Kayne Anderson MLP Investment CO
Form N-CSR
February 04, 2011

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM N-CSR
CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES
Investment Company Act file number 811-21593
Kayne Anderson MLP Investment Company
(Exact name of registrant as specified in charter)

717 Texas Avenue, Suite 3100, Houston, Texas	77002
(Address of principal executive offices)	(Zip code)

David Shladovsky, Esq.
KA Fund Advisors, LLC, 717 Texas Avenue, Suite 3100, Houston, Texas 77002

(Name and address of agent for service)
Registrant s telephone number, including area code: (713) 493-2020
Date of fiscal year end: November 30, 2010
Date of reporting period: November 30, 2010

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

A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR unless the Form displays a currently valid Office of Management and Budget (OMB) control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. § 3507.

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Item 1. Reports to Stockholders.

The report of Kayne Anderson MLP Investment Company (the Registrant) to stockholders for the fiscal year ended November 30, 2010 is attached below.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This report of Kayne Anderson MLP Investment Company (the Company) contains forward-looking statements as defined under the U.S. federal securities laws. Generally, the words believe, expect, intend, estimate, anticipate, project, will 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 Company s historical experience and its present expectations or projections indicated in any forward-looking statements. These risks include, but are not limited to, changes in economic and political conditions; regulatory and legal changes; master limited partnership industry risk; leverage risk; valuation risk; interest rate risk; tax risk; and other risks discussed in the Company 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 Company undertakes no obligation to update or revise any forward-looking statements made herein. There is no assurance that the Company s investment objectives will be attained.

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**KAYNE ANDERSON MLP INVESTMENT COMPANY
LETTER TO STOCKHOLDERS**

January 27, 2011

Dear Fellow Stockholders:

The year ended November 30, 2010 was another strong year for both the MLP sector and our Company. The MLP sector has now fully recovered from the economic crisis of late 2008 and early 2009. When combined with the gains that the MLP market enjoyed during fiscal 2009, the sector has generated a total return in excess of 140% since the market low in March 2009. In large part, we saw during the year a continuation of the positive trends that began in the middle of fiscal 2009. As discussed in greater detail later in this letter, we believe that the outlook for the MLP sector continues to be quite strong, and we expect MLPs to continue to generate attractive risk-adjusted returns. Further, we believe that our team of experienced investment professionals is well positioned to identify and capitalize on opportunities in the sector.

We are very pleased with our performance during the past fiscal year. One of the measures we employ to evaluate our performance is Net Asset Value Return, which is equal to the change in net asset value per share plus the cash distributions paid during the period, assuming reinvestment through our dividend reinvestment program. Our Net Asset Value Return was 43.2% for fiscal 2010. This put us at the top of the class compared to other MLP closed-end funds. During the same period, the Alerian MLP Index had a total return of 42.4%. Given our structure as a taxable entity, we are very pleased to have exceeded the performance of the Alerian MLP Index, which is an index that does not factor in expenses or corporate taxes.

Another measure of the Company s performance is Market Return, which is equal to the change in share price plus the cash distributions paid during the period, assuming reinvestment through our dividend reinvestment program. Our Market Return was 26.0% for fiscal 2010. This measure lagged our Net Asset Value Return for fiscal 2010, as the premium of our share price compared to our NAV declined during fiscal 2010. By the end of the calendar year 2010, the premium had returned to levels closer to the average for fiscal 2009 and the first half of fiscal 2010. As a result, our Market Return for calendar 2010 was 35.8%, which was once again at the top of the class compared to other MLP closed end funds.

We were very successful raising additional capital to make new investments during fiscal 2010. We completed four equity offerings raising $396 million in gross proceeds, two preferred stock offerings raising $160 million and two senior notes offerings raising $250 million. We believe that the returns to shareholders were enhanced because we were able to invest the proceeds from these offerings in securities that provided attractive returns. We intend to continue to raise additional capital to the extent that we can invest it in a manner that is accretive to both NAV and expected total returns.

We also successfully renewed our revolving credit facility, increasing its size by $20 million and extending the maturity date to 2013. Lastly, we redeemed our Series D Auction Rate Preferred Stock in May 2010 a goal we set for ourselves at the beginning of the fiscal year.

MLP Market Overview

The strong performance of the MLP market during the year was the result of a reversion of MLP yields to levels that were more in-line with historical averages. There were several factors that contributed to this tightening, including the strong operating performance of MLPs throughout the financial crisis, the improved prospects for distribution growth across the entire MLP sector, and the strong demand for yield securities by individual investors. At the beginning of the fiscal year, the average MLP yield was 7.9%, which represented a 467 basis point premium (100 basis points equals one percent) to the yield on 10-year U.S. Treasury Bonds. This difference is often referred to as a spread to Treasuries. By the end of the fiscal year, the spread to Treasuries was 352 basis points, which is still well above the 219 basis point average for the five-year period prior to the financial crisis. Since the end of our fiscal year, MLP yields have continued to decline, and overall interest rates have risen, such that the spread to Treasuries is now much closer to historical levels.

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While MLPs experienced strong returns in virtually all sub-sectors, two of the best performing segments of the MLP market were the gathering and processing MLPs and the general partner MLPs. These two sectors had total returns of 66.6% and 65.8% during the year, which was significantly higher than the 42.4% total return for the MLP sector as a whole. Fortunately, we correctly identified the potential of these sectors and were overweight these sectors during the year.

Capital markets activity for MLPs reached a record high in calendar 2010. MLPs raised $12 billion in follow-on equity offerings and $20 billion in debt. Much of the equity was used to finance acquisitions and growth projects, and MLPs took advantage of attractive interest rates to refinance their debt. The previous record for MLP follow-on equity offerings was $7 billion in 2009. We believe that a strong market for raising new capital will help facilitate distribution growth in the future. Also encouraging was the return of the IPO market. After a two-year absence, the IPO market made a strong comeback with five new MLPs raising $1.3 billion during fiscal 2010. Currently, four of these deals are trading well above their IPO prices.

With ample access to capital, MLPs were able to return to a path of more predictable distribution growth. During the last two quarters of the fiscal year, over half of the MLPs increased their distributions, and the remainder provided greater visibility for increasing distributions in 2011. Distribution growth for the universe of midstream MLPs was 4.8% during fiscal 2010 and we believe we will see distribution growth of 5% to 6% for these names in fiscal 2011.

A balanced mix of acquisitions and new projects is driving distribution growth. Fiscal 2010 saw robust acquisition activity, with over $17 billion of transactions completed during this period. These acquisitions were a combination of third-party deals, as well as drop down transactions between MLPs and their general partners. These drop down transactions were typically completed at attractive multiples for assets that are operated either by the MLPs or related parties. There were also multiple new projects that were completed or initiated by the MLPs during this period. As we discuss later in greater detail, we believe much of the demand for this new infrastructure is being driven by the rapid development of unconventional oil and natural gas reserves.

During 2010, there was a substantial amount of capital raised to invest in MLPs through a variety of structured products, including exchange traded funds, open-end mutual funds and exchange traded notes. At the end of fiscal 2010, these new vehicles had approximately $3.8 billion in assets under management (compared to less than $0.5 billion at the end of fiscal 2009). In addition, there was $5 billion raised by new or existing closed end funds. While we welcome additional institutional capital into the sector, we remain convinced that the closed-end fund structure delivers the potential for substantially higher returns for investors than open-end funds or exchange traded funds. Further, we believe it is a superior structure for investors and provides a more stable source of capital for the MLP sector.

Now that we have fully recovered from the 2008-2009 financial crisis, it is helpful to look back at the growth and relative performance of the MLP sector over the decade. During this 10-year period, the MLP market (as measured by the Alerian MLP index) has delivered an annualized total return of 19.3%. We believe that investors are beginning to view MLPs as a distinct asset class and recognizing the strong returns and the yield plus growth attributes of the sector. Since November 30, 2000, the MLP sector has grown from a niche market consisting of 20 partnerships with a combined equity market capitalization of approximately $14 billion to a much larger universe consisting of 66 partnerships with a combined equity market capitalization of approximately $220 billion at November 30, 2010.

Energy Market Overview

Without a doubt, the biggest story in the domestic energy business is the development of unconventional reserves, which is an industry term that refers to oil and natural gas reserves produced using advanced drilling and completion techniques. Technological advances such as horizontal drilling and multi-stage hydraulic fracturing have enabled the development of these reserves which were previously believed to be uneconomic to produce. Unconventional reserves can include oil shales, gas shales and the Canadian oil sands. The rapid

KAYNE ANDERSON MLP INVESTMENT COMPANY
LETTER TO STOCKHOLDERS

development of unconventional reserves has resulted in a substantial increase in both estimated oil and natural gas reserves and production over the past few years. As an example, domestic natural gas reserves, as reported by government agencies, have increased by 44% from 2003 to 2009. Examples of unconventional reserves include the Barnett Shale, Haynesville Shale, Woodford Shale, Fayetteville Shale, Eagle Ford Shale, Marcellus Shale and Bakken Shale.

Significant amounts of capital are being spent by energy companies to develop these reserves. In fact, major oil companies, foreign oil companies and national oil companies have spent more than $60 billion in calendar 2010 to acquire these types of reserves. This trend is very important for MLPs, as development of these new reserves will require substantial amounts of new midstream infrastructure. An energy industry group estimates that up to $210 billion will need to be spent over the next 20 years to build the necessary midstream assets to develop these reserves. We believe this will provide attractive investment opportunities for MLPs and help drive future distribution growth.

With the improving global economy, demand for energy grew modestly in 2010 after experiencing significant declines in 2009. Strong demand for crude oil from China and other developing countries, combined with a weakening dollar, led to substantially higher crude oil prices during fiscal 2010 compared to the prior year. Further, with crude oil trading in the $70 to $85/barrel range for most of the year, this can be described as relatively stable considering the historical volatility of commodity prices. We expect that crude oil prices will continue in this range as both supply and demand are both forecasted to increase modestly.

Largely as a result of the development of the unconventional natural gas shales, growth in the supply of natural gas has exceeded the recovery in demand for natural gas. Further, there is a growing perception that the natural gas market will be oversupplied for years to come. As a result, we saw natural gas prices decline substantially during the year, from the $5.75 to $6.00/mcf range in late December 2009 to as low as $3.25/mcf in late October 2010. While natural gas prices have recovered since October, most analysts are projecting that natural gas prices will remain closer to $5.00/mcf for the remainder of 2011.

On a somber note, the energy industry had more than its share of negative headlines during the year. The tragic events surrounding the Macondo oil spill, as well as several pipeline leaks and explosions, served as powerful reminders of the risks inherent in the energy business. The industry takes great pride in its safety track record, and we believe it is committed to learning the right lessons from these events. We anticipate increased regulatory scrutiny in the years to come, but we do not anticipate that this will materially impact operations or cash flows.

2011 Outlook

In our 2010 Annual Letter, we stated our belief that fiscal 2010 would be a return to normal. This was, in fact, an accurate prediction of what happened during the year. We are very pleased with the progress that the MLP sector made since the 2008 financial crisis and are pleased with the MLP sector s natural progression over the last two years to a more stable operating environment. As we formulate our outlook for 2011, we believe MLP valuations remain attractive. While we do not anticipate a continuation of the strong returns generated during fiscal 2009 and 2010, we do expect low double-digit returns for the sector during fiscal 2011. We expect distribution growth to continue with average distribution growth for the sector in the 5% to 6% range.

Distribution growth will be driven largely by organic growth projects and acquisitions. We believe the development of our nation s unconventional reserves will provide substantial growth opportunities for MLPs. We believe acquisition prospects for MLPs remain good, but we are carefully watching the prices being paid by MLPs (and the resulting acquisition multiples). While recent transactions have been accretive, the acquisition multiples have increased substantially over the last 12 to 18 months.

We believe that MLP management teams are committed to pursuing growth projects and acquisitions that generate returns in excess of their cost of capital. We are encouraged by steps taken by several MLPs during 2010 to

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LETTER TO STOCKHOLDERS

simplify their capital structures and reduce their cost of capital, but we continue to closely watch the terms of these restructuring transactions to ensure the transaction is in the best interest of the public unitholders.

We announced two privately negotiated direct investments, or PIPE transactions, during December 2010 our first MLP PIPE transactions since fiscal 2007. These transactions helped two MLPs to partially finance acquisitions and were situations in which the public markets were not a viable financing alternative. Additionally, we made one private investment in December, where we acquired an equity interest in a privately held general partner of a publicly traded MLP. We believe fiscal 2011 will bring more opportunities where we can provide MLPs with creative financing solutions on a privately negotiated basis. We believe such transactions will help us generate strong returns for our investors and differentiate us from our peers.

We look forward to continuing to execute on our business plan of achieving high after-tax total returns by investing in MLPs and other midstream energy companies. We invite you to visit our website at kaynefunds.com for the latest updates.

Sincerely,

Kevin S. McCarthy
Chairman of the Board of Directors,
President and Chief Executive Officer

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KAYNE ANDERSON MLP INVESTMENT COMPANY
PORTFOLIO SUMMARY
(UNAUDITED)

Portfolio Investments by Category *

** As a percentage of total investments.*

Top 10 Holdings by Issuer

	Holding	Sector	Percent of Total Investments as of November 30, 2010	2009
1.	Enterprise Products Partners L.P.	Midstream MLP	9.1%	7.7%
2.	Magellan Midstream Partners, L.P.	Midstream MLP	6.7	7.9
3.	Kinder Morgan Management, LLC	MLP Affiliate	6.5	6.0
4.	Plains All American Pipeline, L.P.	Midstream MLP	5.9	9.1
5.	Inergy, L.P.	Propane MLP	5.3	6.8
6.	Williams Partners L.P.	Midstream MLP	4.9	3.1
7.	MarkWest Energy Partners, L.P.	Midstream MLP	4.9	5.3
8.	Energy Transfer Equity, L.P.	General Partner MLP	3.9	4.4
9.	Energy Transfer Partners, L.P.	Midstream MLP	3.5	4.8
10.	ONEOK Partners, L.P.	Midstream MLP	3.4	2.4

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KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
(UNAUDITED)

Company Overview

Kayne Anderson MLP Investment Company is a non-diversified, closed-end fund formed in September 2004. Our investment objective is to obtain a high after-tax total return by investing at least 85% of our total assets in energy-related master limited partnerships and their affiliates (MLPs) and in other companies that operate assets used in the gathering, transporting, processing, storing, refining, distributing, mining or marketing of natural gas, natural gas liquids, crude oil, refined petroleum products or coal (collectively with MLPs, Midstream Energy Companies).

As of November 30, 2010, we had total assets of $3.0 billion, net assets applicable to our common stock of $1.8 billion (net asset value per share of $26.67), and 68.5 million shares of common stock outstanding.

Our investments are principally in equity securities issued by MLPs, but we may also invest in debt securities of MLPs and debt/equity securities of Midstream Energy Companies. As of November 30, 2010, we held $2.9 billion in equity investments and $90.4 million in debt investments.

Results of Operations For the Three Months Ended November 30, 2010

Investment Income. Investment income totaled $4.7 million and consisted primarily of net dividends and distributions and interest income on our investments. Interest income was $1.4 million and we received $38.8 million of cash dividends and distributions, of which $35.5 million was treated as return of capital during the period. Return of capital was increased by $1.5 million during the quarter. This increase was related to 2009 tax reporting information that we received in 2010 from the portfolio companies in which we invest. During the quarter, we received $4.3 million of paid-in-kind dividends, which is not included in investment income, but is reflected as an unrealized gain.

Operating Expenses. Operating expenses totaled $18.5 million, including $9.4 million of investment management fees, $6.5 million of interest expense (including non-cash amortization of debt issuance costs of $0.3 million), and $0.8 million of other operating expenses. Management fees are calculated based on the average total assets under management. Preferred stock distributions for the fourth quarter were $1.7 million (including non-cash amortization of $0.06 million).

Net Investment Loss. Our net investment loss totaled $7.9 million and included a deferred income tax benefit of $5.9 million.

Net Realized Losses. We had net realized losses from our investments of $9.2 million, net of $5.3 million of tax benefit. The net loss for the quarter was primarily the result of the disposition of our investments in Clearwater Natural Resources, L.P.

Net Change in Unrealized Gains. We had net unrealized gains of $234.2 million. The net unrealized gain consisted of $373.9 million of unrealized gains from investments and a deferred tax expense of $139.7 million.

Net Increase in Net Assets Resulting from Operations. We had an increase in net assets resulting from operations of $217.1 million. This increase is composed of a net investment loss of $7.9 million; net realized losses of $9.2 million; and net unrealized gains of $234.2 million, as noted above.

Results of Operations For the Year Ended November 30, 2010

Investment Income. Investment income totaled $19.1 million and consisted primarily of net dividends and distributions and interest income on our investments. Interest income was $4.2 million and we received $137.7 million of cash dividends and distributions, of which $122.8 million was treated as return of capital during the period. Return of capital was increased by $1.5 million related to 2009 tax reporting information that we received in 2010 from the portfolio companies in which we invest. During the year we received $14.5 million of paid-in-kind dividends, which is not included in investment income but is reflected as an unrealized gain.

KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
(UNAUDITED)

Operating Expenses. Operating expenses totaled $61.0 million, including $30.1 million of investment management fees, $23.8 million of interest expense (including non-cash amortization of debt issuance costs of $1.2 million), and $3.3 million of other operating expenses. Management fees are calculated based on the average total assets under management. Preferred stock distributions for the year were $3.8 million (including non-cash amortization of $0.1 million).

Net Investment Loss. Our net investment loss totaled $26.3 million and included a deferred income tax benefit of $15.6 million.

Net Realized Gains. We had net realized gains from our investments of $34.3 million, net of $20.3 million of tax expense.

Net Change in Unrealized Gains. We had net unrealized gains of $487.2 million. The net unrealized gain consisted of $775.4 million of unrealized gains from investments and a deferred tax expense of $288.2 million.

Net Increase in Net Assets Resulting from Operations. We had an increase in net assets resulting from operations of $495.2 million. This increase is composed of a net investment loss of $26.3 million; net realized gains of $34.3 million; and net unrealized gains of $487.2 million, as noted above.

Distributions to Common Stockholders

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

Income from portfolio investments includes (a) cash distributions paid by MLPs, (b) paid-in-kind dividends received from MLPs and MLP affiliates (in particular, the two MLP i-shares), (c) interest income from debt securities and (d) net premiums received from the sale of covered calls.

Operating expenses include (a) management fees paid to our investment adviser, (b) other expenses (mostly attributable to fees paid to other service providers), (c) leverage costs, including interest expense and preferred stock distributions and (d) deferred income tax expense/benefit on net investment income/loss.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
(UNAUDITED)

Net Distributable Income (NDI)
(amounts in millions, except for per share amounts)

		Three Months Ended November 30, 2010
Distributions and Other Income from Investments		
Dividends and Distributions	$	38.8
Paid-In-Kind Dividends		4.3
Interest Income		1.4
Net Premiums Received from Call Options Written		2.5
Total Distributions and Other Income from Investments		47.0
Expenses		
Investment Management Fee		(9.4)
Other Expenses		(0.8)
Total Management Fee and Other Expenses		(10.2)
Interest Expense		(6.2)
Preferred Stock Distributions		(1.7)
Income Tax Benefit		5.9
Net Distributable Income (NDI)	**$**	**34.8**
Weighted Shares Outstanding		68.2
NDI per Weighted Share Outstanding	**$**	**0.51**

Payment of future distributions is subject to Board of Directors approval, as well as meeting the covenants of our debt agreements and terms of our preferred stock. In determining our quarterly distribution to common stockholders, our Board of Directors considers a number of factors that include, but are not limited to:

- NDI generated in the current quarter;
- Expected NDI over the next twelve months; and
- Realized and unrealized gains generated by the portfolio.

On December 15, 2010, we declared our quarterly distribution of $0.485 per common share for the period September 1, 2010 through November 30, 2010 for a total of $33.2 million. The distribution was paid on January 14, 2011 to stockholders of record on January 5, 2011. During the fiscal year we paid distributions of $1.92 per common share for a total of $114.1 million to our common stockholders.

Reconciliation of NDI to GAAP

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

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

KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
(UNAUDITED)

NDI includes the value of dividends paid-in-kind (i.e., stock dividends), whereas such amounts are not included as investment income for GAAP purposes during the period received, but rather are recorded as unrealized gains upon receipt.

Many 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 over the remaining term 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 fee that we received, thereby generating a profit. The amount we received from selling call options, less the amount that we pay to repurchase such call option contracts is included in NDI. For GAAP purposes, income from call option contracts sold is 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:

Expenses for purposes of calculating NDI include distributions paid to preferred stockholders.

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

NDI also includes recurring payments (or receipts) on interest rate swap contracts (excluding termination payments) whereas for GAAP purposes, these amounts are included in the realized gains/losses section of the Statement of Operations.

Liquidity and Capital Resources

Total leverage outstanding at November 30, 2010 of $780 million is comprised of $620 million in senior unsecured notes and $160 million in mandatory redeemable preferred stock. At November 30, 2010, we did not have any borrowings outstanding under our senior unsecured revolving credit facility (the Credit Facility). Total leverage represented 26% of total assets at November 30, 2010. As of January 27, 2011, we had $85 million borrowed under our Credit Facility.

The Credit Facility has a $100 million commitment maturing on June 11, 2013. The interest rate may vary between LIBOR plus 1.75% and LIBOR plus 3.00%, depending on our asset coverage ratios. Outstanding loan balances accrue interest daily at a rate equal to one-month LIBOR plus 1.75% based on current asset coverage ratios. We pay a commitment fee of 0.40% per annum on any unused amounts of the Credit Facility. A full copy of our Credit Facility is available on our website, www.kaynefunds.com.

At November 30, 2010, our asset coverage ratios under the Investment Company Act of 1940, as amended (the 1940 Act), were 420% and 334% for debt and total leverage (debt plus preferred stock), respectively. We currently target an asset coverage ratio with respect to our debt of 375%, but at times may be above or below our target depending on market conditions.

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MANAGEMENT DISCUSSION
(UNAUDITED)

During fiscal 2010, we completed private placements with institutional investors of $250 million of senior unsecured notes and $160 million of mandatory redeemable preferred stock. During the year, we also completed the redemption of our series D auction rate preferred stock ($75 million).

At November 30, 2010, we had $620 million of senior unsecured notes outstanding with the following maturity dates: $75 million matures in 2011; $60 million matures in 2012; $125 million matures in 2013; $110 million matures in 2014; $125 million matures in 2015; $25 million matures in 2017; $60 million matures in 2020; and $40 million matures in 2022. At November 30, 2010 we had $160 million of mandatory redeemable preferred stock with the following redemption dates: $118 million redeemable in 2017 and $42 million redeemable in 2020.

As of November 30, 2010, our leverage consisted of both fixed rate (88%) and floating rate (12%) obligations. At such date, the weighted average interest rate on our leverage was 4.29%.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2010
(amounts in 000 s, except number of option contracts)

Description	No. of Shares/Units	Value
Long-Term Investments 164.2%		
Equity Investments[1] 159.2%		
Midstream MLP[2] 112.3%		
Boardwalk Pipeline Partners, LP	508	$ 15,743
Buckeye Partners, L.P.	201	13,697
Chesapeake Midstream Partners, L.P.	1,007	28,690
Copano Energy, L.L.C.	3,350	100,257
Crestwood Midstream Partners LP	1,116	29,676
Crosstex Energy, L.P.	2,761	38,462
DCP Midstream Partners, LP	1,554	54,224
Duncan Energy Partners L.P.	414	12,998
Eagle Rock Energy Partners, L.P.	849	6,799
El Paso Pipeline Partners, L.P.	2,763	91,506
Enbridge Energy Partners, L.P.[3]	1,593	96,944
Energy Transfer Partners, L.P.[3]	2,094	106,126
Enterprise Products Partners L.P.[3]	6,524	274,520
Exterran Partners, L.P.	1,627	39,232
Global Partners LP	1,646	42,524
Holly Energy Partners, L.P.	635	32,493
Magellan Midstream Partners, L.P.	3,394	190,058
Magellan Midstream Partners, L.P. Unregistered[4]	238	13,307
MarkWest Energy Partners, L.P.	3,466	146,703
Martin Midstream Partners L.P.	343	12,608
Niska Gas Storage Partners LLC	847	16,925
ONEOK Partners, L.P.[3]	1,299	102,892
PAA Natural Gas Storage, L.P.	327	7,727
Plains All American Pipeline, L.P.[5]	2,876	176,897
Regency Energy Partners LP	3,796	97,553
Spectra Energy Partners, LP	551	18,696
Sunoco Logistics Partners L.P.[3]	289	23,306
Targa Resources Partners LP	1,260	38,162
TransMontaigne Partners L.P.	714	25,147
Western Gas Partners, LP	1,638	48,786
Williams Partners L.P.	3,149	148,169
		2,050,827
MLP Affiliates[2] 14.3%		
Enbridge Energy Management, L.L.C.[6]	1,087	66,221
Kinder Morgan Management, LLC[6]	3,046	194,920

		261,141
General Partner MLP 11.8%		
Alliance Holdings GP L.P.	1,097	50,045
Energy Transfer Equity, L.P.	2,808	111,096
Penn Virginia GP Holdings, L.P.	2,161	53,882
		215,023
Propane MLP 8.8%		
Inergy, L.P.	2,937	114,606
Inergy, L.P. Unregistered[(4)]	1,175	45,692
		160,298

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2010
(amounts in 000 s, except number of option contracts)

Description	No. of Shares/Units	Value
Shipping MLP 7.7%		
Capital Product Partners L.P.	2,646	$ 22,255
Navios Maritime Partners L.P.	1,685	31,275
Teekay LNG Partners L.P.	1,182	42,961
Teekay Offshore Partners L.P.	1,536	44,270
		140,761
Midstream & Other 1.9%		
CenterPoint Energy, Inc.	50	782
Clearwater Trust[(4)(7)(8)]	N/A	4,515
Knightsbridge Tankers Ltd	284	6,447
ONEOK, Inc.	196	10,038
Teekay Tankers Ltd.	1,168	13,837
		35,619
Upstream MLP 1.4%		
EV Energy Partners, L.P.	254	9,708
Legacy Reserves LP	605	15,795
		25,503
Coal MLP 1.0%		
Alliance Resource Partners, L.P.	73	4,542
Natural Resource Partners L.P.[(3)]	241	7,343
Penn Virginia Resource Partners, L.P.	237	6,463
		18,348
Total Equity Investments (Cost $1,783,520)		2,907,520

	Interest Rate	Maturity Date	Principal Amount
Debt Investments 5.0%			
Midstream 3.0%			

Crestwood Holdings Partners, LLC	(9)	10/1/16	$ 6,250	6,344
Crosstex Energy, L.P.	8.875%	2/15/18	15,000	15,637
El Paso Corporation	7.750	1/15/32	5,000	5,210
Energy Transfer Equity, L.P.	7.500	10/15/20	7,500	7,763
Genesis Energy, L.P.	7.875	12/15/18	14,500	14,373
Niska Gas Storage Partners LLC	8.875	3/15/18	5,000	5,250
				54,577
Upstream 1.7%				
Atlas Energy Resources, LLC	12.125	8/1/17	9,000	11,790
Atlas Energy Resources, LLC	10.750	2/1/18	5,261	6,412
Breitburn Energy Partners L.P.	8.625	10/15/20	6,375	6,359
Linn Energy, LLC	8.625	4/15/20	2,000	2,120
Linn Energy, LLC	7.750	2/1/21	4,000	4,060
				30,741

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2010
(amounts in 000 s, except number of option contracts)

Description	Interest Rate	Maturity Date	Principal Amount	Value
Coal 0.3%				
Penn Virginia Resource Partners, L.P.	8.250%	4/15/18	$ 5,000	$ 5,087
Total Debt Investments (Cost $84,362)				90,405
Total Long-Term Investments (Cost $1,867,882)				2,997,925
Short-Term Investment 0.9%				
Repurchase Agreements 0.9%				
J.P. Morgan Securities Inc. (Agreement dated 11/30/10 to be repurchased at $16,320), collateralized by $16,647 in U.S. Treasury securities (Cost $16,320)	0.130	12/1/10		16,320
Total Investments 165.1% (Cost $1,884,202)				3,014,245

	No. of Contracts	
Liabilities		
Call Option Contracts Written[10]		
Midstream MLP		
Enbridge Energy Partners, L.P., call option expiring 12/18/10 @ $60.00	2,000	(200)
Energy Transfer Partners, L.P., call option expiring 12/18/10 @ $50.00	2,750	(289)
Enterprise Products Partners L.P., call option expiring 12/18/10 @ $65.00	1,500	(34)
ONEOK Partners, L.P., call option expiring 12/18/10 @ $80.00	1,500	(90)
Sunoco Logistics Partners L.P., call option expiring 12/18/10 @ $80.00	1,000	(145)
		(758)
Coal MLP		
Natural Resource Partners L.P., call option expiring 12/18/10 @ $30.00	800	(64)
Total Call Option Contracts Written (Premiums Received $1,247)		(822)
Senior Unsecured Notes		(620,000)
Mandatory Redeemable Preferred Stock at liquidation value		(160,000)
Deferred Tax Liability		(390,711)
Other Liabilities		(28,212)

Total Liabilities		(1,199,745)
Other Assets		11,391
Total Liabilities in Excess of Other Assets		(1,188,354)
Net Assets Applicable to Common Stockholders	$	1,825,891

(1) Unless otherwise noted, equity investments are common units/common shares.

(2) Includes Limited Liability Companies.

(3) Security or a portion thereof is segregated as collateral on option contracts written.

(4) Fair valued securities, restricted from public sale. See Notes 2, 3 and 7.

(5) The Company believes that it is an affiliate of Plains All American, L.P. See Note 5 Agreements and Affiliations.

(6) Distributions are paid-in-kind.

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
NOVEMBER 30, 2010
(amounts in 000 s, except number of option contracts)

(7) Security is not currently paying cash distributions but is expected to pay cash distributions within the next 12 months.

(8) On September 28, 2010, the Bankruptcy Court finalized the plan of reorganization of Clearwater Natural Resources, L.P. (Clearwater). As part of the plan of reorganization, the Company received an interest in the Creditors Trust of Miller Bros. Coal, LLC (Clearwater Trust) consisting of cash and a coal royalty interest as consideration for its unsecured loan to Clearwater. The Company did not receive any consideration for its equity investment in Clearwater or CNR GP Holdco, LLC. The Company believes it is an affiliate of the Clearwater Trust. See Notes 3, 5 and 7.

(9) Floating rate first lien senior secured term loan. Security pays interest at a rate of LIBOR + 850 basis points, with a LIBOR floor of 2% (10.50% as of November 30, 2010).

(10) Security is non-income producing.

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF ASSETS AND LIABILITIES
NOVEMBER 30, 2010
(amounts in 000 s, except share and per share amounts)

ASSETS	
Investments at fair value:	
Non-affiliated (Cost $1,789,197)	$ 2,816,513
Affiliated (Cost $78,685)	181,412
Repurchase agreements (Cost $16,320)	16,320
Total investments (Cost $1,884,202)	3,014,245
Cash	545
Deposits with brokers	1,081
Receivable for securities sold	900
Interest, dividends and distributions receivable	1,785
Deferred debt issuance and preferred stock offering costs and other assets, net	7,080
Total Assets	3,025,636
LIABILITIES	
Payable for securities purchased	5,644
Investment management fee payable	9,365
Accrued directors fees and expenses	54
Call option contracts written (Premiums received $1,247)	822
Accrued expenses and other liabilities	13,149
Deferred tax liability	390,711
Senior Unsecured Notes	620,000
Mandatory Redeemable Preferred Stock, $25.00 liquidation value per share (6,400,000 shares issued and outstanding)	160,000
Total Liabilities	1,199,745
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	$ 1,825,891
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS CONSIST OF	
Common stock, $0.001 par value (68,471,401 shares issued and outstanding, 199,990,000 shares authorized)	$ 68
Paid-in capital	1,227,330
Accumulated net investment loss, net of income taxes, less dividends	(195,858)
Accumulated realized gains on investments, options, and interest rate swap contracts, net of income taxes	85,462
Net unrealized gains on investments and options, net of income taxes	708,889
NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	$ 1,825,891
NET ASSET VALUE PER COMMON SHARE	$ 26.67

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF OPERATIONS
FOR THE FISCAL YEAR ENDED NOVEMBER 30, 2010
(amounts in 000 s)

INVESTMENT INCOME	
Income	
Dividends and distributions:	
Non-affiliated investments	$ 126,929
Affiliated investments	10,801
Total dividends and distributions	137,730
Return of capital	(122,822)
Net dividends and distributions	14,908
Interest	4,189
Total Investment Income	19,097
Expenses	
Investment management fees	30,104
Administration fees	948
Professional fees	690
Custodian fees	279
Reports to stockholders	286
Directors fees and expenses	224
Insurance	186
Other expenses	741
Total Expenses Before Interest Expense, Preferred Distributions and Taxes	33,458
Interest expense and amortization of debt issuance costs	23,789
Distributions on mandatory redeemable preferred stock and amortization of offering costs	3,777
Total Expenses Before Taxes	61,024
Net Investment Loss Before Taxes	(41,927)
Deferred tax benefit	15,585
Net Investment Loss	(26,342)
REALIZED AND UNREALIZED GAINS/(LOSSES)	
Net Realized Gains/(Losses)	
Investments Non-affiliated	136,875
Investments Affiliated	(83,028)
Options	1,475
Payments on interest rate swap contracts	(664)
Deferred tax expense	(20,318)

Net Realized Gains	34,340
Net Change in Unrealized Gains	
Investments Non-affiliated	651,936
Investments Affiliated	121,993
Options	1,307
Interest rate swap contracts	205
Deferred tax expense	(288,257)
Net Change in Unrealized Gains	487,184
Net Realized and Unrealized Gains	521,524
NET INCREASE IN NET ASSETS RESULTING FROM OPERATIONS	495,182
Distributions on Auction Rate Preferred Stock	(177)
NET INCREASE IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS RESULTING FROM OPERATIONS	$ 495,005

See accompanying notes to financial statements.

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KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF CHANGES IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS
(amounts in 000 s, except share amounts)

	For the Fiscal Year Ended November 30, 2010	2009
OPERATIONS		
Net investment loss, net of tax(1)	$ (26,342)	$ (15,388)
Net realized gains/(losses), net of tax	34,340	(18,431)
Net change in unrealized gains, net of tax	487,184	369,027
Net Increase in Net Assets Resulting from Operations	495,182	335,208
DIVIDENDS/DISTRIBUTIONS TO AUCTION RATE PREFERRED STOCKHOLDERS(1)(2)		
Dividends	(177)	
Distributions return of capital		(539)
Dividends/Distributions to Preferred Stockholders	(177)	(539)
DIVIDENDS/DISTRIBUTIONS TO COMMON STOCKHOLDERS(2)		
Dividends	(49,829)	
Distributions return of capital	(64,293)	(89,586)
Dividends/Distributions to Common Stockholders	(114,122)	(89,586)
CAPITAL STOCK TRANSACTIONS		
Proceeds from common stock offerings of 15,846,650 and 6,223,700 shares of common stock, respectively	396,211	126,030
Underwriting discounts and offering expenses associated with the issuance of common stock	(15,169)	(5,524)
Issuance of 1,045,210 and 1,179,655 shares of common stock from reinvestment of distributions, respectively	25,689	21,532
Net Increase in Net Assets Applicable to Common Stockholders from Capital Stock Transactions	406,731	142,038
Total Increase in Net Assets Applicable to Common Stockholders	787,614	387,121
NET ASSETS ATTRIBUTABLE TO COMMON STOCKHOLDERS		
Beginning of year	1,038,277	651,156
End of year	$ 1,825,891	$ 1,038,277