

Kayne Anderson

Midstream/Energy Fund, Inc.



KMF Annual Report

November 30, 2019

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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.

All investments in securities involve risks, including the possible loss of principal. The value of an investment in the Fund could be volatile, and you could suffer losses of some or a substantial portion of the amount invested. The Fund’s concentration of investments in midstream entities and energy-related MLPs subjects it to the risks of midstream companies, MLPs and the energy sector, including the risks of declines in energy and commodity prices, decreases in energy demand, adverse weather conditions, natural or other disasters, changes in government regulation, and changes in tax laws. Leverage creates risks that may adversely affect return, including the likelihood of greater volatility of net asset value and market price of common shares and fluctuations in distribution rates, which increases a stockholder’s risk of loss.

Performance data quoted in this report represent past performance and are for the stated time period only. Past performance is not a guarantee of future results. Current performance may be lower or higher than that shown based on market fluctuations from the end of the reported period.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
ADOPTION OF AN OPTIONAL DELIVERY METHOD FOR SHAREHOLDER REPORTS

Rule 30e-3 Notice

Beginning on January 1, 2021, as permitted by regulations adopted by the Securities and Exchange Commission, paper copies of Kayne Anderson Midstream/Energy Fund, Inc.'s (the "Fund" or "KMF") annual and semi-annual shareholder reports will no longer be sent by mail, unless you specifically request paper copies of the reports from the Fund or from your financial intermediary, such as a broker-dealer or bank. Instead, the reports will be made available on the Fund's website (www.kaynefunds.com), and you will be notified by mail each time a report is posted and provided with a website link to access the report.

If you already elected to receive shareholder reports electronically, you will not be affected by this change and you need not take any action. You may elect to receive shareholder reports and other communications from the Fund or your financial intermediary electronically by calling the Fund at 1-877-657-3863 or contacting your financial intermediary.

You may elect to receive all future reports in paper free of charge. You can inform the Fund or your financial intermediary that you wish to continue receiving paper copies of your shareholder reports by calling the Fund at 1-877-657-3863 or contacting your financial intermediary. Your election to receive reports in paper will apply to all funds managed by KA Fund Advisors, LLC or held with your financial intermediary.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
LETTER TO STOCKHOLDERS

January 17, 2020

Dear Fellow Stockholders:

Greetings, I hope your New Year is off to a good start. I am very pleased to communicate with you in my first annual letter as the Fund's CEO. I take on this role knowing I have some enormous shoes to fill! Kevin McCarthy, our CEO until last summer, has been one of the midstream industry's most influential leaders over the last three decades. While it is never easy to follow a legend, I am excited to take on this challenge. Kevin, we thank you for your vision, leadership, and friendship. The team at Kayne Anderson promises to work hard each day to build on what you helped create. We are enthusiastic about your continued involvement in the business as Chairman of KMF's Board of Directors and Vice Chairman of Kayne Anderson.

This year's annual letter will cover a variety of topics — ranging from the Fund's performance during fiscal 2019 and our latest thoughts on KMF's distribution, to a discussion on the state of the energy industry and what we think that means for the Fund's outlook. We also discuss how the midstream sector has evolved over the last decade. A lot has changed, but we continue to believe that MLPs and Midstream Companies are compelling investments. I hope you find this discussion informative and insightful. In addition to this annual letter, we encourage investors to listen to the podcasts available on our website (www.kaynefunds.com/insights). We recently posted a new podcast, which expands on many of the subjects covered in this letter.

While we believe we have done a commendable job navigating a challenging environment, we know the last five years have not always been a pleasant experience for the Fund's investors. As discussed in this letter, we are optimistic about KMF's return prospects over the next three to five years. We are pleased with how the portfolio is currently positioned and excited about the ways the Fund is expanding its areas of focus within energy infrastructure. We believe patient, long-term investors will be rewarded.

Performance Review

Our primary measure for the Fund's performance is its Net Asset Value Return, which is equal to the change in net asset value per share plus cash distributions paid during the period (assuming reinvestment through our dividend reinvestment plan). The Fund's Net Asset Value Return was negative 2.1% for fiscal 2019. During the same time period, the total return for the Alerian US Midstream Energy Index (or the AMUS) was negative 2.9% and the Alerian Midstream Energy Select Index (or the AMEI) was 1.9%. The average Net Asset Value Return for the two closed-end funds that most closely match KMF's investment mandate was negative 10.5%. We are pleased the Fund's returns compare favorably on a relative basis to our closed-end fund peers and the AMUS but disappointed the Fund's Net Asset Value Return was negative during fiscal 2019.

The Fund's Net Asset Value Return during calendar 2019 was much better than its fiscal year results. This divergence is attributable to the midstream sector's performance in December 2019 (up 8.5%) vs. December 2018 (down 9.4%). For the twelve months ended December 31, 2019, the Fund's Net Asset Value Return was 25.3% — outperforming our fund peers (average Net Asset Value Return of 15.6%), the AMUS (total return of 15.6%) and the AMEI (total return of 22.3%).

Over the last three years, the Fund's Net Asset Value Return was negative 15.8%, which was meaningfully better than our fund peers (average Net Asset Value Return of negative 25.9%), and roughly in-line with the AMZ (total return of negative 16.1%).

Another measure of the Fund's performance is Market Return (share price change plus reinvested dividends), which was negative 4.2% for fiscal 2019. This measure is worse than our Net Asset Value

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Return partly because our stock price went from trading at a 12.8% discount to NAV at the beginning of fiscal 2019 to trading at a 14.7% discount to NAV at the end of fiscal 2019. As of the date of this letter, the Fund's stock price has increased by 12.3% since the end of fiscal 2019 and is currently trading at a 14.3% discount to NAV. We do not believe this discount to NAV is appropriate given KMF's yield (currently 8.3%) and total return prospects.

Portfolio

Over the past few years, we increased KMF's holdings of large, diversified Midstream Companies and reduced its holdings of Energy Companies with meaningful exposure to commodity prices. Given the market environment, we believed that decreasing the Fund's exposure to more commodity-sensitive sectors (including upstream credit) would best position us to generate attractive returns. More recently, the Fund established positions in other energy infrastructure (utilities and renewables). These types of companies performed very well during fiscal 2019, enabling the Fund to outperform its closed-end fund peers and the AMUS. We continue to believe these entities will generate attractive risk-adjusted returns and expect to increase our investments in the utilities and renewable sectors during 2020.

The portfolio investments that were the main drivers of KMF's absolute performance during fiscal 2019 are as follows:

Top 5 Contributors to Performance		Bottom 5 Contributors to Performance	
Name	Total Return	Name	Total Return
1. ONEOK, Inc.	21.9%	1. Enlink Midstream, LLC ⁽¹⁾	(45.9)%
2. Buckeye Partners, L.P.	47.9%	2. Plains GP Holdings, L.P.	(16.0)%
3. Enbridge, Inc.	23.5%	3. GasLog Partners LP	(29.7)%
4. TC Energy Corporation	30.7%	4. Antero Midstream Corporation	(65.4)%
5. Kinder Morgan, Inc.	20.5%	5. The Williams Companies, Inc.	(5.0)%

(1) Includes common equity and preferred equity investments.

Distributions

We understand how important distributions are to our investors, and we appreciate your desire for certainty on the Fund's distribution level. In December 2019, we indicated that the Fund plans to maintain its monthly distribution rate (\$0.075 per share) for the 12-month period ending in December 2020. Further, we indicated that management expects to recommend to the Fund's Board of Directors that it maintain the Fund's distribution at this amount for the foreseeable future. After considering historical results, our outlook for the midstream sector and the Fund's financial metrics, we have concluded that a stable distribution is the best course of action at this time. Over the longer-term, our goal is to provide investors an attractive distribution, as supported by the Fund's financial results. Management believes it is important to take a longer-term view and not focus exclusively on near-term results in determining the distribution.

Balance Sheet

Before turning to a discussion on the state of the energy industry, I would like to comment on recent market volatility and provide an update on the Fund's balance sheet. Equity prices for companies in the energy industry were volatile during 2019, in particular during late November and early December. Encouragingly, stock prices have started to recover, with the AMZ up almost 15% from its early December lows. We expect volatility levels will remain elevated during 2020. The presidential election, trade relations between the U.S. and China, the state of the global economy, and a host of other items

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(including recent events in the Middle East) are expected to contribute to this volatility. Fortunately, the Fund is well-positioned for this type of market environment. Our leverage ratios are near target levels, providing a buffer against the impact of stock price declines.

Energy Industry Update

Earlier this month, we began a new decade, and I believe now is an opportune time to reflect on what has happened in the energy industry over the last 15 years. The development of unconventional resources, or the “Shale Revolution” as we often call it, impacted the energy industry in ways that were almost unimaginable in the mid-2000s. At that time, one of the industry’s biggest concerns was importing enough crude oil, refined products, and natural gas to satisfy our domestic needs. Over the course of the last 15 years, U.S. crude oil production has increased by approximately 150%, America has become the largest producer of crude oil in the world, and we are a net exporter of petroleum products for the first time in 70 years.

However, the domestic energy industry’s success growing its production levels is only part of this story. While the U.S. economy and the American consumer have benefited greatly from cheap, plentiful supplies of energy, the same cannot be said for those who invested in the energy companies that made this happen. Put simply, shareholder returns for most energy companies over the last decade have been poor. While the Shale Revolution meaningfully exceeded expectations on volume growth, it fell well short of expectations for shareholder returns. Compounding this frustration is the energy industry’s performance relative to the overall market — it has been a record-setting decade for all major U.S. equity indices, with most at (or near) all-time highs.

I think 2019 will be remembered as the year that it became painfully obvious that “business as usual” was not a viable option for many companies in the energy industry. After several years of sub-par returns, investors (including us) are demanding management teams abandon their “growth at all costs” mindset and become much more focused on traditional financial metrics (such as corporate returns and net income). The good news, in our opinion, is that we have seen tangible signs of change over the last 12 to 18 months. Upstream companies are prioritizing capital efficiency and returns on capital employed over growth rates in production. Companies across multiple sectors within the energy industry are working hard to reduce capital expenditures in an effort to generate free cash flow and return capital to shareholders.

We believe 2020 will be an important year for the upstream industry to prove it is committed to a new (and improved) way of doing business. Of course, this financial discipline means less spending, which is expected to result in slower rates of growth. We think this is a good outcome for the industry. Stable commodity prices and modest production growth should help restore investor interest in energy companies.

The energy industry must also address another significant challenge this decade — climate change and the evolving role of carbon-based sources of energy, or fossil fuels, in our society. As the impacts of climate change have become more apparent, the use of fossil fuels is increasingly being questioned. While the positive effect that fossil fuels can have on people’s standard of living is undeniable, these benefits must be weighed against the negative impact of carbon emissions on the environment.

In last year’s letter, we discussed the impact that growing opposition to fossil fuels was having on the industry. This opposition gained momentum during 2019 — one needs to look no further than the energy-related proposals being endorsed by many of the Democratic Party’s presidential candidates. Most of these proposals are not practicable, in our opinion, but it does highlight the need for the energy industry to redouble its efforts to better educate the public on the critical role it plays in our society. It

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also serves as a powerful reminder to management teams that investors expect them to act as responsible stewards of our environment. The introduction of sustainability-related compensation metrics and annual ESG reports by many energy companies is an important step forward.

As demand for energy increases in the coming decades, the world's supply needs to transition from one that is predominately fossil-fuel based to a sustainable mix of renewable and conventional energy. As a large investor in both public and private renewable energy infrastructure, Kayne Anderson is actively involved in this development, which we and others often refer to as the "energy transition." We think this will be the industry's most significant trend over the next decade and, as such, have increased our allocation to companies in the utility and renewable sectors by 10% over the last year. We view renewable energy infrastructure as a core part of the Fund's investment mandate and plan to increase our exposure to these types of companies over the next few years.

The Changing Midstream Landscape

The size and complexity of the midstream sector have grown dramatically over the last 15 years. Principally as a result of the Shale Revolution (and rapidly growing domestic production), hundreds of billions of dollars were spent building pipelines, terminals, processing plants, fractionators, and other logistics assets to ensure that these products flowed from the wellhead to the end-user. More recently, significant amounts of capital have been spent to facilitate the export of energy-related commodities to the rest of the world. During this time period, our country's energy infrastructure had to be transformed to facilitate the shift from an import-oriented industry to one that is more export-oriented. Kudos to management teams in the midstream sector — a considerable amount of ingenuity and resourcefulness was required to make this happen.

Another area where the midstream sector has changed is the typical business structure for publicly-traded companies. In the mid-2000s, it was relatively straightforward — if you owned midstream assets and wanted to access the public markets, you did so as an MLP. Most publicly-traded midstream companies were structured as MLPs because these types of companies had the best valuations, the best access to capital, and paid no taxes. The number of MLPs more than tripled from 2004 to 2014 — at times, it felt like every energy company wanted to be an MLP. Today, a much more significant percentage of midstream assets are owned by companies structured as taxable corporations (as opposed to partnerships). Simplification transactions between MLPs and Midstream Companies over the last five years — which we have written about extensively in prior annual letters — helped facilitate this shift from partnership format to corporate structures. This trend has enabled the Fund to invest in a broader set of midstream assets while keeping its allocation to MLPs constant at roughly 25% of total investments.

With the benefit of hindsight, it is now clear that many of these simplification transactions needed to occur in response to the commodity price downturn that began in 2014. It is also clear that modifications to the MLP structure were necessary to better align the interests of management teams and investors (including, for example, eliminating incentive distribution rights, improving corporate governance, and reducing dependence on the capital markets to finance growth projects). I think it is worth mentioning that we continue to be proponents of the MLP structure. In our opinion, it remains an attractive alternative for companies in the midstream sector.

After record financial results over the last two years, the midstream industry enters 2020 on sound financial footing. Asset sales, joint ventures, and improved financial results have enabled companies to reduce their leverage ratios. Distribution coverage ratios are healthy, and companies are much less reliant on external sources of financing to fund growth projects. Quite a bit of progress has been made

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
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since 2016. Unfortunately, stock prices for many companies in the sector do not seem to fully reflect these accomplishments, but we expect that to change over the next year or two.

While most of the hard work is complete, there are a couple of areas that the midstream sector needs to address this year. The most pressing item, in our opinion, is capital spending levels. As production growth slows, less capital needs to be spent building new midstream assets. Importantly, midstream investors are less focused on growth and would rather see fiscal discipline. Another area that requires attention is corporate governance. We will continue to push companies to have independent boards elected by their shareholders as well as incentive structures that provide an alignment of interest with shareholders.

Outlook

It has been quite a journey since KMF's initial public offering in the fall of 2010. The energy industry has enjoyed some incredible successes and, more recently, felt the brunt of investors' ire. We believe the energy industry is taking the right steps to restore investor confidence.

Our outlook for the midstream industry in 2020 is positive. The sector had record financial results in 2019 — we expect results to be strong this year as well, as companies benefit from new assets being placed into service and a continuation of volume growth. The sector's transformation is mostly complete, and we believe MLPs and Midstream Companies are well-positioned to outperform this year. We expect market valuations to better reflect the sector's improved financial health and strong operating results. Additionally, the compelling macro trends supporting renewable energy infrastructure show no signs of abating, and we believe our holdings in the space are poised to continue to outperform in 2020. We expect our allocation to companies in the utility and renewable sectors will increase this year.

Let me provide some facts to support this bullish outlook: The companies in KMF's portfolio (on a weighted average basis) trade at a multiple of 11.0x Enterprise Value to 2020 EBITDA, have a current yield of 6.8% and a distribution coverage ratio of 1.4x. We expect KMF's portfolio investments to grow distributable cash flow per share at a rate of approximately 6% annually over the next two years. Our outlook for distribution growth is more conservative than our projections for growth in distributable cash flow — we believe many companies in the midstream sector will opt to use their excess cash flow to reduce debt and fund capital expenditures. We expect investors to react positively to these actions. Lastly, roughly 60% of the portfolio is invested in companies with an investment-grade credit rating. We find these financial metrics compelling — particularly in an environment where many believe low interest rates are the “new normal” and stocks are trading at record levels.

We are excited about what is in store for the Fund over the next decade. I have little doubt that it will bring even more changes to the midstream sector and the role of energy infrastructure. Importantly, the Fund is very well positioned to capitalize on these changes. The Fund will continue to expand the types of energy infrastructure it invests in as we believe investors will benefit from this diversity.

**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
LETTER TO STOCKHOLDERS**

We appreciate your investment in the Fund and look forward to executing on our investment objective of achieving high-level total returns with an emphasis on making cash distributions to our stockholders. Please do not hesitate to contact us with any questions or comments.

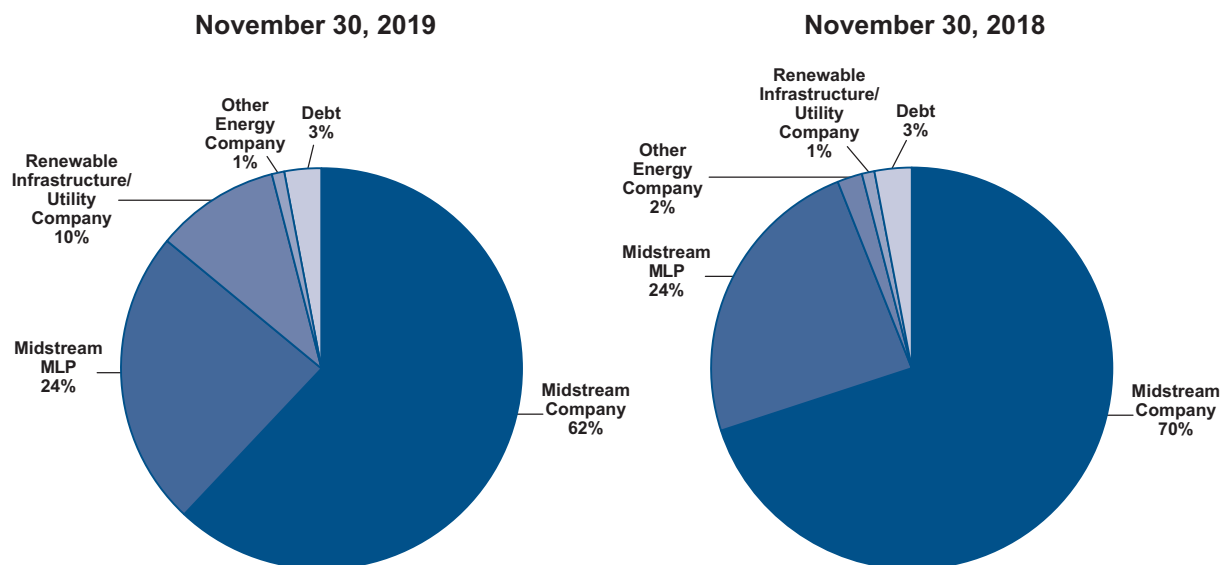
Sincerely,

A handwritten signature in black ink, appearing to read "James Baker". The signature is written in a cursive, flowing style.

James C. Baker
President and Chief Executive Officer

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
PORTFOLIO SUMMARY
(UNAUDITED)

Portfolio of Long-Term Investments by Category⁽¹⁾



Top 10 Holdings by Issuer

Holding	Category ⁽¹⁾	Percent of Long Term Investments as of November 30,	
		2019	2018
1. The Williams Companies, Inc.	Midstream Company	8.5%	7.5%
2. ONEOK, Inc.	Midstream Company	7.4	9.5
3. Plains GP Holdings, L.P. ⁽²⁾	Midstream Company	6.5	7.1
4. Kinder Morgan, Inc.	Midstream Company	6.0	4.6
5. TC Energy Corporation ⁽³⁾	Midstream Company	5.7	2.6
6. Enterprise Products Partners L.P.	Midstream MLP	5.2	2.9
7. Enbridge Inc. ⁽⁴⁾	Midstream Company	5.0	7.7
8. Pembina Pipeline Corporation	Midstream Company	4.7	4.3
9. Targa Resources Corp.	Midstream Company	4.3	7.5
10. KNOT Offshore Partners LP	Midstream Company	4.3	3.8

(1) See Glossary of Key Terms for definitions. Midstream Company category includes Midstream Companies engaged in marine transportation (9% as of November 30, 2019 and 15% as of November 30, 2018).

(2) Our investment includes our holdings of Plains GP Holdings, L.P. (“PAGP”) and our interest in Plains AAP, L.P. (“PAGP-AAP”). Our ownership of PAGP-AAP is exchangeable on a one-for-one basis into either PAGP shares or Plains All American Pipeline, L.P. units at our option.

(3) On May 3, 2019, TransCanada Corporation changed its name to TC Energy Corporation.

(4) As of November 30, 2018, our combined ownership of Enbridge, Inc. (“ENB”) and Energy Management, L.L.C. (“EEQ”) represented 7.7% of long-term investments (these securities represented 2.6% and 5.1% of long-term investments, respectively).

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
MANAGEMENT DISCUSSION
(UNAUDITED)

Fund Overview

Kayne Anderson Midstream/Energy Fund, Inc. (“KMF”) is a non-diversified, closed-end fund that commenced operations in November 2010. Our investment objective is to provide a high level of total return with an emphasis on making 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, 2019, we had total assets of \$813 million, net assets applicable to our common stockholders of \$534 million (net asset value of \$11.31 per share), and 47.2 million shares of common stock outstanding. As of November 30, 2019, we held \$751 million in equity investments and \$23 million in debt investments.

Recent Events

January, February and March Distributions and Guidance

On December 18, 2019, we announced monthly distributions of \$0.075 per share for each of January, February and March 2020. We plan to maintain the monthly distribution at \$0.075 per share for the next 12 months (through the distribution to be paid in December 2020). Beyond this 12-month guidance period, management expects to recommend to our Board of Directors that we maintain our distribution at its current level for the foreseeable future.

Results of Operations — For the Three Months Ended November 30, 2019

Investment Income. Investment income totaled \$4.0 million for the quarter and consisted primarily of net dividends and distributions and interest income on our investments. We received \$14.2 million of dividends and distributions, of which \$10.5 million was treated as return of capital and \$0.1 million was treated as distributions in excess of cost basis. Interest income was \$0.4 million.

Operating Expenses. Operating expenses totaled \$5.7 million, including \$2.6 million of investment management fees, \$2.0 million of interest expense, \$0.7 million of preferred stock distributions and \$0.4 million of other operating expenses. Interest expense includes \$0.2 million of non-cash amortization of debt issuance costs. Preferred stock distributions include \$0.05 million of non-cash amortization.

Net Investment Loss. Our net investment loss totaled \$1.7 million.

Net Realized Losses. We had net realized losses of \$3.7 million, which included \$0.2 million of net realized gains from option activity.

Net Change in Unrealized Gains. We had a net decrease in unrealized gains of \$28.5 million from investments.

Net Decrease in Net Assets Resulting from Operations. As a result of the above, we had a decrease in net assets resulting from operations of \$33.9 million.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
MANAGEMENT DISCUSSION
(UNAUDITED)

Results of Operations — For the Fiscal Year Ended November 30, 2019

Investment Income. Investment income totaled \$19.3 million for the year and consisted primarily of net dividends and distributions and interest income on our investments. We received \$60.2 million of dividends and distributions, of which \$42.1 million was treated as return of capital and \$0.6 million was treated as distributions in excess of cost basis. Return of capital was increased by \$2.7 million and distributions in excess of cost basis was increased by \$0.1 million due to 2018 tax reporting information that was received in fiscal 2019. Interest income was \$1.8 million.

Operating Expenses. Operating expenses totaled \$23.9 million, including \$11.1 million of investment management fees, \$8.1 million of interest expense, \$3.1 million of preferred stock distributions and \$1.6 million of other operating expenses. Interest expense includes \$0.7 million of non-cash amortization of debt issuance costs. Preferred stock distributions includes \$0.2 million of non-cash amortization.

Net Investment Loss. Our net investment loss totaled \$4.6 million.

Net Realized Gains. We had net realized gains of \$9.1 million, which includes \$0.9 million of net realized gains from option activity.

Net Change in Unrealized Gains. We had a net decrease in unrealized gains of \$20.8 million.

Net Decrease in Net Assets Resulting from Operations. As a result of the above, we had a decrease in net assets resulting from operations of \$16.3 million.

Distributions to Common Stockholders

Net distributable income (“NDI”) is the amount of income received by us from our portfolio investments less operating expenses, subject to certain adjustments as described below. Our distributions have been funded generally by NDI and it is one of several items considered by our Board of Directors in setting our distribution to common stockholders. 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, (b) other expenses (mostly comprised of fees paid to other service providers), (c) accrual for estimated excise taxes (if any) and (d) interest expense and preferred stock distributions.

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, 2019	Fiscal Year Ended November 30, 2019
Distributions and Other Income from Investments		
Dividends	\$ 14.2	\$ 60.2
Interest	0.5	1.9
Net Premiums Received from Call Options Written	0.3	1.1
Total Distributions and Other Income from Investment	15.0	63.2
Expenses		
Investment Management Fee	(2.6)	(11.1)
Other Expenses	(0.4)	(1.6)
Interest Expense	(1.9)	(7.5)
Preferred Stock Distributions	(0.7)	(2.9)
Net Distributable Income (NDI)	\$ 9.4	\$ 40.1
Weighted Shares Outstanding	47.2	47.9
NDI per Weighted Share Outstanding	\$0.198	\$0.836
Distribution paid per Common Share⁽¹⁾	\$0.225	\$0.900
	Quarterly rate	Annual rate
Distribution Guidance per Common Share⁽²⁾	\$0.225	\$0.900

(1) The three months ended November 30, 2019, consists of monthly distributions of \$0.075 per common share paid, or to be paid, December 31, 2019, January 31, 2020, and February 28, 2020. The fiscal year ended November 30, 2019, consists of monthly distributions of \$0.075 per common share paid, or to be paid, March 29, 2019, April 30, 2019, May 31, 2019, June 28, 2019, July 31, 2019, August 30, 2019, September 30, 2019, October 31, 2019, November 29, 2019, December 31, 2019, January 31, 2020, and February 28, 2020.

(2) Based on a monthly distribution of \$0.075 per common share (\$0.90 per common share annualized).

Payment of future distributions is subject to Board of Directors approval, as well as meeting the covenants on our debt agreements and terms of our preferred stock. We plan to maintain the monthly distribution at \$0.075 per share for the next 12 months (through the distribution to be paid in December 2020). Beyond this 12-month guidance period, management expects to recommend to our Board of Directors that we maintain our distribution at its current level for the foreseeable future.

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:

- A significant portion of the cash distributions received from our investments is characterized as return of capital. For GAAP purposes, return of capital distributions are excluded from investment income, whereas the NDI calculation includes the return of capital portion of such distributions.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
MANAGEMENT DISCUSSION
(UNAUDITED)

- GAAP recognizes distributions received from our investments that exceed the cost basis of our securities to be realized gains and are therefore excluded from investment income, whereas the NDI calculation includes these 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.
- Certain of our investments in debt securities were purchased at a discount or premium to the par value of such security. When making such investments, we consider the security's yield to maturity, which factors in the impact of such discount (or premium). Interest income reported under GAAP includes the non-cash accretion of the discount (or amortization of the premium) based on the effective interest method. When we calculate interest income for purposes of determining NDI, in order to better reflect the yield to maturity, the accretion of the discount (or amortization of the premium) is calculated on a straight-line basis to the earlier of the expected call date or the maturity date of the debt security.
- We may sell covered call option contracts to generate income or to reduce our ownership of certain securities that we hold. In some cases, we are able to repurchase these call option contracts at a price less than the call premium that we received, thereby generating a profit. The premium we receive from selling call options, less (i) the amount that we pay to repurchase such call option contracts and (ii) the amount by which the market price of an underlying security is above the strike price at the time a new call option is written (if any), is included in NDI. For GAAP purposes, premiums received from call option contracts sold are not included in investment income. See Note 2 — Significant Accounting Policies for a full discussion of the GAAP treatment of option contracts.

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

- The non-cash amortization or write-offs of capitalized debt issuance costs and preferred stock offering costs related to our financings is included in interest expense and distributions on preferred stock for GAAP purposes, but is excluded from our calculation of NDI.
- NDI also includes recurring payments (or receipts) on interest rate swap contracts or the amortization of termination payments on interest rate swap contracts entered into in anticipation of an offering of unsecured notes ("Notes") or mandatory redeemable preferred stock ("MRP Shares"). The termination payments on interest rate swap contracts are amortized over the term of the Notes or MRP Shares issued. For GAAP purposes, these amounts are included in the realized gains/losses section of the Statement of Operations.
- Under GAAP, excise taxes are accrued when probable and estimable. For NDI, we exclude excise tax that is unrelated to the current fiscal period.
- For GAAP purposes, offering costs incurred related to the issuance of common stock reduce paid-in capital when stock is issued. Certain costs related to registration statements or shelf offerings may be written off once the registration statement or prospectus' usefulness has expired. The non-cash amortization or write-off of these offering costs is included in operating expense for GAAP purposes, but is excluded from our calculation of NDI.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
MANAGEMENT DISCUSSION
(UNAUDITED)

Liquidity and Capital Resources

At November 30, 2019, we had total leverage outstanding of \$276 million, which represented 34% of total assets. Total leverage was comprised of \$201 million of Notes and \$75 million of MRP Shares. At November 30, 2019, we did not have any borrowings outstanding under our unsecured revolving credit facility (the "Credit Facility") and we had \$36 million of cash and cash equivalents. As of January 17, 2020, we had no borrowings outstanding under our Credit Facility and we had \$21 million of cash and cash equivalents.

Our Credit Facility has a 364-day term, maturing on February 7, 2020 and a total commitment amount of \$100 million. The interest rate on outstanding borrowings under the Credit Facility may vary between LIBOR plus 1.30% and LIBOR plus 1.95%, depending on our asset coverage ratios. We pay a fee of 0.20% per annum on any unused amounts of the Credit Facility. We expect to renew this facility by its maturity date.

At November 30, 2019, we had \$201 million of Notes outstanding that mature between 2020 and 2025, and we had \$75 million of MRP Shares outstanding that are subject to mandatory redemption between 2021 and 2024. We expect to have sufficient borrowing capacity on our Credit Facility to refinance the \$24.5 million of Notes that mature in 2020.

At November 30, 2019, our asset coverage ratios under the Investment Company Act of 1940, as amended (the "1940 Act"), were 403% for debt and 294% for total leverage (debt plus preferred stock). As of January 17, 2020, our asset coverage ratios were 434% for debt and 316% for total leverage. Our target asset coverage ratio with respect to our debt is 430%. At times we may be above or below this target depending on market conditions as well as certain other factors, including our target total leverage asset coverage ratio of 320% and the basic maintenance amount as stated in our rating agency guidelines.

As of November 30, 2019, our total leverage consisted 100% of fixed rate obligations. At such date, the weighted average interest/dividend rate on our total leverage was 3.72%.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2019
(amounts in 000's, except number of option contracts)

<u>Description</u>	<u>No. of Shares/Units</u>	<u>Value</u>
Long-Term Investments — 144.9%		
Equity Investments⁽¹⁾ — 140.6%		
United States — 108.5%		
Midstream Companies⁽²⁾ — 65.2%		
Antero Midstream Corporation	693	\$ 3,175
Cheniere Energy, Inc. ⁽³⁾⁽⁴⁾	139	8,415
EnLink Midstream, LLC	496	2,357
EnLink Midstream Partners, LP — Series C Preferred Units ⁽⁵⁾	8,605	4,332
Equitrans Midstream Corporation	250	2,492
GasLog Partners LP ⁽⁶⁾	1,289	18,751
Höegh LNG Partners LP ⁽⁶⁾	1,062	16,423
Kinder Morgan, Inc.	2,369	46,455
KNOT Offshore Partners LP ⁽⁶⁾	1,709	32,922
ONEOK, Inc. ⁽⁴⁾	810	57,520
Plains GP Holdings, L.P. ⁽⁶⁾⁽⁷⁾	2,205	38,527
Plains GP Holdings, L.P. — Plains AAP, L.P. ⁽⁶⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾	690	12,047
Rattler Midstream LP ⁽⁶⁾	343	5,452
Targa Resources Corp.	903	32,995
The Williams Companies, Inc.	2,906	66,031
		<u>347,894</u>
Midstream MLPs⁽²⁾⁽¹⁰⁾ — 34.6%		
BP Midstream Partners LP	342	4,990
Cheniere Energy Partners, L.P.	178	6,899
DCP Midstream, LP	451	9,510
Energy Transfer LP	2,588	30,564
Enterprise Products Partners L.P.	1,532	40,334
EQM Midstream Partners, LP — Convertible Preferred Units ⁽⁸⁾⁽¹¹⁾⁽¹²⁾	205	9,387
Global Partners LP	450	9,013
Hess Midstream Partners LP	100	2,045
Magellan Midstream Partners, L.P.	354	20,704
MPLX LP	639	15,120
Phillips 66 Partners LP	263	14,672
Shell Midstream Partners, L.P.	519	10,208
TC PipeLines, LP	64	2,484
Western Midstream Partners, LP	511	9,055
		<u>184,985</u>
Renewable Infrastructure/Utility Companies — 8.2%		
Atlantica Yield plc	493	12,781
NextEra Energy, Inc. ⁽⁴⁾	42	9,891
NextEra Energy Partners, LP ⁽⁶⁾	250	13,304
Sempra Energy ⁽⁴⁾	52	7,658
		<u>43,634</u>
Other Energy Company — 0.5%		
Phillips 66 ⁽⁴⁾	25	2,845
Total United States (Cost — \$625,051)		<u>579,358</u>

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2019
(amounts in 000's, except number of option contracts)

Description	No. of Shares/Units	Value
Canada — 32.1%		
Midstream Companies⁽²⁾ — 25.2%		
Enbridge Inc.	1,020	\$ 38,750
Inter Pipeline Ltd.	142	2,352
Keyera Corp.	547	13,335
Pembina Pipeline Corporation	1,037	36,302
TC Energy Corporation	863	43,932
		134,671
Renewable Infrastructure/Utility Companies — 6.3%		
Algonquin Power & Utilities Corp.	161	2,255
Brookfield Renewable Partners L.P.	420	19,500
Innergex Renewable Energy Inc.	174	2,238
Northland Power Inc.	343	7,107
TransAlta Renewables Inc.	197	2,225
		33,325
Other Energy Company — 0.6%		
Jupiter Resources Inc. ⁽³⁾⁽⁸⁾⁽¹¹⁾	1,229	3,379
		171,375
Total Canada (Cost — \$159,829)		171,375
Total Equity Investments (Cost — \$784,880)		750,733
	Interest	Maturity
	Rate	Date
		Principal
		Amount
Debt Instruments — 4.3%		
United States — 4.3%		
Upstream — 0.7%		
Ascent Resources Utica Holdings, LLC ⁽⁸⁾	7.000%	11/1/26
		\$ 5,000
		3,864
Midstream Companies⁽²⁾ — 3.6%		
Antero Midstream Corporation ⁽⁸⁾	5.750	3/1/27
Antero Midstream Corporation ⁽⁸⁾	5.750	1/15/28
Crestwood Holdings LLC ⁽⁸⁾	(13)	3/6/23
EnLink Midstream, LLC	5.375	6/1/29
		2,500
		2,124
		19,333
Total Debt Investments (Cost — \$24,102)		23,197
Total Long-Term Investments (Cost — \$808,982)		773,930
	No. of	
	Shares/Units	
Short-Term Investment — Money Market Fund — 6.4%		
JPMorgan 100% U.S. Treasury Securities Money Market Fund — Capital Shares, 1.50% ⁽¹⁴⁾ (Cost — \$34,230)	34,230	34,230
Total Investments — 151.3% (Cost — \$843,212)		808,160

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2019
(amounts in 000's, except number of option contracts)

Description	Strike Price	Expiration Date	No. of Contracts	Notional Amount ⁽¹⁵⁾	Value
Liabilities					
Call Option Contracts Written⁽³⁾					
United States					
Midstream Companies					
Cheniere Energy, Inc.	\$65.00	1/17/20	200	\$1,211	\$ (11)
ONEOK, Inc.	72.50	12/20/19	500	3,553	(32)
					(43)
Renewable Infrastructure/Utility Companies					
NextEra Energy, Inc.	240.00	12/20/19	100	2,338	(11)
Sempra Energy	150.00	12/20/19	250	3,682	(20)
					(31)
Other Energy Company					
Phillips 66	120.00	12/20/19	50	574	(2)
Phillips 66	120.00	1/17/20	150	1,721	(18)
					(20)
					(94)
Total Call Option Contracts Written (Premiums Received — \$125)					(94)
Debt					(200,923)
Mandatory Redeemable Preferred Stock at Liquidation Value					(75,000)
Other Assets in Excess of Other Liabilities					1,814
Net Assets Applicable to Common Stockholders					\$ 533,957

- (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) Security is non-income producing.
- (4) Security or a portion thereof is segregated as collateral on option contracts written.
- (5) Series C Preferred Units are cumulative redeemable perpetual units. Distributions on the Series C Preferred Units are payable at a rate of 6.0% per annum through December 15, 2022. On and after December 15, 2022, the rate will be based on three-month LIBOR, determined quarterly, plus 4.11%.
- (6) This company is structured like an MLP, but is not treated as a publicly-traded partnership for regulated investment company ("RIC") qualification purposes.
- (7) The Fund believes that it is an affiliate of Plains AAP, L.P. ("PAGP-AAP") and Plains GP Holdings, L.P. ("PAGP"). See Note 5 — Agreements and Affiliations.
- (8) The Fund's ability to sell this security is subject to certain legal or contractual restrictions. As of November 30, 2019, the aggregate value of restricted securities held by the Fund was \$45,886 (5.6% of total assets), which included \$33,120 of Level 2 securities and \$12,766 of Level 3 securities. See Note 7 — Restricted Securities.
- (9) The Fund's ownership of PAGP-AAP is exchangeable on a one-for-one basis into either PAGP shares or Plains All American Pipeline, L.P. ("PAA") units at the Fund's option. The Fund values its PAGP-AAP investment on an "as exchanged" basis based on the higher public market value of either PAGP or PAA. As of November 30, 2019, the Fund's PAGP-AAP investment is valued at PAGP's closing price. See Notes 3 and 7 in Notes to Financial Statements.

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2019
(amounts in 000's, except number of option contracts)

- (10) 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 22.8% of its total assets invested in publicly-traded partnerships at November 30, 2019. It is the Fund's intention to be treated as a RIC for tax purposes.
- (11) Fair valued security. See Notes 2 and 3 in Notes to Financial Statements.
- (12) On April 10, 2019, the Fund purchased, in a private placement, Series A Convertible Preferred Units ("EQM Convertible Preferred Units") from EQM Midstream Partners, LP ("EQM"). The EQM Convertible Preferred Units are senior to the common units in terms of liquidation preference and priority of distributions and pay a quarterly distribution of \$1.04 per unit (subject to an upward adjustment after five years). The EQM Convertible Preferred Units have a one-year lock-up through April 10, 2020. Holders of the EQM Convertible Preferred Units may convert on a one-for-one basis to EQM common units any time after April 10, 2021.
- (13) Floating rate first lien senior secured term loan. Security pays interest at a rate of LIBOR + 750 basis points with a 1.00% LIBOR floor (9.27% as of November 30, 2019).
- (14) The rate indicated is the yield as of November 30, 2019.
- (15) The notional amount of call option contracts written is the product of (a) the number of contracts written, (b) 100 (each contract entitles the option holder to 100 units/shares) and (c) the market price of the underlying security as of November 30, 2019.

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
STATEMENT OF ASSETS AND LIABILITIES
NOVEMBER 30, 2019
(amounts in 000's, except share and per share amounts)

ASSETS

Investments, at fair value:	
Non-affiliated (Cost — \$719,257)	\$ 723,356
Affiliated (Cost — \$89,725)	50,574
Short-term investments (Cost — \$34,230)	34,230
Cash	2,155
Deposits with brokers	281
Interest, dividends and distributions receivable (Cost — \$2,072)	2,071
Deferred credit facility and term loan offering costs and other assets	313
Total Assets	<u>812,980</u>

LIABILITIES

Investment management fee payable	840
Accrued directors' fees	66
Call option contracts written (Premiums received — \$125)	94
Accrued expenses and other liabilities	3,123
Notes	200,923
Unamortized notes issuance costs	(520)
Mandatory redeemable preferred stock, \$25.00 liquidation value per share (3,000,000 shares issued and outstanding)	75,000
Unamortized mandatory redeemable preferred stock issuance costs	(503)
Total Liabilities	<u>279,023</u>

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS \$ 533,957

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS CONSIST OF

Common stock, \$0.001 par value (47,197,462 shares issued and outstanding, 197,000,000 shares authorized)	\$ 47
Paid-in capital	816,352
Total distributable earnings (loss)	<u>(282,442)</u>

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS \$ 533,957

NET ASSET VALUE PER COMMON SHARE \$ 11.31

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
STATEMENT OF OPERATIONS
FOR THE FISCAL YEAR ENDED NOVEMBER 30, 2019
(amounts in 000's)

INVESTMENT INCOME

Income

Dividends and distributions:	
Non-affiliated investments	\$ 55,940
Affiliated investments	3,995
Money market mutual funds	<u>207</u>
Total dividends and distributions (after foreign taxes withheld of \$1,131)	60,142
Return of capital	(42,070)
Distributions in excess of cost basis	<u>(596)</u>
Net dividends and distributions	17,476
Interest income	<u>1,810</u>
Total Investment Income	<u>19,286</u>

Expenses

Investment management fees	11,052
Professional fees	494
Administration fees	272
Directors' fees	253
Reports to stockholders	192
Insurance	151
Custodian fees	76
Other expenses	<u>187</u>
Total Expenses — before interest expense and preferred distributions	12,677
Interest expense including amortization of offering costs	8,118
Distributions on mandatory redeemable preferred stock including amortization of offering costs	<u>3,097</u>
Total Expenses	<u>23,892</u>

Net Investment Loss (4,606)

REALIZED AND UNREALIZED GAINS (LOSSES)

Net Realized Gains (Losses)

Investments — non-affiliated	8,257
Foreign currency transactions	(34)
Options	<u>855</u>
Net Realized Gains	<u>9,078</u>

Net Change in Unrealized Gains (Losses)

Investments — non-affiliated	(9,913)
Investments — affiliated	(10,902)
Foreign currency translations	(1)
Options	<u>32</u>
Net Change in Unrealized Losses	<u>(20,784)</u>

Net Realized and Unrealized Losses (11,706)

NET DECREASE IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS

RESULTING FROM OPERATIONS \$(16,312)

See accompanying notes to financial statements.

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,	
	2019	2018
OPERATIONS		
Net investment loss ⁽¹⁾	\$ (4,606)	\$ (4,562)
Net realized gains (losses)	9,078	(8,281)
Net change in unrealized losses	(20,784)	(55,070)
Net Decrease in Net Assets Resulting from Operations	(16,312)	(67,913)
DIVIDENDS AND DISTRIBUTIONS TO COMMON STOCKHOLDERS⁽²⁾		
Dividends	—	(2,884)
Distributions — return of capital	(44,335)	(31,610)
Dividends and Distributions to Common Stockholders	(44,335)	(34,494)
CAPITAL STOCK TRANSACTIONS		
Issuance of 26,844,329 shares of common stock in connection with the merger of Kayne Anderson Energy Total Return Fund, Inc.	—	405,460
Offering expenses associated with the issuance of common stock in merger	—	(293) ⁽³⁾
Common stock purchased under the share repurchase program (1,681,037 shares)	(19,999)	—
Net Increase (Decrease) in Net Assets Applicable to Common Stockholders from Capital Stock Transactions	(19,999)	405,167
Total Increase (Decrease) in Net Assets Applicable to Common Stockholders	(80,646)	302,760
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS		
Beginning of year	614,603	311,843
End of year	\$533,957	\$614,603

- (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 loss. See Note 2 — Significant Accounting Policies. Distributions in the amount of \$2,907 paid to holders of MRP Shares for the fiscal year ended November 30, 2019 were characterized as dividends (\$1,011) and as return of capital (\$1,896). Distributions in the amount of \$1,912 paid to holders of MRP Shares for the fiscal year ended November 30, 2018 were characterized as dividends. A portion of the distributions characterized as dividends for the fiscal years ended November 30, 2019 and 2018 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, 2019 and 2018 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.
- (3) Represents offering costs incurred in connection with the merger of Kayne Anderson Energy Total Return Fund, Inc.

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
STATEMENT OF CASH FLOWS
FOR THE FISCAL YEAR ENDED NOVEMBER 30, 2019
(amounts in 000's)

CASH FLOWS FROM OPERATING ACTIVITIES

Net decrease in net assets resulting from operations	\$ (16,312)
Adjustments to reconcile net decrease in net assets resulting from operations to net cash provided by operating activities:	
Return of capital distributions	42,070
Distributions in excess of cost basis	596
Net realized gains (excluding foreign currency transactions)	(9,112)
Net change in unrealized losses (excluding foreign currency translations)	20,783
Accretion of bond discounts, net	(331)
Purchase of long-term investments	(260,947)
Proceeds from sale of long-term investments	341,951
Purchase of short-term investments, net	(32,343)
Increase in deposits with brokers	(35)
Decrease in receivable for securities sold	1,249
Decrease in interest, dividends and distributions receivable	782
Amortization of deferred debt offering costs	651
Amortization of mandatory redeemable preferred stock offering costs	190
Decrease in other assets	21
Decrease in investment management fee payable	(115)
Increase in premiums received on call option contracts written	96
Decrease in accrued directors' fees	(8)
Decrease in accrued expenses and other liabilities	(292)
Net Cash Provided by Operating Activities	<u>88,894</u>

CASH FLOWS FROM FINANCING ACTIVITIES

Decrease in borrowings under credit facility	(24,000)
Shares of common stock repurchased	(19,999)
Costs associated with renewal of credit facility	(405)
Cash distributions paid to common stockholders	<u>(44,335)</u>
Net Cash Used in Financing Activities	<u>(88,739)</u>

NET CHANGE IN CASH	155
CASH — BEGINNING OF YEAR	<u>2,000</u>
CASH — END OF YEAR	<u>\$ 2,155</u>

Supplemental disclosure of cash flow information:

During the fiscal year ended November 30, 2019, interest paid related to debt obligations was \$7,490.

See accompanying notes to financial statements.

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,			
	2019	2018	2017	2016
Per Share of Common Stock⁽¹⁾				
Net asset value, beginning of period	\$ 12.57	\$ 14.15	\$ 17.41	\$ 17.56
Net investment income (loss) ⁽²⁾	(0.10)	(0.18)	0.14	(0.07)
Net realized and unrealized gains (losses)	(0.29)	(0.19)	(2.10)	1.43
Total income (loss) from operations	(0.39)	(0.37)	(1.96)	1.36
Common dividends — dividend income ⁽³⁾	—	(0.10)	(0.03)	(1.50)
Common distributions — long-term capital gains ⁽³⁾	—	—	—	—
Common distributions — return of capital ⁽³⁾	(0.93)	(1.10)	(1.27)	—
Total dividends and distributions — common	(0.93)	(1.20)	(1.30)	(1.50)
Offering expenses associated with the issuance of common stock	—	(0.01) ⁽⁵⁾	—	—
Effect of shares issued in reinvestment of distributions	—	—	—	(0.01)
Effect of issuance of common stock	—	—	—	—
Effect of common stock repurchased	0.06	—	—	—
Net asset value, end of period	<u>\$ 11.31</u>	<u>\$ 12.57</u>	<u>\$ 14.15</u>	<u>\$ 17.41</u>
Market value per share of common stock, end of period	<u>\$ 9.65</u>	<u>\$ 10.96</u>	<u>\$ 12.88</u>	<u>\$ 15.33</u>
Total investment return based on common stock market value ⁽⁶⁾	(4.2)%	(6.7)%	(8.7)%	12.7%
Total investment return based on net asset value ⁽⁸⁾	(2.1)%	(2.6)%	(11.7)%	12.7%
Supplemental Data and Ratios⁽⁹⁾				
Net assets applicable to common stockholders, end of period	\$ 533,957	\$ 614,603	\$ 311,843	\$ 383,557
Ratio of expenses to average net assets				
Management fees ⁽¹⁰⁾	1.8%	1.8%	1.7%	1.8%
Other expenses	0.3	0.4	0.4	0.5
Subtotal	2.1	2.2	2.1	2.3
Interest expense and distributions on mandatory redeemable preferred stock ⁽²⁾	1.9	1.8	1.7	3.8
Management fee waiver	—	—	—	—
Excise taxes	—	—	—	—
Total expenses	<u>4.0%</u>	<u>4.0%</u>	<u>3.8%</u>	<u>6.1%</u>
Ratio of net investment income (loss) to average net assets ⁽²⁾	(0.8)%	(1.1)%	0.9%	(0.5)%
Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets	(2.7)%	(16.1)%	(11.9)%	10.3%
Portfolio turnover rate	30.0%	21.9%	25.5%	48.2%
Average net assets	\$ 604,030	\$ 420,605	\$ 360,869	\$ 314,015
Notes outstanding, end of period ⁽¹¹⁾	\$ 200,923	\$ 200,923	\$ 91,000	\$ 91,000
Credit facility outstanding, end of period ⁽¹¹⁾	\$ —	\$ 24,000	\$ —	\$ —
Term loan outstanding, end of period ⁽¹¹⁾	\$ —	\$ —	\$ —	\$ 27,000
Mandatory redeemable preferred stock, end of period ⁽¹¹⁾	\$ 75,000	\$ 75,000	\$ 35,000	\$ 35,000
Average shares of common stock outstanding	47,903,748	30,639,065	22,034,170	21,975,582
Asset coverage of total debt ⁽¹²⁾	403.1%	406.6%	481.1%	454.7%
Asset coverage of total leverage (debt and preferred stock) ⁽¹³⁾	293.5%	304.9%	347.5%	350.7%
Average amount of borrowings per share of common stock during the period ⁽¹⁾	\$ 4.25	\$ 4.39	\$ 5.16	\$ 4.86

See accompanying notes to financial statements.

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 gains ⁽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)
Offering expenses associated with the issuance of common stock	—	—	—
Effect of shares issued in reinvestment of distributions	(0.01)	(0.02)	—
Effect of issuance of common stock	—	—	—
Effect of common stock repurchased	—	0.09	—
Net asset value, end of period	\$ 17.56	\$ 39.51	\$ 35.75
Market value per share of common stock, end of period	\$ 15.46	\$ 35.82	\$ 32.71
Total investment return based on common stock market value ⁽⁶⁾	(50.2)%	15.3%	23.5%
Total investment return based on net asset value ⁽⁸⁾	(48.7)%	16.4%	30.5%
Supplemental Data and Ratios⁽⁹⁾			
Net assets applicable to common stockholders, end of period	\$ 380,478	\$ 854,257	\$ 788,057
Ratio of expenses to average net assets			
Management fees ⁽¹⁰⁾	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 ⁽¹¹⁾	\$ 185,000	\$ 235,000	\$ 205,000
Credit facility outstanding, end of period ⁽¹¹⁾	\$ —	\$ —	\$ 50,000
Term loan outstanding, end of period ⁽¹¹⁾	\$ —	\$ 46,000	\$ —
Mandatory redeemable preferred stock, end of period ⁽¹¹⁾	\$ 70,000	\$ 105,000	\$ 65,000
Average shares of common stock outstanding	21,657,943	21,897,671	21,969,288
Asset coverage of total debt ⁽¹²⁾	343.5%	441.4%	434.5%
Asset coverage of total leverage (debt and preferred stock) ⁽¹³⁾	249.2%	321.3%	346.3%
Average amount of borrowings per share of common stock during the period ⁽¹⁾	\$ 11.16	\$ 12.84	\$ 10.51

See accompanying notes to financial statements.

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 ⁽¹⁴⁾ through November 30, 2010
	2012	2011	
Per Share of Common Stock⁽¹⁾			
Net asset value, beginning of period	\$ 25.94	\$ 23.80	\$ 23.83 ⁽¹⁵⁾
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 ⁽³⁾	—	—	—
Total dividends and distributions — common	(1.71)	(1.20)	—
Offering expenses associated with the issuance of common stock	—	—	—
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	<u>\$ 29.01</u>	<u>\$ 25.94</u>	<u>\$ 23.80</u>
Market value per share of common stock, end of period	<u>\$ 28.04</u>	<u>\$ 22.46</u>	<u>\$ 25.00</u>
Total investment return based on common stock market value ⁽⁶⁾	33.3%	(5.5)%	0.0% ⁽⁷⁾
Total investment return based on net asset value ⁽⁸⁾	19.4%	14.7%	(0.1)% ⁽⁷⁾
Supplemental Data and Ratios⁽⁹⁾			
Net assets applicable to common stockholders, end of period	\$635,226	\$ 562,044	\$ 452,283
Ratio of expenses to average net assets			
Management fees ⁽¹⁰⁾	1.7%	1.6%	1.3%
Other expenses	0.3	0.3	0.3 ⁽¹⁶⁾
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	<u>3.8%</u>	<u>2.9%</u>	<u>1.3%</u>
Ratio of net investment income (loss) to average net assets ⁽²⁾	0.6%	1.1%	(1.3)% ⁽¹⁶⁾
Net increase (decrease) in net assets applicable to common stockholders resulting from operations to average net assets	16.8%	13.4%	(0.1)% ⁽⁷⁾
Portfolio turnover rate	67.6%	74.1%	0.0% ⁽⁷⁾
Average net assets	\$620,902	\$ 537,044	\$ 452,775
Notes outstanding, end of period ⁽¹¹⁾	\$165,000	\$ 115,000	\$ —
Credit facility outstanding, end of period ⁽¹¹⁾	\$ 48,000	\$ 45,000	\$ —
Term loan outstanding, end of period ⁽¹¹⁾	\$ —	\$ —	\$ —
Mandatory redeemable preferred stock, end of period ⁽¹¹⁾	\$ 65,000	\$ 35,000	\$ —
Average shares of common stock outstanding	21,794,596	21,273,512	19,004,000
Asset coverage of total debt ⁽¹²⁾	428.7%	473.2%	—
Asset coverage of total leverage (debt and preferred stock) ⁽¹³⁾	328.5%	388.2%	—
Average amount of borrowings per share of common stock during the period ⁽¹⁾	\$ 8.85	\$ 6.50	—

See accompanying notes to financial statements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
FINANCIAL HIGHLIGHTS
(amounts in 000's, except share and per share amounts)

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- (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.
 - (5) Represents offering costs incurred in connection with the merger of Kayne Anderson Energy Total Return Fund, Inc.
 - (6) 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.
 - (7) Not annualized.
 - (8) 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.
 - (9) Unless otherwise noted, ratios are annualized.
 - (10) Ratio reflects total management fee before waiver, if any.
 - (11) Principal/liquidation value.
 - (12) Calculated pursuant to section 18(a)(1)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by Notes (principal value) or any other senior securities representing indebtedness and MRP Shares (liquidation value) divided by the aggregate amount of Notes and any other senior securities representing indebtedness. Under the 1940 Act, the Fund may not declare or make any distribution on its common stock nor can it incur additional indebtedness if at the time of such declaration or incurrence its asset coverage with respect to senior securities representing indebtedness would be less than 300%. For purposes of this test, the Credit Facility and the Term Loan are considered senior securities representing indebtedness.
 - (13) Calculated pursuant to section 18(a)(2)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by Notes (principal value), any other senior securities representing indebtedness and MRP Shares divided by the aggregate amount of Notes, any other senior securities representing indebtedness and MRP Shares (liquidation value). Under the 1940 Act, the Fund may not declare or make any distribution on its common stock nor can it issue additional preferred stock if at the time of such declaration or issuance, its asset coverage with respect to all senior securities would be less than 200%. In addition to the limitations under the 1940 Act, the Fund, under the terms of its MRP Shares, would not be able to declare or pay any distributions on its common stock if such declaration would cause its asset coverage with respect to all senior securities to be less than 225%. For purposes of these asset coverage ratio tests, the Credit Facility and the Term Loan are considered senior securities representing indebtedness.
 - (14) Commencement of operations.
 - (15) 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.
 - (16) 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.

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

On August 6, 2018, KMF completed its merger with Kayne Anderson Energy Total Return Fund, Inc. ("KYE"). Pursuant to the terms of the merger agreement approved by stockholders of KYE, KMF acquired all of the net assets of KYE in exchange for an equal net asset value of newly issued KMF common stock. The merger qualified as a tax-free reorganization under Section 368(a) of the Internal Revenue Code.

2. Significant Accounting Policies

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

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

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

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

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

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

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.

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

- **Investment Team Valuation.** The applicable investments are valued by senior professionals of KAFA who are responsible for the portfolio investments. The investments will be valued monthly, with new investments valued at the time such investment was made.
- **Investment Team Valuation Documentation.** Preliminary valuation conclusions will be determined by senior management of KAFA. Such valuations and supporting documentation are submitted to the Valuation Committee (a committee of the Fund's Board of Directors) and the Board of Directors on a quarterly basis.
- **Valuation Committee.** The Valuation Committee meets to consider the valuations submitted by KAFA at the end of each quarter. Between meetings of the Valuation Committee, a senior officer of KAFA is authorized to make valuation determinations. All valuation determinations of the Valuation Committee are subject to ratification by the Board of Directors at its next regular meeting.
- **Valuation Firm.** Quarterly, a third-party valuation firm engaged by the Board of Directors reviews the valuation methodologies and calculations employed for these securities, unless the aggregate fair value of such security is less than 0.1% of total assets.
- **Board of Directors Determination.** The Board of Directors meets quarterly to consider the valuations provided by KAFA and the Valuation Committee and ratify valuations for the applicable securities. The Board of Directors considers the report provided by the third-party valuation firm in reviewing and determining in good faith the fair value of the applicable portfolio securities.

As of November 30, 2019, the Fund held 2.4% of its net assets applicable to common stockholders (1.5% of total assets) in securities that were fair valued pursuant to the procedures adopted by the Board of Directors (Level 3 securities). The aggregate fair value of these securities at November 30, 2019 was \$12,766. See Note 3 — Fair Value and Note 7 — Restricted Securities.

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

Interest rate swap contracts. The Fund may use hedging techniques such as interest rate swaps to mitigate potential interest rate risk on a portion of the Fund's leverage. Such interest rate swaps would principally be used to protect the Fund against higher costs on its leverage resulting from increases in interest rates. The Fund does not hedge any interest rate risk associated with portfolio holdings. Interest rate transactions the Fund may use for hedging purposes may expose it to certain risks that differ from the risks associated with its portfolio holdings. A decline in interest rates may result in a decline in the value of the swap contracts, which, everything else being held constant, would result in a decline in the net assets of the Fund. In addition, if the counterparty to an interest rate swap defaults, the Fund would not be able to use the anticipated net receipts under the interest rate swap to offset its cost of financial leverage.

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

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

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

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

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

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

G. *Return of Capital Estimates* — Dividends and distributions received from the Fund's investments in MLPs and Midstream Companies generally 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 the return of capital portion of distributions received from its MLP investments based on historical information available from the investments. The Fund estimates the return of capital portion of dividends received from Midstream Companies based on information provided by each investment. Return of capital estimates are adjusted to actual in the subsequent fiscal year when final tax reporting information related to the Fund's investments is received.

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

The Fund includes all distributions received on its Statement of Operations and reduces its investment income by (i) the estimated return of capital and (ii) the distributions in excess of cost basis, if any. For the fiscal year ended November 30, 2019, the Fund estimated \$42,070 of return of capital and \$596 of distributions that were in excess of cost basis.

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

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

	<u>For the Fiscal Year Ended November 30, 2019</u>
Dividends from investments	\$42,884
Distributions from investments	<u>17,793</u>
Total dividends and distributions from investments (before foreign taxes withheld of \$1,131 and excluding distributions in excess of cost basis)	<u><u>\$60,677</u></u>
Dividends — % return of capital	63%
Distributions — % return of capital	85%
Total dividends and distributions — % return of capital	69%
Return of capital — attributable to net realized gains (losses)	\$ 9,320
Return of capital — attributable to net change in unrealized gains (losses)	<u>32,750</u>
Total return of capital	<u><u>\$42,070</u></u>

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

For the fiscal year ended November 30, 2019, the Fund estimated the return of capital portion of dividends and distributions received to be \$39,328 (65%). During the second quarter of fiscal 2019, the Fund increased its return of capital estimate for the year by \$2,742 due to 2018 tax reporting information received by the Fund in fiscal 2019. As a result, the return of capital percentage for the fiscal year ended November 30, 2019 was 69%. In addition, for the fiscal year ended November 30, 2019, the Fund estimated the cash distributions received that were in excess of cost basis to be \$464. Distributions in excess of cost basis for the fiscal year ended November 30, 2019 were increased by \$132 due to 2018 tax reporting information received by the Fund in fiscal 2019.

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

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

The Fund may receive paid-in-kind and non-cash dividends and distributions in the form of additional units or shares from its investments. For paid-in-kind dividends, the additional units are not reflected in investment income during the period received, but are recorded as unrealized gains upon receipt. Non-cash distributions are reflected in investment income because the Fund has the option to receive its distribution in cash or in additional shares or units of the security. During the fiscal year ended November 30, 2019, the Fund did not receive any paid-in-kind dividends or non-cash distributions.

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

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

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

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

The Fund must pay distributions equal to 90% of its investment company taxable income (ordinary income and short-term capital gains) to qualify as a RIC and it must distribute all of its taxable income (ordinary income, short-term capital gains and long-term capital gains) to avoid federal income taxes. The Fund will be subject to federal income tax on any undistributed portion of income. For purposes of the distribution test, the Fund may elect to treat as paid on the last day of its taxable year all or part of any distributions that are declared after the end of its taxable year if such distributions are declared before the due date of its tax return, including any extensions (August 15th). See Note 6 — Taxes.

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

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

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

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

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

The Fund's policy is to classify interest and penalties associated with underpayment of federal and state income taxes, if any, as income tax expense on its Statement of Operations. Tax years subsequent to fiscal year 2015 remain open and subject to examination by federal and state tax authorities.

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

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
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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.

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

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

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

3. Fair Value

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

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

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

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- *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, 2019, and the Fund presents these assets and liabilities by security type and description on its Schedule of Investments. Note that the valuation levels below are not necessarily an indication of the risk or liquidity associated with the underlying investment.

	Total	Quoted Prices in Active Markets (Level 1)	Prices with Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets at Fair Value				
Equity investments	\$750,733	\$725,920	\$12,047 ⁽¹⁾	\$12,766
Debt investments	23,197	—	23,197	—
Short-term investments	34,230	34,230	—	—
Total assets at fair value	<u>\$808,160</u>	<u>\$760,150</u>	<u>\$35,244</u>	<u>\$12,766</u>
Liabilities at Fair Value				
Call option contracts written	\$ 94	\$ —	\$ 94	\$ —

(1) The Fund's investment in Plains AAP, L.P. ("PAGP-AAP") is exchangeable on a one-for-one basis into either Plains GP Holdings, L.P. ("PAGP") shares or Plains All American Pipeline, L.P. ("PAA") units at the Fund's option. The Fund values its PAGP-AAP investment on an "as exchanged" basis based on the higher public market value of either PAGP or PAA. As of November 30, 2019, the Fund's PAGP-AAP investment is valued at PAGP's closing price. The Fund categorizes its investment as a Level 2 security for fair value reporting purposes.

As of November 30, 2019, the Fund had Notes outstanding with aggregate principal amount of \$200,923 and 3,000,000 shares of MRP Shares outstanding with a total liquidation value of \$75,000. The Notes and MRP Shares were issued in private placements to institutional investors and are not listed on any exchange or automated quotation system. See Note 11 — Notes and Note 12 — Preferred Stock. As a result, the Fund categorizes the Notes and MRP Shares as Level 3 securities and determines the fair value of these instruments based on estimated market yields and credit spreads for comparable instruments with similar maturity, terms and structure.

The Fund records the Notes and MRP Shares on its Statement of Assets and Liabilities at principal amount or liquidation value. As of November 30, 2019, the estimated fair values of these leverage instruments are as follows.

<u>Security</u>	<u>Principal Amount/ Liquidation Value</u>	<u>Fair Value</u>
Notes	\$200,923	\$208,100
MRP Shares	\$ 75,000	\$ 76,200

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The following table presents 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, 2019.

	<u>Equity Investments</u>
Balance — November 30, 2018	\$ 35,455
Purchases	9,850
Sales	(35,594)
Transfers in from Level 2	5,361
Realized gains (losses)	17,640
Change in unrealized gains (losses), net	<u>(19,946)</u>
Balance — November 30, 2019	<u>\$ 12,766</u>
Net change in unrealized gain (loss) of investments still held at November 30, 2019	\$ (2,066)

The purchase of \$9,850 relates to the Fund's investments in EQM Midstream Partners, LP — Series A Convertible Preferred Units ("EQM Convertible Preferred") in the second quarter of 2019. Sales of \$35,594 relate to the redemption of the Fund's investment in Capital Product Partners L.P. ("CPLP") Class B Units (\$35,455) and the partial sale of Jupiter Resources Inc. ("Jupiter") shares (\$139) during the second quarter of 2019. In connection with the redemption of the CPLP Class B Units, the Fund realized a gain of \$17,880. The Fund realized a \$240 loss from the partial sale of Jupiter shares. These realized gains (losses) are included on the Fund's Statement of Operations — Net Realized Gains (Losses).

The \$5,361 transfer in from Level 2 relates to the Fund's previous investment in a senior unsecured note issued by Jupiter Resources Inc. (Level 2). On December 19, 2018, the Fund exchanged this debt investment for Jupiter Resources Inc. common stock as part of a recapitalization transaction. The common stock investment in Jupiter Resources Inc. is not traded and is considered a Level 3 security. The Fund utilizes the beginning of reporting period method for determining transfers between levels.

The \$19,946 decrease in unrealized gains (net) relates to investments that were held during the period. The Fund includes these unrealized gains and losses on the Statement of Operations — Net Change in Unrealized Gains (Losses).

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 convertible preferred units of EQM Midstream Partners, LP ("EQM"). The convertible preferred units will be convertible on a one-for-one basis into common units at our option and are senior to the underlying common units in terms of liquidation preference and priority of distributions. The Fund's Board of Directors has determined that it is appropriate to value these convertible preferred units using a convertible pricing model. This model takes into account the attributes of the convertible preferred 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 the convertible preferred units, which is based on the credit spread of the partnership's unsecured notes, and (ii) the expected volatility for the underlying common units, which is based on historical volatility, as well as implied volatility derived from traded options. For this security, if

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the resulting price for the convertible preferred units is less than the public market price for the underlying common units at such time, the public market price for the common units will be used to value the convertible preferred units.

The Fund made an initial investment in Jupiter Resources Inc. ("Jupiter") senior unsecured notes in September of 2014. On December 19, 2018, the Fund received 1,261,366 common shares of Jupiter in exchange for the senior unsecured notes owned by the Fund as part of a recapitalization transaction (shares issued at a price of \$4.25 per share). The common shares are not publicly traded. During the second quarter of fiscal 2019, the Fund sold 32,727 shares at a price of \$4.25 per share for proceeds of \$139.

The Fund's investment in Jupiter is valued using a combination of the following valuation techniques: (i) an analysis of valuations for publicly traded companies in a similar line of business ("public company analysis") and (ii) an analysis of the net asset value of the company ("NAV analysis"). In addition to these valuation techniques, the Fund considers any trading activity in Jupiter's equity when determining its valuation for its investment.

The public company analysis uses valuation ratios (commonly referred to as trading multiples) for comparable public companies (Canadian gas-weighted oil & gas producers) to inform appropriate trading multiples for Jupiter. The Fund's analysis focuses on the ratio of enterprise value ("EV") to earnings before interest expense, income tax expense, depreciation and amortization ("EBITDA") which is referred to as an EV/EBITDA multiple. For this analysis, the Fund utilizes projections provided by external sources as well as internally developed estimates reflecting the current forward commodity price outlook, commentary from the company and relevant financial guidance. The analysis focuses on EBITDA projections for the current calendar year as well as future periods. Based on this data, the Fund selects a range of multiples given the trading multiples of similar publicly traded companies and applies such multiples to Jupiter's EBITDA to estimate Jupiter's enterprise value and equity value. When calculating these values, the Fund applies a discount to Jupiter's estimated equity value for the lack of marketability in the company's securities.

The NAV analysis is derived using projected cash flows for the company's proved developed producing ("PDP") reserves as well as its proved undeveloped reserves and undeveloped acreage. These cash flows are discounted back to present value to determine the value of the company's assets (including cash-on-hand and the value of any commodity price hedges). For this analysis, the projections are based on internally developed projections. Further, the cash flows attributable to the company's PDP reserves are discounted at a 15% rate and the cash flows attributable to undeveloped reserves/acreage (net of associated capital expenditures) are discounted at a 25% rate. This value is then reduced by the company's debt and other liabilities to determine Jupiter's equity value, or net asset value. When calculating these values, the Fund applies a discount of 20% based on the trading prices of public peers relative to their estimated net asset values.

Under these valuation techniques, the Fund estimates the operating results of Jupiter (including EBITDA). These estimates utilize unobservable inputs such as historical operating results, which may be unaudited, and projected operating results, which will be based on operating assumptions for the company. These estimates will be sensitive to changes in assumptions specific to Jupiter as well as general assumptions for the industry. Other unobservable inputs utilized in the valuation techniques outlined above include: selection of publicly-traded companies, selected ranges for valuation multiples and selection of discount rates.

Changes in EBITDA multiples, or discount rates, each in isolation, may change the fair value of the Fund's investment. Generally, a decrease in EBITDA multiples, or an increase in discount rates will result in a decrease in the fair value of the Fund's investment.

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

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, 2019:

Quantitative Table for Valuation Techniques

Assets at Fair Value	Fair Value	Valuation Technique	Unobservable Inputs	Range		
				Low	High	Average
EQM	\$ 9,387	- Convertible pricing model	- Credit spread	7.2%	7.8%	7.5%
Convertible Preferred Units			- Volatility	27.5%	32.5%	30.0%
			- Illiquidity discount	0.7%	0.7%	0.7%
Jupiter Resources Inc. Common Shares	3,379	- Public company analysis	- Selected valuation multiples:			
			EV / 2020E EBITDA	4.0x	4.5x	4.2x
			EV / 2021E EBITDA	3.2x	3.8x	3.5x
		- NAV analysis	- Discount for marketability	20.0%	30.0%	25.0%
			- Discount rate	15.0%	25.0%	20.0%
			- Price to NAV discount	20.0%	20.0%	20.0%
Total	<u>\$12,766</u>					

4. Risk Considerations

The Fund's investments are concentrated in the Midstream/Energy Sector. A downturn in one or more industries within the Midstream/Energy Sector, material declines in energy-related commodity prices, adverse political, legislative or regulatory developments or environmental, catastrophic or other events could have a larger impact on the Fund than on an investment company that does not concentrate in the Midstream/Energy Sector. The performance of companies in the Midstream/Energy Sector may lag the performance of other sectors 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, 2019, the Fund had the following investment concentrations:

Category	Percent of Long-Term Investments
Securities of Energy Companies ⁽¹⁾	100.0%
Equity securities	97.0%
Debt securities	3.0%
Securities of MLPs ⁽¹⁾	23.9%
Largest single issuer	8.5%
Restricted securities	5.9%

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

5. Agreements and Affiliations

A. *Administration Agreement* — On August 1, 2018, in connection with its merger with KYE, the Fund entered into an amended administration and accounting agreement with Ultimus Fund Solutions, LLC ("Ultimus"). Pursuant to the agreement, Ultimus will continue to provide certain administrative and

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accounting services for the Fund. The agreement has an initial term of three years and automatic one-year renewals unless earlier terminated by either party as provided under the terms of the agreement.

B. Investment Management Agreement — The Fund has entered into an investment management agreement with KA Fund Advisors, LLC (“KAFA”) under which KAFA, subject to the overall supervision of the Fund’s Board of Directors, manages the day-to-day operations of, and provides investment advisory services to, the Fund. On March 27, 2019, the Fund renewed its investment management agreement with KAFA for a period of one year. The investment management agreement will expire on March 31, 2020 and may be renewed annually thereafter upon approval of the Fund’s Board of Directors (including a majority of the Fund’s directors who are not “interested persons” of the Fund, as such term is defined in the 1940 Act). For providing these services, KAFA receives an investment management fee from the Fund. For the fiscal year ended November 30, 2019, the Fund paid management fees at an annual rate of 1.25% of the average monthly total assets of the Fund.

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.

D. 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

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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 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.

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

The following table summarizes the Fund's investments in affiliates as of and for the fiscal year ended November 30, 2019:

<u>Investment⁽¹⁾</u>	<u>No. of Shares/ Units⁽²⁾ (in 000's)</u>	<u>Value</u>	<u>Dividends/ Distributions Received</u>	<u>Net Change in Unrealized Gains (Losses)</u>
Plains GP Holdings, L.P.	2,205	\$38,527	\$3,043	\$ (7,234)
Plains GP Holdings, L.P. — Plains AAP, L.P.	690	12,047	952	(3,668)
Total		<u>\$50,574</u>	<u>\$3,995</u>	<u>\$(10,902)</u>

(1) See Schedule of Investments for investment classifications.

(2) During the fiscal year ended November 30, 2019, there were no purchases or sales of PAGP or PAGP-AAP.

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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, 2019, 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, 2019, the Fund reclassified \$11,409 from paid in capital to total distributable earnings (loss) primarily due to distributions in excess of taxable income and the permanent differences between GAAP and tax treatment of the amortization of offering costs for MRP Shares.

The tax basis of the components of distributable earnings can differ from the amounts reflected in the Statement of Assets and Liabilities due to temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. At November 30, 2019, the Fund did not have any undistributed ordinary income or long-term capital gains. The following table sets forth the components of accumulated income or deficit for the Fund.

	<u>As of November 30, 2019</u>
Capital loss carryforward	\$(250,869)
Unrealized depreciation of investments	(31,568)
Total accumulated income (deficit)	<u>\$(282,437)</u>

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. As a result of the tax-free reorganization of KMF and KYE, \$130,791 of capital loss carryforwards are subject to limitations under Section 382 of the Internal Revenue Code ("Section 382"). Regulations under Section 382 limit the amount of capital gains that can be offset by the Fund's capital loss carryforward to \$8,533, annually, until all of the Fund's loss carryforwards are fully utilized. In addition to the Section 382 annual limitation, the Fund will be able to utilize capital loss carryforwards up to the amount of built-in gains that are realized. As of November 30, 2019, the Fund estimates that approximately \$48,000 of capital loss carryforwards subject to limitations are available to offset capital gains.

For the fiscal year ended November 30, 2019, the tax character of the total \$44,335 distributions paid to common stockholders was return of capital. The tax character of the total \$2,907 distributions paid to holders of MRP shares was \$1,011 dividend income and \$1,896 return of capital.

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For the fiscal year ended November 30, 2018, the tax character of the total \$34,494 distributions paid to common stockholders was \$2,884 of dividend income and \$31,610 of return of capital. The tax character of the total \$1,912 distributions paid to holders of MRP shares was dividend income.

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.

At November 30, 2019, the cost basis of investments for federal income tax purposes was \$839,751, and the premiums received on outstanding option contracts written were \$125. At November 30, 2019, gross unrealized appreciation and depreciation of investments and options, if any, for federal income tax purposes were as follows:

Gross unrealized appreciation of investments (including options, if any)	\$ 88,543
Gross unrealized depreciation of investments (including options, if any)	<u>(120,102)</u>
Net unrealized depreciation of investments before foreign currency related translations ...	(31,559)
Unrealized depreciation on foreign currency related translations	<u>(9)</u>
Net unrealized depreciation of investments	<u>\$ (31,568)</u>

7. Restricted Securities

From time to time, the Fund's ability to sell certain of its investments is subject to certain legal or contractual restrictions. 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.

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At November 30, 2019, 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. — Plains AAP, L.P. ⁽¹⁾	(2)	(3)	690	\$ 2,343	\$12,047	\$17.47	2.3%	1.5%
Senior Notes ⁽⁴⁾								
Antero Midstream Corporation due 2027	(2)	(5)	5,273	4,361	4,179	n/a	0.8	0.5
Antero Midstream Corporation due 2028	(2)	(5)	8,420	6,989	6,526	n/a	1.2	0.8
Ascent Resources Utica Holdings, LLC due 2026	7/31/19	(6)	5,000	4,055	3,864	n/a	0.7	0.5
Crestwood Holdings LLC, due 2023	(2)	(6)	6,874	6,609	6,504	n/a	1.2	0.8
Total				<u>\$24,357</u>	<u>\$33,120</u>		<u>6.2%</u>	<u>4.1%</u>
Level 3 Investments⁽⁷⁾								
Equity Investments								
EQM Midstream Partners, LP Convertible Preferred Units	4/10/19	(5)	205	\$ 9,850	\$ 9,387	\$45.78	1.8%	1.1%
Jupiter Resources, Inc.	(8)	(6)	1,229	14,230	3,379	2.75	0.6	0.4
Total				<u>24,080</u>	<u>12,766</u>		<u>2.4</u>	<u>1.5</u>
Total of all restricted investments				<u>\$48,437</u>	<u>\$45,886</u>		<u>8.6%</u>	<u>5.6%</u>

- (1) The Fund values its investment in Plains AAP, L.P. ("PAGP-AAP") on an "as exchanged" basis based on the higher public market value of either Plains GP Holdings, L.P. ("PAGP") or Plains All American Pipeline, L.P. ("PAA"). As of November 30, 2019, the Fund's PAGP-AAP investment is valued at PAGP's closing price. See Note 3 — Fair Value.
- (2) Security was acquired at various dates in current and/or prior fiscal years.
- (3) The Fund's investment in PAGP-AAP is exchangeable on a one-for-one basis into either PAGP shares or PAA units at the Fund's option. Upon exchange, the PAGP shares or PAA units will be freely tradable.
- (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) Unregistered or restricted security of a publicly-traded company.
- (6) Unregistered security of a private company.
- (7) 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) On December 28, 2018, as part of a recapitalization transaction, the Fund received shares from Jupiter Resources Inc.

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

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 — Based on the notional amount, the Fund has written a monthly average of \$10,769 of call options during the fiscal year ended November 30, 2019.

Interest Rate Swap Contracts — As of November 30, 2019, 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, 2019
Call options written	Call option contracts written	\$(94)

The following table sets 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, 2019	
		Net Realized Gains/(Losses) on Derivatives Recognized in Income	Change in Unrealized Gains/(Losses) on Derivatives Recognized in Income
Call options written	Options	\$855	\$32

9. Investment Transactions

For the fiscal year ended November 30, 2019, the Fund purchased and sold securities in the amounts of \$260,947 and \$341,951 (excluding short-term investments).

10. Credit Facility

The Fund has a \$100,000 unsecured revolving credit facility (the "Credit Facility") with a 364-day term, maturing on February 7, 2020. The Fund expects to renew this facility by its maturity date. The interest rate on outstanding borrowings under the Credit Facility may vary between LIBOR plus 1.30% and LIBOR plus 1.95%, depending on the Fund's asset coverage ratios. The Fund pays a fee of 0.20% per annum on any unused amounts of the Credit Facility.

For the fiscal year ended November 30, 2019, the average amount outstanding under the Credit Facility was \$2,619 with a weighted average rate of 3.77%. As of November 30, 2019, the Fund had no outstanding borrowings under the Credit Facility.

As of November 30, 2019, the Fund was in compliance with all financial and operational covenants required by the Credit Facility. See Financial Highlights for the Fund's asset coverage ratios under the 1940 Act.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS
(amounts in 000's, except number of option contracts, share and per share amounts)

11. Notes

At November 30, 2019, the Fund had \$200,923 aggregate principal amount of Notes outstanding. The table below sets forth the key terms of each series of Notes outstanding at November 30, 2019.

Series	Principal Outstanding November 30, 2019	Unamortized Issuance Costs	Estimated Fair Value November 30, 2019	Fixed Interest Rate	Maturity
C	\$ 21,000	\$ 41	\$ 21,800	4.00%	3/22/22
D	40,000	123	41,100	3.34%	5/1/23
E	30,000	61	30,600	3.46%	7/30/21
G	24,538	20	24,800	3.07%	8/8/20
H	42,308	127	44,200	3.72%	8/8/23
I	38,077	147	40,500	3.82%	8/8/25
J	5,000	1	5,100	3.36%	10/7/21
	<u>\$200,923</u>	<u>\$520</u>	<u>\$208,100</u>		

Holders of the Series C, D and E Notes are entitled to receive cash interest payments semi-annually (on March 3 and September 3) at the fixed rate. Holders of the Series G, H, I and J Notes are entitled to receive cash interest payments semi-annually (on February 13 and August 13) at the fixed rate. As of November 30, 2019, the weighted average interest rate on the outstanding Notes was 3.57%.

As of November 30, 2019, 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 and is prohibited from having any rating of less than investment grade ("BBB-") 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 senior securities representing indebtedness (including the 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, 2019, the Fund was in compliance with all covenants under the Notes agreements.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
NOTES TO FINANCIAL STATEMENTS

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

12. Preferred Stock

At November 30, 2019, the Fund had 3,000,000 shares of MRP Shares outstanding, with a total liquidation value of \$75,000 (\$25.00 per share). The table below sets forth the key terms of each series of MRP Shares outstanding at November 30, 2019.

Series	Liquidation Value November 30, 2019	Unamortized Issuance Costs	Estimated Fair Value November 30, 2019	Rate	Mandatory Redemption Date
C	\$35,000	\$116	\$35,500	4.06%	7/30/21
D	20,000	119	20,000	3.36%	9/7/21
E	20,000	268	20,700	4.07%	12/1/24
	<u>\$75,000</u>	<u>\$503</u>	<u>\$76,200</u>		

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, 2019, the Fund's series C, D and E MRP Shares were rated "A" by FitchRatings. 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, 2019, the Fund was in compliance with the asset coverage and basic maintenance requirements of its MRP Shares.

13. Common Stock

At November 30, 2019, the Fund had 197,000,000 shares of common stock authorized and 47,197,462 shares outstanding. As of November 30, 2019, KAFA owned 4,000 shares of the Fund. On June 7, 2019, the Fund completed its program to purchase up to \$20,000 of the Fund's common stock. The repurchase program was first announced on March 28, 2019 and, as approved by the Board of Directors, was to continue until the earlier of (i) the repurchase of \$20,000 of common stock or

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.

NOTES TO FINANCIAL STATEMENTS

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

(ii) September 30, 2019. Under this program, the Fund authorized its agents to make purchases in the open market when shares are trading at a discount of at least 8% to the Fund's net asset value ("NAV") per share. Under the program, the Fund purchased 1,681,037 shares of its common stock at an average price of \$11.90 (total cost of \$19,999), which represented an average discount to the Fund's NAV per share of approximately 12.3%. Transactions in common shares for the fiscal year ended November 30, 2019 were as follows:

Shares outstanding at November 30, 2018	48,878,499
Shares repurchased	<u>(1,681,037)</u>
Shares outstanding at November 30, 2019	<u>47,197,462</u>

14. Subsequent Events

On December 18, 2019, the Fund declared monthly distributions of \$0.075 per common share to be paid on January 31, February 28, and March 31 of 2020.

On December 31, 2019, the Fund paid its previously declared monthly distribution of \$0.075 per common share. Of the total distribution of \$3,540, pursuant to the Fund's dividend reinvestment plan, \$303 was reinvested into the Fund through open market purchases 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.

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” or “MLPs” means limited partnerships and limited liability companies that are publicly traded and are treated as partnerships for federal income tax purposes, includes Midstream MLPs and other MLPs.

“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 that own and operate Midstream Assets and are taxed as corporations for federal income tax purposes, including MLP Affiliates of Midstream MLPs. This includes companies structured like MLPs, but not treated as a publicly-traded partnership for RIC qualification purposes as well as MLP Affiliates of Midstream MLPs. 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 (d) Renewable Infrastructure/Utility Companies and (e) 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 including General Partner MLPs whose assets consist of ownership interests of an affiliated Midstream MLP.

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

“Other Energy Companies” means Energy Companies, excluding MLPs, Midstream Companies and Renewable Infrastructure/Utility 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.

“Renewable Infrastructure/Utility Assets” means assets used in the generation, production, distribution, transportation, transmission, storage and marketing of electricity and natural gas, including, but not limited to, renewable energy such as solar, wind, hydroelectric power, geothermal and biomass power.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
GLOSSARY OF KEY TERMS
(UNAUDITED)

“Renewable Infrastructure/Utility Companies” means utilities, independent power producers, developers and other companies that own, operate or provide services for Renewable Infrastructure/Utility Assets. For purposes of this definition, this includes companies that (i) derive at least 50% of their revenue or operating income from Renewable Infrastructure/Utility Assets or (ii) have Renewable Infrastructure/Utility Assets that represent the majority of their assets.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Kayne Anderson Midstream/Energy Fund, Inc.

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the schedule of investments, of Kayne Anderson Midstream/Energy Fund, Inc. (the "Fund") as of November 30, 2019, the related statements of operations and cash flows for the year ended November 30, 2019, the statement of changes in net assets applicable to common stockholders for each of the two years in the period ended November 30, 2019, including the related notes, and the financial highlights for each of the nine years in the period ended November 30, 2019 and for the period November 24, 2010 (commencement of operations) through November 30, 2010 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Fund as of November 30, 2019, the results of its operations and its cash flows for the year then ended, the changes in its net assets for each of the two years in the period ended November 30, 2019 and the financial highlights for each of the nine years in the period ended November 30, 2019 and for the period November 24, 2010 (commencement of operations) through November 30, 2010 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Fund's management. Our responsibility is to express an opinion on the Fund's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Fund in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of November 30, 2019 by correspondence with the custodian, transfer agents and brokers. We believe that our audits provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers LLP
Los Angeles, CA
January 28, 2020

We have served as the auditor of one or more investment companies in the Kayne Anderson Funds Family since 2004.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS
(UNAUDITED)

Independent Directors⁽¹⁾

Name⁽²⁾ (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. Revised term (until the 2020 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: <ul style="list-style-type: none"> • Kayne Anderson MLP/Midstream Investment Company ("KYN") Prior: <ul style="list-style-type: none"> • Kayne Anderson Energy Development Company ("KED") • Boardwalk Pipeline Partners, LP (midstream MLP) • Northern Border Partners, L.P. (midstream MLP)
Anne K. Costin (born 1950)	Director. 3-year term (until the 2022 Annual Meeting of Stockholders)/served since August 2018.	Professor at the Amsterdam Institute of Finance from 2007 through 2013. Adjunct Professor in the Finance and Economics Department of Columbia University Graduate School of Business in New York from 2004 through 2007. As of March 1, 2005, Ms. Costin retired after a 28-year career at Citigroup. During the seven years prior to her retirement, Ms. Costin was Managing Director and Global Deputy Head of the Project & Structured Trade Finance product group within Citigroup's Investment Banking Division.	Current: <ul style="list-style-type: none"> • KYN Prior: <ul style="list-style-type: none"> • Kayne Anderson Energy Total Return Fund, Inc. ("KYE")
Barry R. Pearl (born 1949)	Director. Revised term (until the 2020 Annual Meeting of Stockholders)/served since inception.	Management consultant to Northstar Midstream, a private developer and operator of petroleum infrastructure assets from March 2016 to July 2018, Executive Vice President of Kealine, LLC, (and its affiliate WesPac Midstream LLC an energy infrastructure developer), from February 2007 to March 2016. 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: <ul style="list-style-type: none"> • KYN • Magellan Midstream Partners, L.P. (midstream MLP) Prior: <ul style="list-style-type: none"> • KED • Peregrine Midstream Partners LLC (natural gas storage) • Seaspan Corporation (containership chartering) • Targa Resources Partners LP (midstream MLP) • TEPPCO Partners, L.P. (midstream MLP)
Albert L. Richey (born 1949)	Director. 3-year term (until the 2022 Annual Meeting of Stockholders)/served since inception.	Retired from Anadarko Petroleum Corporation in August 2016 after serving as Senior Vice President Finance and Treasurer from January 2013 to August 2016; 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.	Current: <ul style="list-style-type: none"> • KYN Prior: <ul style="list-style-type: none"> • KED • Boys & Girls Clubs of Houston (not-for-profit organization) • Boy Scouts of America (not-for-profit organization)

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS
(UNAUDITED)

Independent Directors⁽¹⁾

Name⁽²⁾ (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 H. Shea, Jr. (born 1954)	New term director (until the 2021 Annual Meeting of Stockholders)/served since August 2018.	Chief Executive Officer of Jefferson Energy Companies since January 2020. Chief Executive Officer of Mainline Energy Partners, LLC from July 2016 to September 2019. Chief Executive Officer and President of Niska Gas Storage Partners LLC from May 2014 to July 2016. Chief Executive Officer of the general partner of PVR Partners, L.P. (PVR) from March 2010 to March 2014. Chief Executive Officer and President of the general partner of Penn Virginia GP Holdings, L.P. (PVG), from March 2010 to March 2011. Private investor from June 2007 to March 2010. From September 2000 to June 2007, President, Chief Executive Officer and Director (Chairman from May 2004 to June 2007) of Buckeye Partners L.P. (BPL). From May 2004 to June 2007, President, Chief Executive Officer and Chairman of Buckeye GP Holdings L.P. (BGH) and its predecessors.	<ul style="list-style-type: none"> • Current: • KYN Prior: • KYE • BGH (general partner of BPL) • BPL (midstream MLP) • Gibson Energy ULC (midstream energy) • Mainline Energy Partners, LLC (midstream energy) • Niska Gas Storage Partners LLC (natural gas storage) • PVG (owned general partner of PVR) • PVR (midstream MLP) • Penn Virginia Corporation (oil and gas exploration and production company) • USA Compression Partners, LP (natural gas compression MLP)
William L. Thacker (born 1945)	Director. 3-year term (until the 2021 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.	<ul style="list-style-type: none"> Current: • KYN Prior: • KED • Copano Energy, L.L.C. (midstream MLP) • GenOn Energy, Inc. (electricity generation and sales) • Pacific Energy Partners, L.P. (midstream MLP) • QEP Resources Inc. (oil and gas exploration and production company) • TEPPCO Partners, L.P. (midstream MLP)

**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS
(UNAUDITED)**

Interested Directors and Non-Director Officers

Name⁽²⁾ (Year Born)	Position(s) Held with Fund, Term of Office/Time of Service	Principal Occupations During Past Five Years⁽³⁾	Other Directorships Held by Director/Officer During Past Five Years
Kevin S. McCarthy ⁽⁴⁾ (born 1959)	Chairman of the Board of Directors since inception. 3-year term as a director (until the 2021 Annual Meeting of Stockholders). Chief Executive Officer from inception to June 2019. President from inception through June 2016.	Vice Chairman of Kayne Anderson since January 2019. Managing Partner of Kayne Anderson since June 2004 and Co-Managing Partner of KAFA from 2006 to June 2019. Chief Executive Officer of KYN since inception (2004) to June 2019.	Current: <ul style="list-style-type: none"> • KYN • Altus Midstream Company (midstream company) Prior: <ul style="list-style-type: none"> • KYE • KED • Clearwater Natural Resources, L.P. (coal mining) • Direct Fuels Partners, L.P. (transmix refining and fuels distribution) • Emerge Energy Services LP (frac sand MLP) • International Resource Partners LP (coal mining) • K-Sea Transportation Partners LP (shipping MLP) • ONEOK, Inc. (midstream company) • ProPetro Services, Inc. (oilfield services) • Range Resource Corporation (oil and gas exploration and production company)
James C. Baker ⁽⁴⁾ (born 1972)	Director President and Chief Executive Officer. 3-year term (until the 2022 Annual Meeting of Stockholders). Chief Executive Officer since June 2019. President since June 2016. Executive Vice President from inception to June 2016. Elected annually as an officer/ served since inception.	Partner and Senior Managing Director of Kayne Anderson since February 2008. Co-Managing Partner of KAFA since June 2019. Senior Managing Director of KAFA from February 2008 to June 2019. Chief Executive Officer of KYN since June 2019. President of KYN since June 2016. Executive Vice President of KYN from June 2008 to June 2016.	Current: <ul style="list-style-type: none"> • KYN Prior: <ul style="list-style-type: none"> • KED • K-Sea Transportation Partners LP (shipping MLP) • Petris Technology, Inc. (data management for energy companies) • ProPetro Services, Inc. (oilfield services)
J.C. Frey (born 1968)	Executive Vice President. Elected annually as an officer/ served since inception.	Managing Partner of Kayne Anderson since 2004 and Co-Managing Partner of KAFA since 2006. Executive Vice President of KYN since June 2008. Assistant Secretary and Assistant Treasurer of KYN from 2004 to January 2019.	None
Terry A. Hart (born 1969)	Chief Financial Officer, Treasurer and Assistant Secretary. Elected annually as an officer/ served since inception.	Senior Managing Director of Kayne Anderson since January 2020. Managing Director of Kayne Anderson from December 2005 to January 2020 and Chief Financial Officer of KAFA since 2006. Chief Financial Officer and Treasurer of KYN since December 2005. Assistant Secretary of KYN since January 2019. Chief Financial Officer of Kayne Anderson Acquisition Corp. from December 2016 to November 2018.	Current: <ul style="list-style-type: none"> • The Source for Women (not-for-profit organization) Prior: <ul style="list-style-type: none"> • KED

**KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS
(UNAUDITED)**

Interested Directors and Non-Director Officers

Name⁽²⁾ (Year Born)	Position(s) Held with Fund, Term of Office/Time of Service	Principal Occupations During Past Five Years⁽³⁾	Other Directorships Held by Director/Officer During Past Five Years
Jarvis V. Hollingsworth (born 1962)	Secretary. Elected annually as an officer/served since 2019.	General Counsel of Kayne Anderson and Secretary of KYN since 2019. Private practice of law at Fulbright & Jaworski LLP (1993-1999); Brobeck Phleger & Harrison (1999-2001); and Bracewell LLP (2001-2019). Chairman of the Board of Trustees of the Teacher Retirement System of Texas (2017 to Present).	Current: <ul style="list-style-type: none"> • Teacher Retirement System of Texas (public retirement system) Prior: <ul style="list-style-type: none"> • Cullen/Frost Bankers, Inc. (financial holding company) • Emergent Technologies, LP (commerce technology) • Infogroup, Inc. (data and marketing solutions) • University of Houston System Board of Regents (public university system)
Ron M. Logan, Jr. (born 1960)	Senior Vice President. Elected annually as an officer/served since September 2012.	Senior Managing Director of Kayne Anderson since February 2014. Managing Director of Kayne Anderson from September 2006 to February 2014. Senior Vice President of KYN since September 2012.	Prior: <ul style="list-style-type: none"> • VantaCore Partners LP (aggregates MLP)
Jody C. Meraz (born 1978)	Senior Vice President. Elected annually as an officer/served since June 2011.	Senior Managing Director of Kayne Anderson since February 2019. Managing Director of Kayne Anderson from February 2014 to February 2019. Senior Vice President of Kayne Anderson from 2011 to February 2014. Vice President of KYN since 2011.	None
A. Colby Parker (born 1987)	Assistant Treasurer. Elected annually as an officer/served since January 2019.	Assistant Treasurer of KYN since January 2019. Controller of Kayne Anderson since July 2015. Finance and Treasury Analyst of Kayne Anderson from June 2014 to June 2015.	None
Michael J. O'Neil (born 1983)	Chief Compliance Officer. Elected annually as an officer/served since December 2013.	Chief Compliance Officer of Kayne Anderson since March 2012 and of KYN since December 2013 and of KA Associates, Inc. (broker-dealer) since January 2013. A compliance officer at BlackRock Inc. from January 2008 to February 2012.	None

- (1) The Fund is managed by KA Fund Advisors, LLC (“KAFA”), an affiliate of Kayne Anderson Capital Advisors, L.P. (“KACALP” and, together with its affiliates, “Kayne Anderson”). The 1940 Act requires the term “Fund Complex” to be defined to include registered investment companies advised by Kayne Anderson and includes the Fund and KYN. Each Independent Director oversees two registered investment companies in the Fund Complex, the Fund and KYN, as noted above.
- (2) The address of each director and corporate officer is c/o KA Fund Advisors, LLC, 811 Main Street, 14th Floor, Houston, Texas, 77002.
- (3) In August 2018, Kayne Anderson Energy Total Return Fund, Inc. (“KYE”) merged into Kayne Anderson Midstream/Energy Fund, Inc. (“KMF”) and Kayne Anderson Energy Development

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
INFORMATION CONCERNING DIRECTORS AND CORPORATE OFFICERS
(UNAUDITED)

Company (“KED”) merged into Kayne Anderson MLP/Midstream Investment Company (“KYN”), respectively. The table presents principal occupations for each interested director and non-director officer of KYN and KMF and does not set forth the principal occupations, if any, for KYE and KED.

- (4) Kevin S. McCarthy and James C. Baker are each an “interested person” of the Fund as defined by the 1940 Act by virtue of their employment relationship with Kayne Anderson.

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 www.kaynefunds.com or is available without charge, upon request, by calling (877) 657-3863.

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

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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 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

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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.

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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STOCKHOLDER PROPOSALS

The Amended and Restated Bylaws currently in effect for the Fund provide that in order for a stockholder to nominate a candidate for election as a director at an annual meeting of stockholders or propose business for consideration at such meeting, which nomination or proposal is not to be included in the Fund's proxy statement, written notice containing the information required by the current Bylaws must be delivered to the Secretary of the Fund at 811 Main Street, 14th Floor, Houston, TX 77002, not later than 5:00 p.m. Central Time on the 120th day, and not earlier than the 150th day, prior to the first anniversary of the date of mailing of the notice for the preceding year's annual meeting; provided, however that in the event that the date of the annual meeting is advanced or delayed by more than 30 days from the first anniversary of the date of the preceding year's annual meeting, notice by the stockholder to be timely must be so delivered not earlier than the 150th day prior to the date of such annual meeting and not later than 5:00 p.m. Central Time on the later of the 120th day prior to the date of such annual meeting or the tenth day following the day on which public announcement of the date of such meeting is first made.

The Fund anticipates that the 2020 Annual Meeting of Stockholders (the "2020 Annual Meeting") will be held on or about April 2, 2020, which is advanced by more than 30 days from the anniversary of the 2019 Annual Meeting of Stockholders. Accordingly, it is anticipated that a stockholder nomination or proposal for the Fund intended to be considered at the 2020 Annual Meeting must be received by the Secretary of the Fund on or after November 4, 2019 and prior to 5:00 p.m. Central Time on December 4, 2019. However, under the rules of the SEC, if a stockholder wishes to submit a proposal for possible inclusion in the 2020 proxy statement pursuant to Rule 14a-8(e) of the 1934 Act, the Fund must receive it not fewer than 120 calendar days before the anniversary of the date the proxy statement was released to stockholders for the previous year's annual meeting, or, if the date of the annual meeting has been changed by more than 30 days from the date of the previous year's annual meeting, then the deadline is a reasonable time before the Fund begins to print and send its proxy materials. Accordingly, it is anticipated that a stockholder's proposal under Rule 14a-8(e) should be received by the Fund on or before January 24, 2020 in order to be included in the proxy statement and proxy card for the 2020 Annual Meeting. All nominations and proposals must be in writing.

ANNUAL CERTIFICATION

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

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, www.kaynefunds.com; and
- on the SEC's website, 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 www.sec.gov (see Form N-PX).

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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-PORT and Form N-30B-2. The Fund's Form N-PORT and Form N-30B-2 are available on the SEC's website at www.sec.gov. The Fund also makes its quarterly reports available on its website at www.kaynefunds.com.

REPURCHASE DISCLOSURE

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 privately negotiated transactions.

KAYNE ANDERSON MIDSTREAM/ENERGY FUND, INC.
PRIVACY POLICY NOTICE
(UNAUDITED)

This Privacy Notice (“Notice”) provides information about the data that is collected, processed, used, transmitted and stored by KA Fund Advisors, LLC and its affiliates (collectively “we,” “Kayne Anderson” or the “Firm”), and Kayne Anderson’s commitment to appropriately using and protecting the data collected.

Generally speaking, Kayne Anderson collects data about you from the following sources:

- Information we receive about you on applications or other forms;
- Information you provide to us orally; and
- Information about your transactions with us, our affiliates or others.

When you use our services, you acknowledge that you have read and understand the contents of this Notice.

Defining Personal Information

Various laws and regulations use different terms and definitions for information about individuals that is personal and should be protected. Some laws and regulations consider only very limited types of information to be protected and private. Others include much broader categories.

At Kayne Anderson, we have chosen to adopt the broader approach to what information must be protected and kept private. In this notice, “Personal Information” (or “PI”) refers to data that could be used, alone or in combination with other data, to identify you as an individual. It can include name, physical address, email address, IP address, date of birth, social security number, passwords, financial information, and more.

What Personal Information Do We Collect?

Kayne Anderson does not collect more information than is needed to conduct its business and satisfy any associated regulatory requirements. The following are examples of the types of personal information that we may collect:

- Name, address, phone number and email address;
- Age, date of birth, occupation and marital status;
- Personal identifier, depending on your country of residence, such as your Social Security Number; and
- Financial information, including account balances and assets, and, in certain jurisdictions, representations required under applicable law or regulation concerning your financial resources.

How Do We Collect Information?

When Kayne collects data from you directly, we will provide Kayne Anderson’s contact information and Kayne Anderson’s purpose for collecting and processing the data.

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PRIVACY POLICY NOTICE
(UNAUDITED)

Do We Need Consent to Collect Your Data?

By providing your data, you consent to its collection, processing, use, transfer and storage. Your consent can be withdrawn at any time by providing adequate notice (see below) to Kayne Anderson. However, withdrawing your consent may impact your ability to invest in our funds.

How Do We Use Personal Information?

We use your personal information for a variety of business purposes, including but not limited to, the following:

- For our everyday business purposes to administer, facilitate and manage your relationship and/or account(s) with Kayne Anderson.
- To contact you or your designated representative(s) in connection with your relationship and/or account;
- To monitor and audit compliance with our internal policies and procedures; and
- To comply with and enforce applicable legal and regulatory requirements.

If your relationship with Kayne Anderson ends, we will continue to treat your personal information, to the extent we retain it, as described in this Notice.

With Whom Do We Share Personal Information?

Privacy is an integral part of the Firm. We do not disclose your personal information to third parties, except as described in this Notice, and never for compensation. Additionally, we will not share your personal information with third parties without your specific consent or unless Kayne Anderson is required or permitted to by law (such as Regulation S-P) and/or government authorities.

Third parties that we share personal information with are required to maintain the confidentiality of such information and are prohibited from using your personal information for purposes other than those that were specified upon receipt of your data. We enter into contractual agreements with all nonaffiliated third parties that prohibit such third parties from disclosing or using the information other than to carry out the purposes for which we disclose the information.

We will not sell your personal information. If we share your personal information with third parties performing services for us, or acting on our behalf, we will not allow them to use your information for other purposes, and we will contractually require them to protect your information.

What Security Measures Do We Have?

Kayne Anderson restricts access to personal information about you to those employees who need to know that information to provide financial products or services to you. Kayne Anderson has physical, electronic and administrative safeguards in place to help protect data from loss, misuse, unauthorized access, disclosure, alteration, and destruction. This includes a dedicated group of information security personnel that design, implement and monitor our information security program.

Please contact us for a copy of Kayne Anderson's policies for more information on the Firm's information security practices and procedures.

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How Long Do We Retain Personal Information?

We will retain your personal information for the period necessary to fulfill our services and the purposes outlined in this Notice unless a longer retention period is required by law.

How Can You Manage Your Personal Information?

If you would like to request, delete, or update the personal information that you provided us, or exercise any of your data protection rights you may contact us using the contact information below. For your protection, we will need to verify your identity prior to complying with your request. Kayne Anderson does not charge for this service.

Kayne Anderson will make a good faith effort to process your request without undue delay and within the timeframe provided by applicable law. You are also entitled to have Kayne Anderson modify or delete any information that you believe is incorrect or out of date. Kayne Anderson reserves the right to limit or deny access to personal information where providing such information would be unreasonably burdensome or expensive or as otherwise permissible under relevant laws. If Kayne Anderson determines that access cannot be provided in any particular instance, Kayne Anderson will provide the individual requesting access with an explanation of why it has made that determination and a contact point for any further inquiries.

What Rights Do California Clients Have?

Under the CCPA, clients domiciled in California have certain rights with respect to their personal information. In particular, you may have the right to:

- Request that we disclose, free of charge, the categories and specifics of the PI we collect about you as a California resident (and/or, if applicable, sell or otherwise disclose to a third party for business purposes). Currently, however, Kayne Anderson does not sell personal information.
- Choose to opt-out of the sale of personal information. Currently, however, Kayne Anderson does not sell personal information.
- Request that we delete the PI we have collected. Following our verification of the request, we will comply with the request and delete any or all of the PI in our possession that we collected from you and/or any or all such PI in the possession of our service providers, unless otherwise restricted by law or regulation. However, withdrawing your consent for us to collect, process, use, transfer and store your data may impact your ability to invest in our funds.

Non-Discrimination for Exercising Your CCPA Right

We follow the requirements of California Civil Code §1798.125, and will not discriminate against any consumer who exercises the rights under the CCPA. However, withdrawing your consent for us to collect, process, use, transfer and store your data may impact your ability to invest in our funds.

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Contact Us

If you have questions, concerns, or suggestions related to our Notice or our privacy practices, contact the Investor Relations Team or Kayne's Chief Compliance Officer, Michael O'Neil, at:

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

Website: <https://www.kaynefunds.com/>
Email Address: CEF@kaynecapital.com
Toll Free Phone Number: 877-657-3863

Changes to this Privacy Notice

We reserve the right to update this Notice at any time to reflect changes in our policies concerning the collection and use of personal information.

This Privacy Notice was last revised on January 16, 2020.

Directors and Corporate Officers

Kevin S. McCarthy	Chairman of the Board of Directors
James C. Baker	Director, President and Chief Executive Officer
William R. Cordes	Director
Anne K. Costin	Director
Barry R. Pearl	Director
Albert L. Richey	Director
William H. Shea, Jr	Director
William L. Thacker	Director
Terry A. Hart	Chief Financial Officer, Treasurer and Assistant Secretary
Jarvis V. Hollingsworth	Secretary
Michael J. O'Neil	Chief Compliance Officer
J.C. Frey	Executive Vice President
Ron M. Logan, Jr.	Senior Vice President
Jody C. Meraz	Senior Vice President
A. Colby Parker	Assistant Treasurer

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

Custodian

JPMorgan Chase Bank, N.A.
383 Madison Avenue, Fourth Floor
New York, NY 10179

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

Independent Registered Public Accounting Firm

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

Legal Counsel

Paul Hastings LLP
101 California Street, Forty-Eighth Floor
San Francisco, CA 94111

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

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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.