	0.2	0.1
Halcón Resources Corporation	9/10/15	(6)	6,825	6,825	3,191	n/a	0.8	0.5
Jonah Energy LLC	5/8/14	(7)	3,000	2,965	2,235	n/a	0.6	0.3
Jones Energy, Inc.	4/29/15	(6)	5,000	5,349	3,938	n/a	1.0	0.6
Jupiter Resources Inc.	9/11/14	(7)	10,000	9,624	4,250	n/a	1.1	0.7
Triangle USA Petroleum Corporation	7/15/14	(6)	800	800	340	n/a	0.1	0.1
Vantage Energy, LLC	(2)	(7)	8,862	8,820	6,425	n/a	1.7	1.0

Total				\$ 94,982	\$ 81,574		21.4%	12.7%
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Level 3 Investments⁽⁹⁾

Capital Product Partners L.P.

Class B Units	(2)	(6)	606	3,974	4,327	7.14	1.1	0.7
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Total of all restricted investments				\$ 98,956	\$ 85,901		22.5%	13.4%
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(1) The Fund values its investment in Plains AAP, L.P. (PAA GP) on an as exchanged basis based on the public market value of Plains GP Holdings, L.P. (Plains GP). See Note 3 Fair Value.

(2) Security was acquired at various dates during the fiscal year ended November 30, 2015 and/or in prior fiscal years.

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

- (3) The Fund's investment in PAA GP is exchangeable into shares of Plains GP on a one-for-one basis at the Fund's option. Upon exchange, the shares of Plains GP will be free of any restriction.
- (4) These securities have a fair market value determined by the mean of the bid and ask prices provided by an agent or a syndicate bank, a principal market maker, an independent pricing service or an independent broker as more fully described in Note 2 Significant Accounting Policies. These securities have limited trading volume and are not listed on a national exchange.
- (5) Security has filed voluntary petitions in the United States Bankruptcy Court seeking relief under Chapter 11 of the bankruptcy code.
- (6) Unregistered or restricted security of a publicly-traded company.
- (7) Unregistered security of a private company.
- (8) Principal amount is 6,850 Canadian dollars.
- (9) Securities are valued using inputs reflecting the Fund's own assumptions as more fully described in Note 2 Significant Accounting Policies and Note 3 Fair Value.

8. Derivative Financial Instruments

As required by the Derivatives and Hedging Topic of the FASB Accounting Standards Codification (ASC 815), the following are the derivative instruments and hedging activities of the Fund. See Note 2 Significant Accounting Policies.

Option Contracts Transactions in option contracts for the fiscal year ended November 30, 2015 were as follows:

	Number of Contracts	Premium
Call Options Written		
Options outstanding at November 30, 2014	11,400	\$ 1,046
Options written	60,440	6,529
Options subsequently repurchased ⁽¹⁾	(17,430)	(2,045)
Options exercised	(13,478)	(1,554)
Options expired	(35,317)	(3,374)
Options outstanding at November 30, 2015 ⁽²⁾	5,615	\$ 602

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(1) The price at which the Fund subsequently repurchased the options was \$572, which resulted in net realized gains of \$1,472.

(2) The percentage of total investments subject to call options written was 5.2% at November 30, 2015.

Interest Rate Swap Contracts The Fund may enter into interest rate swap contracts to partially hedge itself from increasing expense on its leverage resulting from increasing interest rates. At the time the interest rate swap contracts reach their scheduled termination, there is a risk that the Fund would not be able to obtain a replacement transaction or that the terms of the replacement transaction would not be as favorable as on the expiring transaction. In addition, if the Fund is required to terminate any swap contract early, then the Fund could be required to make a termination payment. As of November 30, 2015, the Fund did not have any interest rate swap contracts outstanding.

The following table sets forth the fair value of the Fund's derivative instruments on the Statement of Assets and Liabilities:

Derivatives Not Accounted for as Hedging Instruments	Statement of Assets and Liabilities Location	Fair Value as of November 30, 2015
Call options written	Call option contracts written	\$ (605)

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The following table set forth the effect of the Fund's derivative instruments on the Statement of Operations:

Derivatives Not Accounted for as Hedging Instruments	Location of Gains/(Losses) on Derivatives Recognized in Income	For the Fiscal Year Ended November 30, 2015	
		Net Realized Gains/(Losses) on Derivatives Recognized in Income	Change in Unrealized Gains/(Losses) on Derivatives Recognized in Income
Call options written	Options	\$ 4,844	\$ (425)

9. Investment Transactions

For the fiscal year ended November 30, 2015, the Fund purchased and sold securities in the amounts of \$452,202 and \$664,072 (excluding short-term investments and options).

10. Credit Facility and Term Loan

At November 30, 2015, the Fund had a \$105,000 unsecured revolving credit facility (the Credit Facility) with a syndicate of lenders. The Credit Facility has a three-year commitment, maturing on November 21, 2016. The interest rate on outstanding loan balances may vary between LIBOR plus 1.50% and LIBOR plus 2.15%, depending on the Fund's asset coverage ratios. The Fund pays a fee of 0.25% per annum on any unused amounts of the Credit Facility.

For the fiscal year ended November 30, 2015, the average amount outstanding under the Credit Facility was \$463 with a weighted average interest rate of 1.72%. Under the terms of the Credit Facility the Fund is unable to borrow unless its net assets exceed a minimum net asset threshold (\$389,540 as of November 30, 2015). As of November 30, 2015, the Fund did not have any borrowings outstanding under the Credit Facility and was unable to borrow under the Credit Facility because its net asset value was below the minimum net asset threshold.

At November 30, 2015, the Fund had a \$50,000 unsecured revolving term loan (Term Loan). The Term Loan has a five-year commitment and borrowings under the Term Loan accrue interest at a rate of LIBOR plus 1.30%. The Fund pays a fee of 0.25% per annum on any unused amount of the Term Loan.

For the fiscal year ended November 30, 2015, the average amount outstanding under the Term Loan was \$15,238 with a weighted average interest rate of 1.48%. Under the terms of the Term Loan the Fund is unable to borrow unless its net assets exceed a minimum net asset threshold (\$487,121 as of November 30, 2015). As of November 30, 2015, the Fund did not have any borrowings outstanding under the Term Loan and was unable to borrow under the Term Loan because its net asset value was below the minimum net asset threshold.

As of November 30, 2015, the Fund was in compliance with all financial and operational covenants required by the Credit Facility and Term Loan. See Financial Highlights for the Fund's asset coverage ratios under the 1940 Act.

11. Notes

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At November 30, 2015, the Fund had \$185,000 aggregate principal amount of Notes outstanding. The Fund redeemed \$30,000 of Series A Notes on September 24, 2015 at 100.8% of par and \$20,000 of Series A Notes on September 29, 2015 at 100.8% of par. During the first quarter of fiscal 2016, the Fund redeemed \$79,000 of Notes. See Note 14 Subsequent Events. The table below sets forth the key terms of each series of the Notes at November 30, 2015.

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Series	Principal Outstanding November 30, 2014	Principal Redeemed	Principal Outstanding November 30, 2015	Estimated Fair Value November 30, 2015	Fixed Interest Rate	Maturity
A	\$ 55,000	\$ (50,000)	\$ 5,000	\$ 5,100	3.93%	3/3/16
B	60,000		60,000	63,200	4.62%	3/3/18
C	50,000		50,000	51,700	4.00%	3/22/22
D	40,000		40,000	39,400	3.34%	5/1/23
E	30,000		30,000	30,300	3.46%	7/30/21
	\$ 235,000	\$ (50,000)	\$ 185,000	\$ 189,700		

Holders of the Notes are entitled to receive cash interest payments semi-annually (on September 3 and March 3) at the fixed rate. For the fiscal year ended November 30, 2015, the weighted average interest rate on the outstanding Notes was 4.32%. The weighted average interest rate includes prepayment penalties and accelerated interest recognized during the period.

As of November 30, 2015, each series of Notes was rated AAA by FitchRatings. In the event the credit rating on any series of Notes falls below A-, the interest rate on such series will increase by 1% during the period of time such series is rated below A-. The Fund is required to maintain a current rating from one rating agency with respect to each series of Notes.

The Notes were issued in private placement offerings to institutional investors and are not listed on any exchange or automated quotation system. The Notes contain various covenants related to other indebtedness, liens and limits on the Fund's overall leverage. Under the 1940 Act and the terms of the Notes, the Fund may not declare dividends or make other distributions on shares of its common stock or make purchases of such shares if, at any time of the declaration, distribution or purchase, asset coverage with respect to the outstanding Notes would be less than 300%.

The Notes are redeemable in certain circumstances at the option of the Fund. The Notes are also subject to a mandatory redemption to the extent needed to satisfy certain requirements if the Fund fails to meet an asset coverage ratio required by law and is not able to cure the coverage deficiency by the applicable deadline, or fails to cure a deficiency as stated in the Fund's rating agency guidelines in a timely manner.

The Notes are unsecured obligations of the Fund and, upon liquidation, dissolution or winding up of the Fund, will rank: (1) senior to all of the Fund's outstanding preferred shares; (2) senior to all of the Fund's outstanding common shares; (3) on a parity with any unsecured creditors of the Fund and any unsecured senior securities representing indebtedness of the Fund; and (4) junior to any secured creditors of the Fund.

At November 30, 2015, the Fund was in compliance with all covenants under the agreements of the Notes.

12. Preferred Stock

At November 30, 2015, the Fund had 2,800,000 shares of MRP Shares outstanding, with a total liquidation value of \$70,000 (\$25.00 per share). On November 24, 2015, the Fund redeemed all 1,400,000 shares of its Series A MRP Shares at 102.0% of liquidation value plus accumulated unpaid dividends. During December 2015, the Fund redeemed \$10,000 of its Series B MRP Shares. See Note 14 Subsequent Events. The table below sets forth the key terms of each series of the MRP Shares at November 30, 2015.

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

Series	Liquidation Value November 30, 2014	Liquidation Value Redeemed	Liquidation Value November 30, 2015	Estimated Fair Value November 30, 2015	Rate	Mandatory Redemption Date
A	\$ 35,000	\$ (35,000)	\$	\$	5.32%	3/3/18
B	30,000		30,000	30,900	4.50%	3/22/20
C	40,000		40,000	40,100	4.06%	7/30/21
	\$ 105,000	\$ (35,000)	\$ 70,000	\$ 71,000		

Holders of the MRP Shares are entitled to receive cumulative cash dividend payments on the first business day following each quarterly period (February 28, May 31, August 31 and November 30).

As of November 30, 2015, each series of the Fund's MRP Shares was rated AA by FitchRatings. On December 16, 2015, FitchRatings downgraded the rating on the Fund's MRP Shares to A. The dividend rate on the Fund's MRP Shares will increase between 0.5% and 4.0% if the credit rating is downgraded below A by FitchRatings. Further, the annual dividend rate for all series of MRP Shares will increase by 4.0% if no ratings are maintained, and the annual dividend rate will increase by 5.0% if the Fund fails to make quarterly dividend or certain other payments. The Fund is required to maintain a current rating from one rating agency with respect to each series of MRP Shares.

The MRP Shares rank senior to all of the Fund's outstanding common shares and on parity with any other preferred stock. The MRP Shares are redeemable in certain circumstances at the option of the Fund and are also subject to a mandatory redemption if the Fund fails to meet a total leverage (debt and preferred stock) asset coverage ratio of 225% or fails to maintain its basic maintenance amount as stated in the Fund's rating agency guidelines.

Under the terms of the MRP Shares, the Fund may not declare dividends or make other distributions on shares of its common stock or make purchases of such shares if, at any time of the declaration, distribution or purchase, asset coverage with respect to total leverage would be less than 225% or the Fund would fail to maintain its basic maintenance amount as stated in the Fund's rating agency guidelines.

The holders of the MRP Shares have one vote per share and will vote together with the holders of common stock as a single class except on matters affecting only the holders of MRP Shares or the holders of common stock. The holders of the MRP Shares, voting separately as a single class, have the right to elect at least two directors of the Fund.

At November 30, 2015, the Fund was in compliance with the asset coverage and basic maintenance requirements of its MRP Shares.

13. Common Stock

At November 30, 2015, the Fund had 197,200,000 shares of common stock authorized and 21,663,136 shares outstanding. As of that date, KAFA owned 4,000 shares. Transactions in common shares for the fiscal year ended November 30, 2015 were as follows:

Shares outstanding at November 30, 2014	21,621,933
Shares issued through reinvestment of distributions	41,203

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14. Subsequent Events

During the first quarter of fiscal 2016, the Fund redeemed \$79,000 of its Notes and \$10,000 of its MRP Shares to maintain compliance with its leverage ratios. The table below sets forth a summary of those redemptions.

Date of Redemption	Notes/ MRP Shares	Series	Principal/ Liquidation Value Redeemed	Rate	Maturity/ Mandatory Redemption Date	Redemption Price
12/7/15	Notes	A	\$ 5,000	3.93%	3/3/16	100.6%
12/7/15	Notes	B	15,000	4.62	3/3/18	106.7
12/14/15	Notes	B	20,000	4.62	3/3/18	106.5
12/14/15	Notes	C	20,000	4.00	3/22/22	102.0
1/12/16	Notes	B	19,000	4.62	3/3/18	106.4
			\$ 79,000			

12/24/15	MRP Shares	B	\$ 10,000	4.50%	3/22/20	102.0%
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On December 16, 2015, FitchRatings downgraded the rating on the Fund's MRP Shares to A from AA. On this date, FitchRatings affirmed the existing AAA rating assigned to the Fund's Notes.

On December 17, 2015, KAFA and its principals announced an agreement to purchase \$1,438 of newly issued shares of the Fund funded in part with 100% of the after-tax management fees received during the fiscal fourth quarter. The new shares were purchased at the net asset value as of the close of business on December 18, 2015 (\$10.56 per share) which represents a 2.9% premium to the closing market price.

On December 17, 2015, the Fund declared its quarterly distribution of \$0.45 per common share for the fiscal fourth quarter of 2015. The total distribution of \$9,810 was paid January 15, 2016. Of this total, pursuant to the Fund's dividend reinvestment plan \$1,282 was reinvested into the Fund through the issuance of 147,480 shares of common stock.

The Fund has performed an evaluation of subsequent events through the date the financial statements were issued and has determined that no additional items require recognition or disclosure.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of

Kayne Anderson Midstream/Energy Fund, Inc.

In our opinion, the accompanying statement of assets and liabilities, including the schedule of investments, and the related statements of operations, of changes in net assets applicable to common stockholders, and of cash flows and the financial highlights present fairly, in all material respects, the financial position of the Kayne Anderson Midstream/Energy Fund, Inc. (the Fund) at November 30, 2015, the results of its operations and its cash flows for the year then ended, the changes in its net assets applicable to common stockholders for each of the two years in the period then ended and the financial highlights for each of the periods presented, in conformity with accounting principles generally accepted in the United States of America. These financial statements and financial highlights (hereafter referred to as financial statements) are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits, which included confirmation of securities at November 30, 2015 by correspondence with the custodian and brokers, provide a reasonable basis for our opinion.

PricewaterhouseCoopers LLP

Los Angeles, California

January 28, 2016

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

GLOSSARY OF KEY TERMS

(UNAUDITED)

This glossary contains definitions of certain key terms, as they are used in our investment objective and policies and as described in this report. These definitions may not correspond to standard sector definitions.

Energy Assets means assets that are used in the energy sector, including assets used in exploring, developing, producing, generating, transporting, transmitting, storing, gathering, processing, refining, distributing, mining or marketing of natural gas, natural gas liquids, crude oil, refined products, coal or electricity.

Energy Companies means companies that own and operate Energy Assets or provide energy-related services. For purposes of this definition, this includes companies that (i) derive at least 50% of their revenues or operating income from operating Energy Assets or providing services for the operation of such Energy Assets or (ii) have Energy Assets that represent the majority of their assets.

General Partner MLPs means Master Limited Partnerships whose assets consist of ownership interests of an affiliated Master Limited Partnership (which may include general partnership interests, incentive distribution rights, common units and subordinated units).

Master Limited Partnerships means limited partnerships and limited liability companies that are publicly traded and are treated as partnerships for federal income tax purposes.

Midstream Assets means assets used in energy logistics, including, but not limited to, assets used in transporting, storing, gathering, processing, distributing, or marketing of natural gas, natural gas liquids, crude oil or refined products.

Midstream Companies means companies, other than Midstream MLPs, that own and operate Midstream Assets and are taxed as corporations for federal income tax purposes. This includes companies structured like MLPs, but not treated as a publicly-traded partnership for RIC qualification purposes. For purposes of this definition, this includes companies that (i) derive at least 50% of their revenue or operating income from operating Midstream Assets or (ii) have Midstream Assets that represent the majority of their assets.

Midstream/Energy Sector consists of (a) Midstream MLPs, (b) Midstream Companies, (c) Other MLPs and (d) Other Energy Companies.

Midstream Sector consists of (a) Midstream MLPs and (b) Midstream Companies.

Midstream MLPs means MLPs that principally own and operate Midstream Assets. Midstream MLPs also include (a) MLPs that provide transportation and distribution services of energy related products through the ownership of marine transportation vessels, (b) General Partner MLPs whose assets consist of ownership interests of an affiliated Midstream MLP and (c) MLP Affiliates of Midstream MLPs.

MLPs means entities that are structured as Master Limited Partnerships and their affiliates and includes Midstream MLPs, Other MLPs and MLP Affiliates.

MLP Affiliates means affiliates of Master Limited Partnerships, substantially all of whose assets consist of i-units. MLP Affiliates are not treated as partnerships for federal income tax purposes.

Other Energy Companies means Energy Companies, excluding MLPs and Midstream Companies.

Other MLPs consists of (a) upstream MLPs, (b) coal MLPs, (c) propane MLPs and (d) MLPs that operate other energy assets or provide energy-related services.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

PRIVACY POLICY NOTICE

(UNAUDITED)

Rev. 01/2011

FACTS

WHAT DOES KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC. (KMF) DO WITH YOUR PERSONAL INFORMATION?

Why?

Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.

What?

The types of personal information we collect and share depend on the product or service you have with us. This information can include:

- n Social Security number and account balances

- n Payment history and transaction history

- n Account transactions and wire transfer instructions

When you are *no longer* our customer, we continue to share your information as described in this notice.

How?

All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons KMF chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	Does KMF share?	Can you limit this sharing?
For our everyday business purposes such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes to offer our products and services to you	No	No
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes information about your transactions and experiences	No	We don't share
	No	We don't share

For our affiliates everyday business purposes
information about your creditworthiness

For nonaffiliates to market to you

No

We don't share

Questions?

Call 877-657-3863 or go to <http://www.kaynefunds.com>

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

PRIVACY POLICY NOTICE

(UNAUDITED)

Who we are

Who is providing this notice?

KMF

What we do

How does KMF protect my personal information?

To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings.

How does KMF collect my personal information?

Access to your personal information is on a need-to-know basis. KMF has adopted internal policies to protect your non-public personal information. We collect your personal information, for example, when you

n Open an account or provide account information

n Buy securities from us or make a wire transfer

n Give us your contact information

Why can't I limit all sharing?

We also collect your personal information from other companies. Federal law gives you the right to limit only

n sharing for affiliates everyday business purposes information about your creditworthiness

n affiliates from using your information to market to you

n sharing for nonaffiliates to market to you

State laws and individual companies may give you additional rights to limit sharing.

Definitions

Affiliates

Companies related by common ownership or control. They can be financial and nonfinancial companies.

Nonaffiliates

n KMF does not share with our affiliates.

Companies not related by common ownership or control. They can be financial and nonfinancial companies.

Joint marketing

n KMF does not share with nonaffiliates so they can market to you.

A formal agreement between nonaffiliated financial companies that together market financial products or services to you.

n KMF doesn't jointly market.

Other important information

None.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

DIVIDEND REINVESTMENT PLAN

(UNAUDITED)

Kayne Anderson Midstream/Energy Fund, Inc., a Maryland corporation (the **Fund**), has adopted the following plan (the **Plan**) with respect to distributions declared by its Board of Directors (the **Board**) on shares of its Common Stock:

1. Unless a stockholder specifically elects to receive cash as set forth below, all distributions hereafter declared by the Board shall be payable in shares of the Common Stock of the Fund, and no action shall be required on such stockholder's part to receive a distribution in stock.
2. Such distributions shall be payable on such date or dates as may be fixed from time to time by the Board to stockholders of record at the close of business on the record date(s) established by the Board for the distribution involved.
3. The Fund may use newly-issued shares of its Common Stock or purchase shares in the open market in connection with the implementation of the plan. The number of shares to be issued to a stockholder shall be based on share price equal to 95% of the closing price of the Fund's Common Stock one day prior to the dividend payment date.
4. The Board may, in its sole discretion, instruct the Fund to purchase shares of its Common Stock in the open market in connection with the implementation of the Plan as follows: If the Fund's Common Stock is trading below net asset value at the time of valuation, upon notice from the Fund, the Plan Administrator (as defined below) will receive the dividend or distribution in cash and will purchase Common Stock in the open market, on the New York Stock Exchange or elsewhere, for the Participants' accounts, except that the Plan Administrator will endeavor to terminate purchases in the open market and cause the Fund to issue the remaining shares if, following the commencement of the purchases, the market value of the shares, including brokerage commissions, exceeds the net asset value at the time of valuation. These remaining shares will be issued by the Fund at a price equal to the greater of (i) the net asset value at the time of valuation or (ii) 95% of the then current market price.
5. In a case where the Plan Administrator has terminated open market purchases and caused the issuance of remaining shares by the Fund, the number of shares received by the participant in respect of the cash dividend or distribution will be based on the weighted average of prices paid for shares purchased in the open market, including brokerage commissions, and the price at which the Fund issues remaining shares. To the extent that the Plan Administrator is unable to terminate purchases in the open market before the Plan Administrator has completed its purchases, or remaining shares cannot be issued by the Fund because the Fund declared a dividend or distribution payable only in cash, and the market price exceeds the net asset value of the shares, the average share purchase price paid by the Plan Administrator may exceed the net asset value of the shares, resulting in the acquisition of fewer shares than if the dividend or distribution had been paid in shares issued by the Fund.
6. A stockholder may, however, elect to receive his or its distributions in cash. To exercise this option, such stockholder shall notify American Stock Transfer & Trust Company, the plan administrator and the Fund's transfer agent and registrar (collectively the **Plan Administrator**), in writing so that such notice is received by the Plan Administrator no later than the record date fixed by the Board for the distribution involved.
7. The Plan Administrator will set up an account for shares acquired pursuant to the Plan for each stockholder who has not so elected to receive dividends and distributions in cash (each, a **Participant**). The Plan Administrator may hold each Participant's shares, together with the shares of other Participants, in non-certificated form in the Plan Administrator's name or that of its nominee. Upon request by a Participant, received no later than three (3) days prior to the payable date, the Plan Administrator will, instead of crediting shares to and/or carrying shares in a Participant's account, issue, without charge to the Participant, a certificate registered in the Participant's name for the number of whole shares payable to the Participant and a check for any fractional share less a broker commission on the sale of such fractional shares. If a

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

DIVIDEND REINVESTMENT PLAN

(UNAUDITED)

request to terminate a Participant's participation in the Plan is received less than three (3) days before the payable date, dividends and distributions for that payable date will be reinvested. However, subsequent dividends and distributions will be paid to the Participant in cash.

8. The Plan Administrator will confirm to each Participant each acquisition made pursuant to the Plan as soon as practicable but not later than ten (10) business days after the date thereof. Although each Participant may from time to time have an undivided fractional interest (computed to three decimal places) in a share of Common Stock of the Fund, no certificates for a fractional share will be issued. However, dividends and distributions on fractional shares will be credited to each Participant's account. In the event of termination of a Participant's account under the Plan, the Plan Administrator will adjust for any such undivided fractional interest in cash at the market value of the Fund's shares at the time of termination.

9. The Plan Administrator will forward to each Participant any Fund related proxy solicitation materials and each Corporation report or other communication to stockholders, and will vote any shares held by it under the Plan in accordance with the instructions set forth on proxies returned by Participants to the Fund.

10. In the event that the Fund makes available to its stockholders rights to purchase additional shares or other securities, the shares held by the Plan Administrator for each Participant under the Plan will be added to any other shares held by the Participant in certificated form in calculating the number of rights to be issued to the Participant.

11. The Plan Administrator's service fee, if any, and expenses for administering the Plan will be paid for by the Fund.

12. Each Participant may terminate his or its account under the Plan by so notifying the Plan Administrator via the Plan Administrator's website at www.amstock.com, by filling out the transaction request form located at the bottom of the Participant's Statement and sending it to American Stock Transfer and Trust Company, P.O. Box 922, Wall Street Station, New York, NY 10269-0560 or by calling the Plan Administrator at (888) 888-0317. Such termination will be effective immediately. The Plan may be terminated by the Fund upon notice in writing mailed to each Participant at least 30 days prior to any record date for the payment of any dividend or distribution by the Fund. Upon any termination, the Plan Administrator will cause a certificate or certificates to be issued for the full shares held for the Participant under the Plan and a cash adjustment for any fractional share to be delivered to the Participant without charge to the Participant. If a Participant elects by his or its written notice to the Plan Administrator in advance of termination to have the Plan Administrator sell part or all of his or its shares and remit the proceeds to the Participant, the Plan Administrator is authorized to deduct a \$15.00 transaction fee plus a \$0.10 per share brokerage commission from the proceeds.

13. These terms and conditions may be amended or supplemented by the Fund at any time but, except when necessary or appropriate to comply with applicable law or the rules or policies of the Securities and Exchange Commission or any other regulatory authority, only by mailing to each Participant appropriate written notice at least 30 days prior to the effective date thereof. The amendment or supplement shall be deemed to be accepted by each Participant unless, prior to the effective date thereof, the Plan Administrator receives written notice of the termination of his or its account under the Plan. Any such amendment may include an appointment by the Plan Administrator in its place and stead of a successor agent under these terms and conditions, with full power and authority to perform all or any of the acts to be performed by the Plan Administrator under these terms and conditions. Upon any such appointment of any agent for the purpose of receiving dividends and distributions, the Fund will be authorized to pay to such successor agent, for each Participant's account, all dividends and distributions payable on shares of the Fund held in the Participant's name or under the Plan for retention or application by such successor agent as provided in these terms and conditions.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

DIVIDEND REINVESTMENT PLAN

(UNAUDITED)

14. The Plan Administrator will at all times act in good faith and use its best efforts within reasonable limits to ensure its full and timely performance of all services to be performed by it under this Plan and to comply with applicable law, but assumes no responsibility and shall not be liable for loss or damage due to errors unless such error is caused by the Plan Administrator's negligence, bad faith, or willful misconduct or that of its employees or agents.

15. These terms and conditions shall be governed by the laws of the State of Maryland.

Adopted: November 18, 2010

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

INVESTMENT MANAGEMENT AGREEMENT APPROVAL DISCLOSURE

(UNAUDITED)

The Fund's Board of Directors (the Board) on September 30, 2015 approved the continuation of the Fund's Investment Management Agreement (the Agreement) with KA Fund Advisors, LLC (the Adviser) through March 31, 2016.

The Board approved a new investment management agreement at an in-person meeting held on July 8, 2015. That new agreement would have taken effect upon the termination of the current Agreement as a result of a technical change of control of the Adviser resulting from the announced business combination of the Adviser with another investment management organization. Because that business combination was terminated before it could be consummated, the current Agreement remains in effect. The Board, including the Independent Directors, approved the continuation of the current Agreement based on information presented to them on various prior occasions, including information presented at their meeting on July 8, 2015. The description provided below explains the basis for the Board's approval of the new agreement as previously included in a proxy statement seeking stockholder approval of that new agreement. Because the terms of the new agreement would have been substantially the same as the current Agreement, the Board's approval of the continuation of the current Agreement was substantially based on the same considerations and factors.

During the course of each year and in connection with its consideration of the continuation of the Agreement, the Board received various materials from the Adviser, including (i) information on the advisory personnel of the Adviser; (ii) information on the internal compliance procedures of the Adviser; (iii) comparative information showing how the Fund's fees and expenses compare to other registered investment companies that follow investment strategies similar to those of the Fund; (iv) information regarding brokerage and portfolio transactions; (v) comparative information showing how the Fund's performance compares to other registered investment companies that follow investment strategies similar to those of the Fund; and (vi) information on any material legal proceedings or regulatory audits or investigations affecting the Fund or the Adviser.

Discussed below are certain of the factors considered by the Board in continuing the Agreement. This discussion is not intended to be all-inclusive. The Board, including the Independent Directors, reviewed a variety of factors and considered a significant amount of information, including information received on an ongoing basis at Board and committee meetings and in various discussions with senior management of the Adviser relating specifically to the Adviser and the Agreement. The approval determination was made on the basis of each Director's business judgment after consideration of all the information taken as a whole. Individual Directors may have given different weight to certain factors and assigned various degrees of materiality to information received in connection with the contract review process.

Taking all of the information and deliberations into account, the Independent Directors reviewed various factors presented to them, the detailed information provided by the Adviser at the meeting and at other times throughout the year, and other relevant information and the following factors, none of which was dispositive in their decision whether to approve the Agreement:

The nature, extent, and quality of the services to be provided by the Adviser

The Board, including the Independent Directors, considered the scope and quality of services that have been provided by the Adviser under the Agreement. The Board, including the Independent Directors, considered the quality of the investment research capabilities of the Adviser and the other resources the Adviser has dedicated to performing services for the Fund, including the high caliber of portfolio managers and research analysts involved, the large and experienced team of investment, accounting, legal, trading and compliance professionals at the Adviser dedicated to the Fund, and the continued addition of professionals at the Adviser to broaden its coverage efforts. The Board, including the Independent Directors, also considered the quality of other services, including the Adviser's assistance in the coordination of the activities of some of the Fund's other service providers, the provision of certain administrative, compliance, reporting and financial services by the Adviser, the use of call options and the responsible handling of the leverage target. The Board, including the Independent

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

INVESTMENT MANAGEMENT AGREEMENT APPROVAL DISCLOSURE

(UNAUDITED)

Directors, took note of the Adviser's excellent track records in identifying and executing on key investment themes and in sourcing and negotiating private investments for the Fund as well as the Fund's best-in-class access to investments and capital markets due in part to the Adviser's credibility with institutional investors. The Board, including the Independent Directors, also considered the nature and quality of the services provided by the Adviser to the Fund in light of their experience as Directors of the Fund, their confidence in the Adviser's integrity and competence gained from that experience and the Adviser's responsiveness to questions, concerns or requests for information raised or made by them in the past. The Board, including the Independent Directors, noted the high quality of services provided by the Adviser during periods when the market faces significant turmoil, including various current market challenges as well as the Adviser's efforts to maximize returns and its leadership position in the markets in which it invests. The Board, including the Independent Directors, discussed the scope of responsibilities of, and resources expected to be available to, the key investment management and other personnel of the Adviser. Based on information provided by the Adviser, the Independent Directors concluded that the Adviser has the quality and depth of personnel and investment methods essential to performing its duties under the Agreement, and should be able to sustain that quality and depth, and that the nature and the proposed cost of such advisory services would be fair and reasonable in light of the services expected to be provided.

The Fund's performance under the management of the Adviser

The Independent Directors reviewed information pertaining to the performance of the Fund. These data compared the Fund's performance to the performance of certain other registered investment companies that follow investment strategies similar to those of the Fund as well as its benchmark. The comparative information showed that the performance of the Fund is satisfactory on an overall basis compared to other similar closed-end funds for various periods despite certain periods of lower relative performance against applicable peer groups. Based upon their review and consideration of applicable securities price indices, the Independent Directors concluded that the Fund's investment performance over time has been satisfactory compared to other closed-end funds that focus on investments in energy-related master limited partnerships (MLPs) and other energy companies, as applicable, and that the Fund has generated strong returns for investors for various periods. The Independent Directors also reviewed information comparing the performance of the Fund with alternative fund structures following similar strategies, including exchange-traded funds and open-end funds, and concluded that the comparative information showed that the performance of the Fund compares favorably for many periods to alternative MLP and comparable energy company fund structures. The Independent Directors noted that in addition to the information received for this meeting, the Independent Directors also receive detailed performance information for the Fund at each regular meeting of the Board of Directors during the year. The Independent Directors considered the investment performance of other closed-end investment companies managed by the Adviser, but noted that they are not directly comparable. The Independent Directors did not consider the performance of other accounts of the Adviser because there were no accounts similar enough to be relevant for performance purposes.

The reasonability of the management fee and fall-out benefits

The Independent Directors considered the Fund's management fee under the Agreement in comparison to the management fees of funds within the Fund's peer group. The Independent Directors also compared the fee structure under the Agreement with that of various private funds and separately managed accounts (the Other Accounts) advised by the Adviser or its affiliates and concluded that the fee rate under the Agreement is lower than many of the Other Accounts because the Adviser charges a performance fee for many of the Other Accounts. The Independent Directors also considered the greater risks and burdens associated with managing the Fund. The Adviser's successful handling of past market downturns and related leverage challenges, the administrative burden resulting from the Fund's tax complexities, the Fund's lower level of operating expenses

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

INVESTMENT MANAGEMENT AGREEMENT APPROVAL DISCLOSURE

(UNAUDITED)

(other than management fees), the Fund's participation in private investments, particularly PIPE transactions, the Adviser's long standing relationships with management teams in the energy space, and the Adviser's successful pricing and timing strategies related to the capital raising for the Fund were also noted by the Independent Directors as relevant considerations in evaluating the reasonableness of the management fee rate. The Independent Directors also discussed and are comfortable with the different contractual fee rates for the Fund and other closed-end companies managed by the Adviser given differences in strategies and investments, and related differences in difficulties and complexities. Based on those comparisons, the Independent Directors concluded that the management fee for the Fund remain reasonable.

The extent to which economies of scale would be realized as the Fund grows and whether fee levels reflect these economies of scale for the benefit of stockholders

The Independent Directors considered economies of scale that are being enjoyed by stockholders of the Fund. In this regard, they noted the extent to which operating expenses declined over the past several years and noted that the Adviser added professionals to its already robust and high-quality team, both of which represented a sharing of those economies of scale. The Independent Directors also considered further possible economies of scale that the Adviser could achieve in its management of the Fund. They considered the information provided by the Adviser relating to the Fund's operating expenses and information comparing the fee rate charged by the Adviser with fee rates charged by other unaffiliated investment advisers to their investment company clients. The Independent Directors also considered the Adviser's commitment to retaining its current professional staff in a competitive environment for investment and compliance professionals. The Independent Directors concluded that the fee structure for the Fund is reasonable in view of the information provided by the Adviser. The Independent Directors then noted that they would continue to monitor and review further growth of the Fund in order to remain comfortable with the fee structure after any applicable future economies of scale.

Conclusion

Based on the review by the Board of Directors, including their consideration of each of the factors discussed above and the materials requested from and provided by the Adviser, the Board of Directors concluded, in agreement with the recommendation of the Independent Directors, that the Fund and its stockholders received reasonable value in return for the management fees and other amounts paid to the Adviser by the Fund under the Agreement, that stockholders could expect to receive reasonable value in return for the management fees and other amounts proposed to be paid to the Adviser by the Fund under the Agreement and that the approval of the continuation of the Agreement was in the best interests of stockholders of the Fund.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS

(UNAUDITED)

Independent Directors⁽¹⁾

Name (Year Born)	Position(s) Held with Fund, Term of Office/Time of Service	Principal Occupations During Past Five Years	Other Directorships Held by Director/Officer During Past Five Years
William R. Cordes (born 1948)	Director. 3-year term as Director (until the 2016 Annual Meeting of Stockholders)/served since inception	Retired from Northern Border Pipeline Company in March 2007 after serving as President from October 2000 to March 2007. Chief Executive Officer of Northern Border Partners, L.P. from October 2000 to April 2006. President of Northern Natural Gas Company from 1993 to 2000. President of Transwestern Pipeline Company from 1996 to 2000.	Current: Kayne Anderson Energy Development Company (KED) Boardwalk Pipeline Partners, LP (pipeline MLP) Prior: Northern Border Partners, L.P. (midstream MLP)
Barry R. Pearl (born 1949)	Director. 3-year term (until the 2018 Annual Meeting of Stockholders)/served since inception	Executive Vice President of Kealine, LLC, a private developer and operator of petroleum infrastructure facilities (and its affiliate WesPac Midstream LLC an energy infrastructure developer), since February 2007. Provided management consulting services from January 2006 to February 2007. President of Texas Eastern Products Pipeline Company, LLC (TEPPCO), (the general partner of TEPPCO Partners, L.P.,) from February 2001 to December 2005. Chief Executive Officer and director of TEPPCO from May 2002 to December 2005; and Chief Operating Officer from February 2001 to May 2002.	Current: KED Targa Resources Partners LP (midstream MLP) Magellan Midstream Partners, L.P. (midstream MLP) Prior:

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			Peregrine Midstream Partners LLC (natural gas storage)
			Seaspan Corporation (containership chartering)
			TEPPCO Partners, L.P. (midstream MLP)
Albert L. Richey (born 1949)	Director. 3-year term (until the 2016 Annual Meeting of Stockholders)/served since inception	Senior Vice President Finance and Treasurer of Anadarko Petroleum Corporation since January 2013; Vice President Special Projects from January 2009 to December 2012; Vice President Corporate Development from 2006 to December 2008; Vice President and Treasurer from 1995 to 2005 and Treasurer from 1987 to 1995.	KED Boys & Girls Clubs of Houston
			Boy Scouts of America
William L. Thacker (born 1945)	Director. 3-year term (until the 2018 Annual Meeting of Stockholders)/served since inception	Chairman of the Board of Directors of Copano Energy, L.L.C. from 2009 to 2013. Retired from the Board of TEPPCO in May 2002 after serving as Chairman from March 1997 to May 2002; Chief Executive Officer from January 1994 to May 2002; and President, Chief Operating Officer and Director from September 1992 to January 1994.	Current: KED
			QEP Resources Inc. (oil and gas exploration and production company)
			Prior:
			Copano Energy, L.L.C. (midstream MLP)
			Pacific Energy Partners, L.P. (midstream MLP)
			GenOn Energy, Inc. (electricity generation and sales)

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS

(UNAUDITED)

Interested Director and Non-Director Officers

Name (Year Born)	Position(s) Held with Fund, Term of Office/Time of Service	Principal Occupations During Past Five Years	Other Directorships Held by Director/Officer During Past Five Years
Kevin S. McCarthy ⁽²⁾ (born 1959)	Chairman of the Board of Directors, President and Chief Executive Officer. 3-year term as a director (until the 2017 Annual Meeting of Stockholders), elected annually as an officer/served since inception ⁽³⁾	Senior Managing Director of KACALP since June 2004 and of KAFA since 2006. President and Chief Executive Officer of Kayne Anderson MLP Investment Company (KYN); Kayne Anderson Energy Total Return Fund, Inc. (KYE); and Kayne Anderson Energy Development Company (KED) since inception (KYN inception in 2004; KYE inception in 2005; and KED inception in 2006). Global Head of Energy at UBS Securities LLC from November 2000 to May 2004.	<p>Current:</p> <p>KYN</p> <p>KYE</p> <p>KED</p> <p>ONEOK, Inc. (midstream company)</p> <p>Range Resource Corporation (oil and gas exploration and production company)</p> <p>Prior:</p> <p>Clearwater Natural Resources, L.P. (coal mining)</p> <p>Direct Fuels Partners, L.P. (transmix refining and fuels distribution)</p>

			Emerge Energy Services LP (frac sand MLP)
			International Resource Partners LP (coal mining)
			K-Sea Transportation Partners LP (shipping MLP)
			ProPetro Services, Inc. (oilfield services)
J.C. Frey (born 1968)	Executive Vice President, Assistant Treasurer and Assistant Secretary. Elected annually/served since inception	Senior Managing Director of KACALP since 2004 and of KAFA since 2006, and Managing Director of KACALP from 2000 to 2004. Portfolio Manager of KACALP since 2000, Co-Portfolio Manager, Vice President, Assistant Secretary and Assistant Treasurer of KYN since 2004; of KYE since 2005, and of KED since 2006. Executive Vice President of KYN, KYE and KED since June 2008.	None
James C. Baker (born 1972)	Executive Vice President. Elected annually/served since inception	Senior Managing Director of KACALP and KAFA since February 2008, Managing Director of KACALP and KAFA from December 2004 and 2006, respectively, to February 2008. Vice President of KYN and KYE from 2005 to 2008; and of KED from 2006 to 2008, and Executive Vice President of KYN, KYE and KED since June 2008.	Current: KED
			Prior:
			K-Sea Transportation Partners LP (shipping MLP)
			Petris Technology, Inc. (data management for energy companies)
			ProPetro Services, Inc. (oilfield services)
Terry A. Hart (born 1969)	Chief Financial Officer and Treasurer. Elected annually/served since inception	Managing Director of KACALP since December 2005 and KAFA since 2006. Chief Financial Officer and Treasurer of KYN and KYE since December 2005, and KED since September 2006. Director of Structured Finance, Assistant Treasurer, Senior Vice President and Controller of Dynegy, Inc. from 2000 to 2005.	Current: KED

The Source for Women
(not-for-profit organization)

Table of Contents**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.****INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS****(UNAUDITED)****Interested Director and Non-Director Officers**

Name (Year Born)	Position(s) Held with Fund, Term of Office/Time of Service	Principal Occupations During Past Five Years	Other Directorships Held by Director/Officer During Past Five Years
Ron M. Logan, Jr. (born 1960)	Senior Vice President Elected annually/served since September 2012	Senior Managing Director of KACALP and KAFA since February 2014. Managing Director of KACALP and KAFA from September 2006 to February 2014. Senior Vice President of KED since September 2006. Senior Vice President of KYN and KYE since September 2012. Independent consultant to several leading energy firms. Senior Vice President of Ferrellgas Inc. from 2003 to 2005. Vice President of Dynegy Midstream Services from 1997 to 2002.	Prior: VantaCore Partners LP (aggregates MLP)
Jody C. Meraz (born 1978)	Vice President. Elected annually. Elected annually/served since 2011	Managing Director of KACALP and KAFA since February 2014. Senior Vice President of KACALP and KAFA from 2011 to February 2014. Vice President of KACALP from 2007 to 2011. Associate of KACALP and KAFA since 2005 and 2006, respectively. Vice President of KYN, KYE, and KED since 2011.	None
Michael O. Neil (born 1983)	Chief Compliance Officer. Elected annually/served since 2013	Chief Compliance Officer of KACALP and KAFA since March 2012 and of KYN, KED, KYE since December 2013 and KA Associates, Inc. (broker-dealer) since January 2013. A Compliance Officer at BlackRock Inc. from January 2008 to February 2012.	None
David J. Shladovsky (born 1960)	Secretary. Elected annually/served since inception	Managing Director and General Counsel of KACALP since 1997 and of KAFA since 2006. Secretary and Chief Compliance Officer (through December 2013) of KYN since 2004; of KYE since 2005, and of KED since 2006.	None

(1) The 1940 Act requires the term "Fund Complex" to be defined to include registered investment companies advised by KAFA, the Fund's investment advisor, and the Fund Complex includes the Fund, KYN, KYE, and KED. Each Independent Director oversees two registered investment companies in the Fund Complex, the Fund and KED, as noted above.

(2) Mr. McCarthy is an interested person of the Fund as defined by the 1940 Act by virtue of his employment relationship with KAFA. Additional information regarding the Fund's directors is contained in the Fund's Statement of Additional Information, the most recent version of which can be found on the Fund's website at <http://www.kaynefunds.com> or is available without charge, upon request, by calling (877) 657-3863.

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KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

ANNUAL CERTIFICATION

(UNAUDITED)

The Fund's Chief Executive Officer has filed an annual certification with the NYSE that, as of the date of the certification, he was unaware of any violation by the Fund of the NYSE's corporate governance listing standards.

PROXY VOTING AND PORTFOLIO HOLDINGS INFORMATION

(UNAUDITED)

The policies and procedures that the Fund uses to determine how to vote proxies relating to its portfolio securities are available:

without charge, upon request, by calling (877) 657-3863/MLP-FUND;

on the Fund's website, <http://www.kaynefunds.com>; and

on the SEC's website, <http://www.sec.gov>.

Information regarding how the Fund voted proxies relating to portfolio securities during the most recent 12-month period ended June 30 is available without charge, upon request, by calling (877) 657-3863/MLP-FUND, and on the SEC's website at <http://www.sec.gov> (see Form N-PX).

The Fund files a complete schedule of its portfolio holdings for the first and third quarters of each of its fiscal years with the SEC on Form N-Q and Form N-30B-2. The Fund's Form N-Q and Form N-30B-2 are available on the SEC's website at <http://www.sec.gov> and may be reviewed and copied at the SEC's Public Reference Room in Washington, DC. Information on the operation of the SEC's Public Reference Room may be obtained by calling 1-800-SEC-0330. The Fund also makes its Form N-Q and Form N-30B-2 available on its website at <http://www.kaynefunds.com>.

REPURCHASE DISCLOSURE

(UNAUDITED)

Notice is hereby given in accordance with Section 23(c) of the 1940 Act, that the Fund may from time to time purchase shares of its common and preferred stock and its Notes in the open market or in a privately negotiated transactions.

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Directors and Corporate Officers

Kevin S. McCarthy	Chairman of the Board of Directors, President and Chief Executive Officer
William R. Cordes	Director
Barry R. Pearl	Director
Albert L. Richey	Director
William L. Thacker	Director
Terry A. Hart	Chief Financial Officer and Treasurer
David J. Shladovsky	Secretary
Michael J. O Neil	Chief Compliance Officer
J.C. Frey	Executive Vice President, Assistant Secretary and Assistant Treasurer
James C. Baker	Executive Vice President
Ron M. Logan, Jr.	Senior Vice President
Jody C. Meraz	Vice President

Investment Adviser

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

1800 Avenue of the Stars, Third Floor
Los Angeles, CA 90067

Administrator

Ultimus Fund Solutions, LLC
225 Pictoria Drive, Suite 450
Cincinnati, OH 45246

Stock Transfer Agent and Registrar

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, NY 11219

(888) 888-0317

Custodian

JPMorgan Chase Bank, N.A.
14201 North Dallas Parkway, Second Floor
Dallas, TX 75254

Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP
601 S. Figueroa Street, Suite 900
Los Angeles, CA 90017

Legal Counsel

Paul Hastings LLP
55 Second Street, 24th Floor
San Francisco, CA 94105

Please visit us on the web at <http://www.kaynefunds.com> or call us toll-free at 1-877-657-3863.

This report, including the financial statements herein, is made available to stockholders of the Fund for their information. It is not a prospectus, circular or representation intended for use in the purchase or sale of shares of the Fund or of any securities mentioned in this report.

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Item 2. Code of Ethics.

(a) As of the end of the period covered by this report, the Registrant has adopted a code of ethics that applies to the Registrant’s principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions.

(c) and (d) During the period covered by this report, there was no amendment to, and no waiver, including implicit waiver, was granted from, any provision of the Registrant’s code of ethics that applies to the Registrant’s principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions.

(f)(1) Pursuant to Item 12(a)(1), the Registrant is attaching as an exhibit (EX-99.CODE ETH) a copy of its code of ethics that applies to its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions.

Item 3. Audit Committee Financial Expert.

(a)(1) The Registrant’s board of directors has determined that the Registrant has four audit committee financial experts serving on its Audit Committee.

(a)(2) The audit committee financial experts are William R. Cordes, Barry R. Pearl, Albert L. Richey, and William L. Thacker. Messrs. Cordes, Pearl, Richey, and Thacker are independent for purposes of this Item.

Item 4. Principal Accountant Fees and Services.

(a) through (d) The information in the table below is provided for professional services rendered to the Registrant by its independent registered public accounting firm, PricewaterhouseCoopers LLP, during the Registrant’s (i) fiscal year ended November 30, 2015, and (ii) fiscal year ended November 30, 2014.

	2015	2014
Audit Fees	\$ 188,000	\$ 186,640
Audit-Related Fees		
Tax Fees	88,300	162,500
All Other Fees		
Total	\$ 276,300	\$ 349,140

With respect to the table above, Audit Fees are the aggregate fees billed for professional services for the audit of the Registrant’s annual financial statements and services provided in connection with statutory and regulatory filings or engagements. Audit-Related Fees are the aggregate fees billed for assurance and related services reasonably related to the performance of the audit of the Registrant’s financial statements and are not reported under Audit Fees. Tax Fees are the aggregate fees billed for professional services for tax compliance, tax advice and tax planning.

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

Before the auditor is (i) engaged by the Registrant to render audit, audit related or permissible non-audit services to the Registrant or (ii) with respect to non-audit services to be provided by the auditor to the Registrant’s investment adviser or any entity in the Registrant’s investment company complex, if the nature of the services provided relate directly to the operations or financial reporting of the Registrant, either: (a) the Audit Committee shall pre-approve such engagement; or (b) such engagement shall be entered into pursuant to pre-approval policies and procedures established by the Audit Committee. Any such policies and procedures must be detailed as to the particular service and not involve any delegation of the Audit Committee’s responsibilities to the Registrant’s investment adviser. The Audit Committee may delegate to one or more of its members the authority to grant pre-approvals. The pre-approval policies and procedures shall include the requirement that the decisions of any member to whom authority is delegated under this provision be presented to the full Audit Committee at its next scheduled meeting. Under certain limited circumstances, pre-approvals are not required if certain de minimis thresholds are not exceeded, as such thresholds are set forth by the Audit Committee and in accordance with applicable Securities and Exchange Commission rules and regulations.

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(e)(2) None of the services provided to the Registrant described in paragraphs (b) through (d) of this Item 4 were pre-approved by the Audit Committee pursuant to paragraph (c)(7)(i)(C) of Rule 2-01 of regulation S-X.

(f) No disclosures are required by this Item 4(f).

(g) The aggregate non-audit fees billed by PricewaterhouseCoopers LLP for services rendered to the Registrant for the fiscal years ended November 30, 2015 and 2014 were \$88,300 and \$162,500, respectively. The aggregate non-audit fees billed by PricewaterhouseCoopers LLP totaled \$3,497,000 and \$894,000 for services rendered to the Registrant's investment adviser and any entity controlling, controlled by, or under common control with the adviser that provides ongoing services to the Registrant for the fiscal years ended November 30, 2015 and 2014, respectively.

(h) The Registrant's Audit Committee has considered the provision of non-audit services that were rendered to the Registrant's investment adviser and any entity controlling, controlled by, or under common control with the investment adviser that provides ongoing services to the Registrant that were not pre-approved pursuant to paragraph (c)(7)(ii) of Rule 2-01 of Regulation S-X and has determined that the provision of such non-audit services is compatible with maintaining the Registrant's principal accountant's independence.

Item 5. Audit Committee of Listed Registrants.

The Registrant has a separately-designated standing audit committee established in accordance with Section 3(a)(58)(A) of the Securities and Exchange Act of 1934, as amended (the Exchange Act). William R. Cordes (Chair), Barry R. Pearl, Albert L. Richey and William L. Thacker are the members of the Registrant's Audit Committee.

Item 6. Investments.

(a) Please see the schedule of investments contained in the KMF Annual Report for the fiscal year ended November 30, 2015 included under Item 1 of this Form N-CSR.

(b) Not applicable.

Item 7. Disclosure of Proxy Voting Policies and Procedures for Closed-End Management Investment Companies.

The Registrant has delegated the voting of proxies relating to its voting securities to its investment adviser, KA Fund Advisors, LLC (the Adviser). The respective proxy voting policies and procedures of the Registrant and the Adviser are attached as Exhibit 99.VOTEREG and Exhibit 99.VOTEADV hereto.

Item 8. Portfolio Managers of Closed-End Management Investment Companies.

(a)(1) As of the date of filing this report, the following individuals (the Portfolio Managers) are primarily responsible for the day-to-day management of the Registrant's portfolio:

Kevin S. McCarthy has served as the Registrant's President, Chief Executive Officer and co-portfolio manager since November 2010 and has served as the President, Chief Executive Officer and co-portfolio manager of Kayne Anderson MLP Investment Company (KYN) since June 2004, of Kayne Anderson Energy Total Return Fund, Inc. (KYE) since May 2005 and of Kayne Anderson Energy Development Company (KED) since September 2006. Mr. McCarthy has served as a Senior Managing Director of Kayne Anderson Capital Advisors, L.P. (KACALP) since June 2004 and of the Adviser (collectively with KACALP, Kayne Anderson) since 2006. Prior to that, he was Global Head of Energy at UBS Securities LLC. In this role, he had senior responsibility for all of UBS' energy investment banking activities. Mr. McCarthy was with UBS Securities from 2000 to 2004. From 1995 to 2000, Mr. McCarthy led the energy investment banking activities of Dean Witter Reynolds and then PaineWebber Incorporated. He began his investment banking career in 1984. He earned a BA degree in Economics and Geology from Amherst College in 1981, and an MBA degree in Finance from the University of Pennsylvania's Wharton School in 1984.

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J.C. Frey is the Registrant's Executive Vice President, Assistant Secretary, Assistant Treasurer and co-portfolio manager (since November 2010) and a Senior Managing Director of Kayne Anderson (since June 2004). He serves as portfolio manager of Kayne Anderson's various funds investing in MLP securities, including serving as a co-portfolio manager, Assistant Secretary and Assistant Treasurer of KYN since June 2004, of KYE since May 2005, and of KED since September 2006, Vice President of KYN from June 2004 through June 2008, of KYE from May 2005 through June 2008, and of KED from September 2006 through July 2008, and Executive Vice President of KYN and KYE since June 2008 and of KED since July 2008. Mr. Frey began investing in MLPs on behalf of Kayne Anderson in 1998 and has served as portfolio manager of Kayne Anderson's MLP funds since their inception in 2000. In addition to the closed-end funds, Mr. Frey manages approximately \$5 billion in assets in MLPs and midstream companies and other Kayne Anderson funds. Prior to joining Kayne Anderson in 1997, Mr. Frey was a CPA and audit manager in KPMG Peat Marwick's financial services group, specializing in banking and finance clients and loan securitizations. Mr. Frey graduated from Loyola Marymount University with a BS degree in Accounting in 1990. In 1991, he received a Master's degree in Taxation from the University of Southern California.

(a)(2)(i) and (ii) Other Accounts Managed by Portfolio Managers:

The following table reflects information regarding accounts for which the Portfolio Managers have day-to-day management responsibilities (other than the Registrant). Accounts are grouped into three categories: (i) registered investment companies, (ii) other pooled investment vehicles, and (iii) other accounts, and include accounts that pay advisory fees based on account performance shown in the separate table below under (a)(2)(iii). Information is shown as of November 30, 2015. Asset amounts are approximate and have been rounded.

Portfolio Manager	Registered Investment Companies (excluding the Registrant)		Other Pooled Investment Vehicles		Other Accounts	
	Number of Accounts	Total Assets in the Accounts (\$ in millions)	Number of Accounts	Total Assets in the Accounts (\$ in millions)	Number of Accounts	Total Assets in the Accounts (\$ in millions)
Kevin S. McCarthy	3	\$ 5,181	1	\$ 730	2	\$ 91
J.C. Frey	5	\$ 5,694	13	\$ 3,792	16	\$ 1,138

(a)(2)(iii) Other Accounts that Pay Performance-Based Advisory Fees Managed by Portfolio Managers:

The following table reflects information regarding accounts for which the Portfolio Managers have day-to-day management responsibilities (other than the Registrant) and with respect to which the advisory fee is based on the performance of the account. Information is shown as of November 30, 2015. Asset amounts are approximate and have been rounded.

Portfolio Manager	Registered Investment Companies (excluding the Registrant)		Other Pooled Investment Vehicles		Other Accounts	
	Number of Accounts	Total Assets in the Accounts (\$ in millions)	Number of Accounts	Total Assets in the Accounts (\$ in millions)	Number of Accounts	Total Assets in the Accounts (\$ in millions)
Kevin S. McCarthy		N/A	1	\$ 730	2	\$ 91
J.C. Frey		N/A	11	\$ 3,768	5	\$ 314

(a)(2)(iv) Potential Material Conflicts of Interest:

Some of the other accounts managed by Messrs. McCarthy and Frey have investment strategies that are similar to those of the Registrant. However, Kayne Anderson manages potential conflicts of interest by allocating investment opportunities in accordance with its written allocation policies and procedures.

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(a)(3) Compensation of Each Portfolio Manager:

As of November 30, 2015, Messrs. McCarthy and Frey are compensated by Kayne Anderson through partnership distributions from Kayne Anderson, based on the amount of assets they manage, and they receive a portion of the advisory fees applicable to those accounts (including the Registrant), which, with respect to certain accounts (not including the Registrant), as noted above, are based in part on the performance of those accounts.

Additional benefits received by Messrs. McCarthy and Frey are normal and customary benefits generally available to all salaried employees.

(a)(4) As of November 30, 2015, the end of the Registrant's most recently completed fiscal year, the dollar range of equity securities beneficially owned by each Portfolio Manager in the Registrant is shown below:

Kevin S. McCarthy: over \$1,000,000

J.C. Frey: \$100,001-\$500,000

Through their limited partnership interests in KACALP, which owns shares of Registrant's common stock, Messrs. McCarthy and Frey could be deemed to also indirectly own a portion of the Registrant's equity securities.

(b) Not applicable.

Item 9. Purchases of Equity Securities by Closed-End Management Investment Company and Affiliated Purchasers.

None

Item 10. Submission of Matters to a Vote of Security Holders.

None.

Item 11. Controls and Procedures.

(a) The Registrant's principal executive and principal financial officers have evaluated the Registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act")) as of a date within 90 days of the filing of this report and have concluded that the Registrant's disclosure controls and procedures are effective, as of such date, based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) or 15d-15(b) under the Exchange Act.

(b) There have been no changes in the Registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the second fiscal quarter of the period covered by this report that have materially affected, or are reasonably likely to materially affect, the Registrant's internal control over financial reporting.

Item 12. Exhibits.

(a)(1) Code of Ethics attached hereto as EX-99.CODE ETH.

(a)(2) Separate certifications of Principal Executive and Principal Financial Officers of the Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 attached hereto as EX-99.CERT.

(b) Certification of Principal Executive and Principal Financial Officers of the Registrant pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 attached hereto as EX-99.906 CERT.

(99) Proxy Voting Policies of the Registrant attached hereto as EX-99.VOTEREG.

(99) Proxy Voting Policies of the Adviser attached hereto as EX-99.VOTEADV.

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SIGNATURES

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

Date: January 28, 2016

By: /s/ KEVIN S. MCCARTHY
Kevin S. McCarthy
Chairman of the Board of Directors,

President and Chief Executive Officer

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

Date: January 28, 2016

By: /s/ KEVIN S. MCCARTHY
Kevin S. McCarthy
Chairman of the Board of Directors,

President and Chief Executive Officer

Date: January 28, 2016

By: /s/ TERRY A. HART
Terry A. Hart
Chief Financial Officer and Treasurer

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