

Kayne Anderson MLP Investment CO

Form N-30B-2

April 29, 2010

Table of Contents

CONTENTS

	Page
<u>Management Discussion</u>	1
<u>Schedule of Investments</u>	6
<u>Statement of Assets and Liabilities</u>	10
<u>Statement of Operations</u>	11
<u>Statement of Changes in Net Assets Applicable to Common Stockholders</u>	12
<u>Statement of Cash Flows</u>	13
<u>Financial Highlights</u>	14
<u>Notes to Financial Statements</u>	17

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This report 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 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; MLP industry risk; leverage risk; valuation risk; interest rate risk; tax risk; and other risks discussed in the Company's filings with the 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.

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010**

Company Overview

Kayne Anderson MLP Investment Company is a 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 (MLPs) and other Midstream Energy Companies. MLPs and Midstream Energy Companies 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.

As of February 28, 2010, we had total assets of approximately \$2.0 billion, net assets applicable to our common stock of approximately \$1.3 billion (\$22.23 per share), and approximately 58.1 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 other Midstream Energy Companies. As of February 28, 2010, we held \$1.9 billion in equity investments and \$52 million in fixed income investments. Our top 10 largest holdings by issuer as of that date were:

Investment (Sector)	Type of Securities	Amount (\$ millions)	Percent of Total Investments
1. Plains All American Pipeline, L.P. (Midstream MLP)	Common Units	\$ 159.4	8.1%
2. Enterprise Products Partners L.P. (Midstream MLP)	Common Units	144.7	7.4
3. Magellan Midstream Partners, L.P. (Midstream MLP)	Common Units	141.6	7.2
4. Kinder Morgan Management, LLC (MLP Affiliate)	Common Units	134.8	6.9
5. Inergy, L.P. (Propane MLP)	Common Units	122.9	6.3
6. MarkWest Energy Partners, L.P. (Midstream MLP)	Common Units and Senior Notes	103.6	5.3
7. Copano Energy L.L.C. (Midstream MLP)	Common Units and Senior Notes	88.8	4.5
8. Energy Transfer Partners, L.P. (Midstream MLP)	Common Units	85.5	4.4
9. Energy Transfer Equity, L.P. (General Partner MLP)	Common Units	79.9	4.1
10. Regency Energy Partners LP (Midstream MLP)	Common Units	71.9	3.7

Financial Results

During the quarter ended February 28, 2010, our NAV per share increased from \$20.13 to \$22.23, and total assets increased from approximately \$1.60 billion to \$1.97 billion. The increase in NAV was driven primarily by unrealized

gains on our investments. The increase in total assets was driven by unrealized gains on our investments as well as increased investments from the proceeds of our common stock offering in January 2010 and additional borrowings under our revolver. During the quarter, our net distributable income was \$0.48 per common share. We provide a detailed calculation of net distributable income below under Quarterly Distribution to Common Stockholders.

Recent Events

Common Share Offering. On January 20, 2010, we completed a public offering of 6.3 million shares of common stock at a price of \$23.61 per share (the offering price represented a 10% premium to our net asset value at such time). Net proceeds from the offering of \$142 million were used to make additional portfolio investments. These new investments were predominately equity securities of Midstream MLPs. Since the time of the offering, our stock price is up \$3.83 per share, or 16.2% (as of April 26, 2010).

Senior Unsecured Notes and Preferred Stock Offering. On April 20, 2010, we announced that we reached a conditional agreement with institutional investors relating to a private placement of \$110 million of senior unsecured notes and \$110 million of mandatory redeemable preferred stock. Net proceeds from such offerings will be used to repay borrowings under our revolving credit facility, to redeem our Series D Auction Rate Preferred

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010**

Stock (the ARP Shares), to make new portfolio investments and for general corporate purposes. Closing of the private placements is schedule to occur on or about May 7, 2010. Redemption of the ARP Shares is expected to occur in late May and is conditioned on closing of the offering of mandatory redeemable preferred stock.

MLP Market Overview

Sector Performance. MLPs continued to perform very well in our first fiscal quarter, with total returns (share price appreciation plus distributions) of 10.3% during the quarter compared to a return of slightly less than 1% for the S&P 500. This out-performance has continued since quarter end as investors continue to look for stable, yield-based investments. With the strong performance year to date, the Alerian MLP index is now trading at levels last seen before the financial crisis in September 2008.

Distribution Trends. We continue to see signs that distribution growth is returning to the MLP market. Our research analysts currently project that distribution growth will be in the 4% to 5% range for midstream MLPs during 2010, and we believe the number of MLPs that increase their distributions will increase steadily during the year. Now that the financial markets have stabilized, we believe that distribution growth is once again a top priority of MLP management teams.

Quarterly Distribution 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 a non-GAAP financial measure. 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 advisor, (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.

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010**

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

		Three Months Ended February 28, 2010
Distributions and Other Income from Investments		
Dividends and Distributions	\$	31.1
Paid-In-Kind Dividends		3.0
Interest Income		0.8
Net Premiums Received from Call Options Written		0.6
Total Distributions and Other Income from Investments		35.5
Expenses		
Investment Management Fee		(6.0)
Other Expenses		(0.7)
Total Management Fee and Other Expenses		(6.7)
Interest Expense and Payments on Interest Rate Swap Contracts		(5.2)
Preferred Stock Distributions		(0.1)
Income Tax (Expense)/Benefit		2.7
Net Distributable Income (NDI)	\$	26.2
Weighted Shares Outstanding		54.4
NDI per Weighted Share Outstanding	\$	0.48

In determining our quarterly distribution to common stockholders, our Board of Directors considers a number of factors which include but are not limited to:

NDI generated in the current quarter

Expected NDI over the next twelve months

Realized and unrealized gains generated by the portfolio

The \$0.48 per share distribution that was declared with respect to the first quarter 2010 is consistent with the level of NDI generated during the quarter and the amounts expected to be generated over the next twelve months. NDI during the second quarter 2010 will depend on the timing of the new investments made with the net proceeds of the private placement of senior unsecured notes and preferred stock, as described above under "Recent Events".

Dividends and Distributions from Investments

Total dividends and distributions for the first quarter 2010 were \$31.1 million representing a 7.2% increase from the fourth quarter 2009. The increase was primarily the result of additional investments made with the proceeds from the January 2010 equity offering and associated borrowings on our revolving credit facility. Due to the timing of the equity offering, we were unable to invest all of the proceeds prior to the ex-dividend dates for distributions paid in the first quarter 2010. All the proceeds have since been invested, and we anticipate realizing the full amount of the dividends and distributions for our investments in the second quarter.

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010**

Expenses

Our largest expenses are investment management fees and leverage costs.

Management fees are calculated based on the average total assets under management. For the first quarter 2010, management fees were \$6.0 million compared to \$5.0 million for the fourth quarter 2009. Increased management fees were driven by increases in our total assets due to (a) higher valuations on our portfolio investments and (b) additional investments made with the proceeds from our recent equity offering and associated borrowings on our revolving credit facility.

Interest expense for the first quarter 2010 was \$5.3 million compared to \$5.8 million for the fourth quarter 2009. Interest expense was lower than the previous quarter, primarily because the fourth quarter included \$0.7 million of premiums paid to note holders associated with the refinancing of certain senior unsecured notes prior to their maturity dates and included a \$0.2 million write-off of debt issue costs associated with the senior unsecured notes that were redeemed.

Other expenses of \$0.7 million for the first quarter 2010 were slightly more than \$0.6 for the fourth quarter 2009, but in-line with expectations.

Reconciliation of NDI to GAAP

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

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

NDI includes the value of 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 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 for a fee 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 of fees we received 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:

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

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

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
MANAGEMENT DISCUSSION
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010**

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 February 28, 2010 of \$485 million is comprised of \$370 million in senior unsecured notes, \$40 million outstanding under our credit facility, and \$75 million in ARP Shares. Total leverage represented 25% of total assets at February 28, 2010, as compared to 28% as of November 30, 2009 and 36% as of February 28, 2009.

At February 28, 2010 our asset coverage ratios under the 1940 Act were 433% and 366% for debt and total leverage (debt plus preferred stock), respectively. We target an asset coverage ratio with respect to our debt of at least 370%.

We have an \$80 million revolving credit facility that is scheduled to mature on June 26, 2010. We have begun discussions with our current lenders and do not anticipate any significant issues with respect to the renewal of this facility at no less favorable terms than our existing facility.

At February 28, 2010, we had \$370 million of senior unsecured notes outstanding with the following maturity dates: \$75 million matures in 2011 (Series G); \$60 million matures in 2012 (Series I); \$125 million matures in 2013 (Series K); and \$110 million matures in 2014 (Series M and Series N).

Our leverage consists of both fixed rate and floating rate obligations. To partially hedge against our floating rate exposure, we entered into a \$125 million interest rate swap contract at a fixed rate of 0.99% and a termination date in November 2011. At February 28, 2010, excluding the impact of the swaps, the weighted average interest rate on our leverage was 4.19%. At February 28, 2010, factoring in the impact of the interest rate swap, the weighted average interest rate on our leverage was 4.44%.

We anticipate using the net proceeds from our private placement of \$110 million of senior notes and \$110 million of mandatory redeemable preferred stock (described above in *Recent Events*), to repay borrowings under our revolving credit facility, to redeem our ARP Shares, and to make new portfolio investments. In conjunction with this transaction we terminated our \$125 million interest rate swap contract because our floating interest rate exposure will be greatly reduced since the majority of the new leverage will have fixed interest/dividend rates.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except number of option contracts)
(UNAUDITED)

Description	No. of Shares/Units	Value
Long-Term Investments 151.9%		
Equity Investments(a) 147.9%		
Midstream MLP(b) 105.1%		
Boardwalk Pipeline Partners, LP	350	\$ 10,464
Buckeye Partners, L.P.	830	48,799
Copano Energy, L.L.C.	3,634	86,491
Crosstex Energy, L.P.(c)	2,868	27,188
DCP Midstream Partners, LP	861	26,546
Duncan Energy Partners L.P.	592	15,087
El Paso Pipeline Partners, L.P.	1,064	27,540
Enbridge Energy Partners, L.P.	1,307	66,945
Energy Transfer Partners, L.P.(d)	1,846	85,450
Enterprise Products Partners L.P.	4,416	144,678
Exterran Partners, L.P.	1,092	23,960
Global Partners LP	1,302	32,346
Holly Energy Partners, L.P.	562	23,951
Magellan Midstream Partners, L.P.	3,130	141,580
MarkWest Energy Partners, L.P.	3,502	103,581
Martin Midstream Partners L.P.	318	10,051
ONEOK Partners, L.P.(d)	951	57,657
Plains All American Pipeline, L.P.(e)	2,876	159,380
Quicksilver Gas Services LP	612	12,352
Regency Energy Partners LP(d)	3,383	71,860
Spectra Energy Partners, LP	381	11,415
Sunoco Logistics Partners L.P.	114	7,716
Targa Resources Partners LP	952	23,797
TC PipeLines, LP	772	28,469
TransMontaigne Partners L.P.	502	13,850
Western Gas Partners, LP	932	19,921
Williams Partners L.P.	1,430	55,555
Williams Pipeline Partners L.P.	722	21,065
		1,357,694
MLP Affiliates(b) 13.5%		
Enbridge Energy Management, L.L.C.(f)	782	39,090
Kinder Morgan Management, LLC(d)(f)	2,351	134,825
		173,915

General Partner MLP 12.6%

Alliance Holdings GP L.P.	874	25,096
Buckeye GP Holdings L.P.	57	1,857
Energy Transfer Equity, L.P.	2,473	79,919
Enterprise GP Holdings L.P.	1,347	55,299
Inergy Holdings, L.P.	8	555
		162,726

Propane MLP 9.5%

Inergy, L.P.(d)	3,404	122,938
-----------------	-------	---------

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except number of option contracts)
(UNAUDITED)

Description	No. of Shares/Units	Value
Shipping MLP 6.3%		
Capital Product Partners L.P.	895	\$ 7,766
K-Sea Transportation Partners L.P.	78	737
Navios Maritime Partners L.P.	1,247	19,617
Teekay LNG Partners L.P.	1,132	30,886
Teekay Offshore Partners L.P.	876	16,456
Teekay Tankers Ltd.	524	5,354
		80,816
Upstream MLP 0.5%		
Legacy Reserves LP	313	6,632
Coal MLP 0.4%		
Alliance Resource Partners, L.P.	83	3,466
Penn Virginia Resource Partners, L.P.	98	2,266
		5,732
Total Equity Investments (Cost \$1,346,541)		1,910,453

	Interest Rate	Maturity Date	Principal Amount	
Energy Debt Investments 4.0%				
Midstream MLP(b) 2.1%				
Copano Energy, L.L.C.	7.750%	6/1/18	\$ 1,800	1,759
Copano Energy, L.L.C.	8.125	3/1/16	500	504
Crosstex Energy, L.P.	8.875	2/15/18	20,000	20,300
Niska Gas Storage U.S., LLC	8.875	3/15/18	5,000	5,000
				27,563
Upstream MLP(b) 1.5%				
Atlas Energy Resources, LLC	12.125	8/1/17	9,000	10,125
Atlas Energy Resources, LLC	10.750	2/1/18	9,000	9,743

				19,868
Coal MLP 0.4%				
Clearwater Natural Resources, LP(c)(g)(h)	(i)	12/3/09	13,601	4,420
Total Energy Debt Investments (Cost \$57,421)				51,851
Total Long-Term Investments (Cost \$1,403,962)				1,962,304
Short-Term Investment 0.2%				
Repurchase Agreement 0.2%				
J.P. Morgan Securities Inc. (Agreement dated 2/26/10 to be repurchased at \$2,087), collateralized by \$2,152 in U.S.				
Treasury note (Cost \$2,087)	0.020	3/1/10		2,087
Total Investments 152.1% (Cost \$1,406,049)				1,964,391

See accompanying notes to financial statements.

7

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except number of option contracts)
(UNAUDITED)

Description	No. of Contracts	Value
Liabilities		
Call Option Contracts Written(c)		
Midstream MLP		
Energy Transfer Partners, L.P., call option expiring 3/19/10 @ \$45.00	906	\$ (136)
ONEOK Partners, L.P., call option expiring 3/19/10 @ \$60.00	1,000	(115)
Regency Energy Partners LP, call option expiring 3/19/10 @ \$20.00	250	(34)
		(285)
Propane MLP		
Inergy, L.P., call option expiring 3/19/10 @ \$35.00	1,000	(145)
		Total Call Option Contracts Written (Premiums Received \$391) (430)
Senior Unsecured Notes		(370,000)
Unrealized Depreciation on Interest Rate Swap Contracts		(416)
Revolving Credit Line		(40,000)
Deferred Tax Liability		(174,308)
Other Liabilities		(17,708)
		Total Liabilities (602,862)
Other Assets		5,331
		Total Liabilities in Excess of Other Assets (597,531)
Preferred Stock at Redemption Value		(75,000)
Net Assets Applicable to Common Stockholders		\$ 1,291,860

- (a) Unless otherwise noted, equity investments are common units/common shares.
- (b) Includes Limited Liability Companies.
- (c) Security is non-income producing.
- (d) Security or a portion thereof is segregated as collateral on option contracts written or interest rate swap contract.
- (e) The Company believes that it is an affiliate of Plains All American, L.P. See Note 5 Agreements and Affiliations.

- (f) Distributions are paid in-kind.
- (g) Fair valued securities, restricted from public sale. See Notes 2, 3 and 7.
- (h) Clearwater Natural Resources, LP is a privately-held MLP that the Company believes is a controlled affiliate. On January 12, 2010, Clearwater closed on the sale of all of its reserves and a substantial portion of its operating assets to International Resource Partners, L.P. (IRP). On March 16, 2010, the Bankruptcy Court confirmed Clearwater s plan of reorganization (including such sale of assets to IRP). As part of Clearwater s plan of reorganization, the Company will receive consideration for its unsecured term loan. Such consideration will be in the form of cash and a royalty interest in the reserves sold. Pursuant to the plan of reorganization, the

See accompanying notes to financial statements.

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except number of option contracts)
(UNAUDITED)**

Company will not receive any consideration for its equity investment in Clearwater or CNR GP Holdco, LLC. In addition to the unsecured term loan, the Company owns 3,889 common units, 34 warrants and 41 unregistered, deferred participation units of Clearwater. The Company assigned no value to these equity investments as of February 28, 2010. CNR GP Holdco, LLC is the general partner of Clearwater. The Company owns 83.7% of CNR GP Holdco, LLC, which was assigned no value as of February 28, 2010, and believes it is a controlled affiliate. See Notes 3, 5 and 7.

- (i) Floating rate unsecured working capital term loan. Interest is paid-in-kind at a rate of the higher of (i) one year LIBOR or (ii) 4.75%, plus 900 basis points (13.75% as of February 28, 2010). As described in Note 2(I), the Company is not accruing interest on this investment.

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF ASSETS AND LIABILITIES
FEBRUARY 28, 2010
(amounts in 000 s, except share and per share amounts)
(UNAUDITED)

ASSETS

Investments at fair value:	
Non-affiliated (Cost \$1,237,473)	\$ 1,798,504
Affiliated (Cost \$78,857)	159,380
Controlled (Cost \$87,632)	4,420
Repurchase agreement (Cost \$2,087)	2,087
Total investments (Cost \$1,406,049)	1,964,391
Deposits with brokers	316
Receivable for securities sold	2,099
Interest, dividends and distributions receivable	330
Deferred debt issuance costs and other assets, net	2,586
Total Assets	1,969,722

LIABILITIES

Payable for securities purchased	6,824
Revolving credit line	40,000
Investment management fee payable	5,988
Accrued directors' fees and expenses	43
Call option contracts written (Premiums received \$391)	430
Accrued expenses and other liabilities	4,853
Unrealized depreciation on interest rate swap contracts	416
Deferred tax liability	174,308
Senior Unsecured Notes	370,000
Total Liabilities	602,862

PREFERRED STOCK

\$25,000 liquidation value per share applicable to 3,000 outstanding shares (10,000 shares authorized)	75,000
--	--------

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	\$ 1,291,860
---	---------------------

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS CONSIST OF

Common stock, \$0.001 par value (58,118,644 shares issued and outstanding, 199,990,000 shares authorized)	\$ 58
Paid-in capital	1,010,683
Accumulated net investment loss, net of income taxes, less dividends	(126,824)
Accumulated realized gains on investments and interest rate swap contracts, net of income taxes	58,438
Net unrealized gains on investments and interest rate swap contracts, net of income taxes	349,505

NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS	\$ 1,291,860
NET ASSET VALUE PER COMMON SHARE	\$ 22.23

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF OPERATIONS
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010
(amounts in 000 s)
(UNAUDITED)

INVESTMENT INCOME**Income**

Dividends and distributions:

Non-affiliated investments	\$ 28,410
Affiliated investments	2,668

Total dividends and distributions	31,078
Return of capital	(27,311)

Net dividends and distributions	3,767
Interest	779

Total Investment Income	4,546
-------------------------	-------

Expenses

Investment management fees	5,988
Administration fees	201
Professional fees	144
Custodian fees	56
Reports to stockholders	43
Directors fees	54
Insurance	45
Other expenses	188

Total Expenses Before Interest Expense and Taxes	6,719
Interest expense	5,306

Total Expenses Before Taxes	12,025
-----------------------------	--------

Net Investment Loss Before Taxes	(7,479)
Deferred tax benefit	2,767

Net Investment Loss	(4,712)
----------------------------	----------------

REALIZED AND UNREALIZED GAINS/(LOSSES)**Net Realized Gains/(Losses)**

Investments	11,868
Options	(16)
Payments on interest rate swap contracts	(240)
Deferred tax expense	(4,296)

Net Realized Gains	7,316
--------------------	-------

Net Change in Unrealized Gains/(Losses)	
Investments	202,227
Options	843
Interest rate swap contracts	(211)
Deferred tax expense	(75,058)
Net Change in Unrealized Gains	127,801
Net Realized and Unrealized Gains	135,117
NET INCREASE IN NET ASSETS RESULTING FROM OPERATIONS	130,405
DISTRIBUTION TO PREFERRED STOCKHOLDERS	(79)
NET INCREASE IN NET ASSETS APPLICABLE TO COMMON STOCKHOLDERS RESULTING FROM OPERATIONS	\$ 130,326

See accompanying notes to financial statements.

Table of Contents

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

	For the Three Months Ended February 28, 2010 (Unaudited)	For the Fiscal Year Ended November 30, 2009
OPERATIONS		
Net investment loss, net of tax	\$ (4,712)	\$ (15,388)
Net realized gains/(losses), net of tax	7,316	(18,431)
Net change in unrealized gains, net of tax	127,801	369,027
Net Increase in Net Assets Resulting from Operations	130,405	335,208
DIVIDENDS/DISTRIBUTIONS TO PREFERRED STOCKHOLDERS		
Dividends	(79) ⁽¹⁾	
Distributions return of capital		(539) ⁽²⁾
Dividends/Distributions to Preferred Stockholders	(79)	(539)
DIVIDENDS/DISTRIBUTIONS TO COMMON STOCKHOLDERS		
Dividends	(2,525) ⁽¹⁾	
Distributions return of capital	(22,233) ⁽¹⁾	(89,586) ⁽²⁾
Dividends/Distributions to Common Stockholders	(24,758)	(89,586)
CAPITAL STOCK TRANSACTIONS		
Proceeds from common stock public offerings of 6,291,600 shares of common stock	148,545	126,030
Underwriting discounts and offering expenses associated with the issuance of common stock	(6,114)	(5,524)
Issuance of 247,503 and 1,179,655 shares of common stock from reinvestment of distributions, respectively	5,584	21,532
Net Increase in Net Assets Applicable to Common Stockholders from Capital Stock Transactions	148,015	142,038
Total Increase in Net Assets Applicable to Common Stockholders	253,583	387,121
NET ASSETS ATTRIBUTABLE TO COMMON STOCKHOLDERS		
Beginning of period	1,038,277	651,156

End of period	\$	1,291,860	\$	1,038,277
---------------	----	-----------	----	-----------

- (1) This is an estimate of the characterization of the distributions paid to preferred stockholders and common stockholders for the three months ended February 28, 2010 as either a dividend (ordinary income) or distribution (return of capital). This estimate is based on the Company's operating results during the period. The actual characterization of the preferred stock and common stock distributions made during the period will not be determinable until after the end of the fiscal year when the Company can determine earnings and profits and, therefore, it may differ from the preliminary estimates.
- (2) All distributions paid to preferred stockholders and common stockholders for the fiscal year ended November 30, 2009 were characterized as distributions (return of capital). This characterization is based on the Company's earnings and profits.

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
STATEMENT OF CASH FLOWS
FOR THE THREE MONTHS ENDED FEBRUARY 28, 2010
(amounts in 000 s)
(UNAUDITED)

CASH FLOWS FROM OPERATING ACTIVITIES

Net increase in net assets resulting from operations	\$ 130,405
Adjustments to reconcile net increase in net assets resulting from operations to net cash used in operating activities:	
Net deferred tax expense	76,587
Return of capital distributions	27,311
Net realized gains	(11,612)
Unrealized gains on investments, interest rate swap contracts and options written	(202,860)
Accretion of bond discount, net	(43)
Purchase of investments	(243,791)
Proceeds from sale of investments	57,957
Proceeds from sale of short-term investments, net	4,253
Sale of option contracts, net	(103)
Decrease in deposits with brokers	237
Increase in receivable for securities sold	(1,329)
Decrease in interest, dividends and distributions receivable	564
Decrease in income tax receivable	60
Amortization of deferred debt issuance costs	289
Decrease in other assets, net	13
Increase in payable for securities purchased	1,296
Increase in investment management fee payable	1,008
Decrease in accrued directors' fees and expenses	(1)
Decrease in accrued expenses and other liabilities	(3,419)
Net Cash Used in Operating Activities	(163,178)

CASH FLOWS FROM FINANCING ACTIVITIES

Issuance of shares of common stock, net of offering costs	142,431
Proceeds from revolving credit line	40,000
Cash distributions paid to preferred stockholders	(79)
Cash distributions paid to common stockholders	(19,174)
Net Cash Provided by Financing Activities	163,178

NET CHANGE IN CASH**CASH BEGINNING OF PERIOD****CASH END OF PERIOD**

\$

Supplemental disclosure of cash flow information:

Non-cash financing activities not included herein consist of reinvestment of distributions of \$5,584 pursuant to the Company's dividend reinvestment plan.

During the three months ended February 28, 2010, the Company received federal and state income tax refunds of \$60 and interest paid was \$8,406.

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
FINANCIAL HIGHLIGHTS
(amounts in 000 s, except share and per share amounts)

	For the Three Months Ended February 28, 2010 (Unaudited)	2009	2008	For the Fiscal Year Ended November 30,			2005	For the Period September 28, 2004⁽¹⁾ through November 30, 2004
				2007	2006			
Per Share of Common Stock⁽²⁾								
Net asset value, beginning of period	\$ 20.13	\$ 14.74	\$ 30.08	\$ 28.99	\$ 25.07	\$ 23.91	\$ 23.70 ⁽³⁾	
Net investment income/(loss)	(0.10)	(0.33)	(0.73)	(0.73)	(0.62)	(0.17)	0.02	
Net realized and unrealized gain/(loss) on investments, securities sold short, options and interest rate swap contracts	2.57	7.50	(12.56)	3.58	6.39	2.80	0.19	
Total income from investment operations	2.47	7.17	(13.29)	2.85	5.77	2.63	0.21	
Preferred Stockholder Dividends ⁽⁴⁾				(0.10)		(0.05)		
Preferred Stockholder Distributions return of capital ⁽⁴⁾	(0.00)	(0.01)	(0.10)		(0.10)			
Total dividends and distributions Preferred Stockholders	(0.00)	(0.01)	(0.10)	(0.10)	(0.10)	(0.05)		

Common Stockholder Dividends ⁽⁴⁾	(0.05)			(0.09)		(0.13)	
Common Stockholder Distributions return of capital ⁽⁴⁾	(0.43)	(1.94)	(1.99)	(1.84)	(1.75)	(1.37)	
Total dividends and distributions Common Stockholders	(0.48)	(1.94)	(1.99)	(1.93)	(1.75)	(1.50)	
Underwriting discounts and offering costs on the issuance of preferred stock						(0.03)	
Anti-dilutive effect due to issuance of common stock, net of underwriting discounts and offering costs	0.11	0.12		0.26		0.11	
Anti-dilutive effect due to shares issued in reinvestment of dividends		0.05	0.04	0.01			
Total capital stock transactions	0.11	0.17	0.04	0.27		0.08	
Net asset value, end of period	\$ 22.23	\$ 20.13	\$ 14.74	\$ 30.08	\$ 28.99	\$ 25.07	\$ 23.91
Market value per share of common stock, end of period	\$ 24.86	\$ 24.43	\$ 13.37	\$ 28.27	\$ 31.39	\$ 24.33	\$ 24.90
Total investment return based on common stock market value ⁽⁵⁾	3.9% ⁽⁶⁾	103.0%	(48.8)%	(4.4)%	37.9%	3.7%	(0.4)% ⁽⁶⁾

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
FINANCIAL HIGHLIGHTS

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

	For the Three Months Ended February 28, 2010 (Unaudited)	2009	2008	For the Fiscal Year Ended November 30, 2007	2006	2005	For Peri Septem 200 thro Novem 200
total ratios ⁽⁷⁾							
s, end	\$ 1,291,860	\$ 1,038,277	\$ 651,156	\$ 1,300,030	\$ 1,103,392	\$ 932,090	\$ 7
enses Net							
nt fees	2.1%	2.1%	2.2%	2.3%	3.2%	1.2%	
ses	0.3	0.4	0.3	0.2	0.2	0.3	
	2.4	2.5	2.5	2.5	3.4	1.5	
ense agent	1.9	2.5	3.4	2.3	1.7	0.8	
enefit)	27.5	25.4	(29.7)	3.5	13.8	6.4	
ses	31.8%	30.4%	(23.8)%	8.3%	18.9%	8.7%	
s) to assets	(1.7)%	(2.0)%	(2.8)%	(2.3)%	(2.4)%	(0.7)%	
crease) to	0.1% ⁽⁶⁾	43.2%	(51.2)%	7.3%	21.7%	10.0%	
s om o							

	3.3% ⁽⁶⁾	28.9%	6.7%	10.6%	10.0%	25.6%	
assets	\$ 1,130,015	\$ 774,999	\$ 1,143,192	\$ 1,302,425	\$ 986,908	\$ 870,672	\$ 7
turnover							
assets	370,000	370,000	304,000	505,000	320,000	260,000	
end of							
credit	40,000			97,000	17,000		
standing,							
d	75,000	75,000	75,000	75,000	75,000	75,000	
e							
ock,							
d							
ures of	54,866,226	46,894,632	43,671,666	41,134,949	37,638,314	34,077,731	33,1
ock							
age of	433.4%	400.9%	338.9%	328.4%	449.7%	487.3%	
age of							
ge (Debt							
d	366.4%	333.3%	271.8%	292.0%	367.8%	378.2%	
ount of							
per							
ommon							
g the	\$ 7.12	\$ 6.79	\$ 11.52	\$ 12.14	\$ 8.53	\$ 5.57	

- (1) Commencement of operations.
- (2) Based on average shares of common stock outstanding.
- (3) Initial public offering price of \$25.00 per share less underwriting discounts of \$1.25 per share and offering costs of \$0.05 per share.
- (4) The information presented for the three months ended February 28, 2010 is an estimate of the characterization of the distribution paid and is based on the Company's operating results during the period. The information presented for each other period is a characterization of a portion of the total distributions paid to preferred stockholders and common stockholders as either a dividend (ordinary income) or a distribution (return of capital) and is based on the Company's earnings and profits.
- (5) Total investment return 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 assumed reinvestment of distributions at actual prices pursuant to the Company's dividend reinvestment plan.
- (6) Not annualized.
- (7) Unless otherwise noted, ratios are annualized for periods of less than one full year.

- (8) The following table sets forth the components of the Company's ratio of expenses to average total assets for each period presented in the Company's Financial Highlights.

See accompanying notes to financial statements.

Table of Contents

**KAYNE ANDERSON MLP INVESTMENT COMPANY
FINANCIAL HIGHLIGHTS**

(amounts in 000 \$, except share and per share amounts)

	For the Three Months Ended February 28, 2010 (Unaudited)	2009	For the Fiscal Year Ended November 30,			2005	For the Period September 28, 2004 ⁽¹⁾ through November 30, 2004
		2008	2007	2006			
Management fees	1.4%	1.3%	1.4%	1.4%	2.0%	0.9%	0.7%
Other expenses	0.2	0.3	0.2	0.2	0.2	0.3	0.4
Subtotal	1.6	1.6	1.6	1.6	2.2	1.2	1.1
Interest expense							
and auction agent fees	1.2	1.5	2.1	1.3	1.1	0.6	0.0
Income tax expense/(benefit)	17.4	15.8	(18.5)	2.2	8.9	5.0	3.3
Total expenses	20.2%	18.9%	(14.8)%	5.1%	12.2%	6.8%	4.4%
Average total assets	\$ 1,785,571	\$ 1,245,442	\$ 1,841,311	\$ 2,105,217	\$ 1,520,322	\$ 1,137,399	\$ 778,899

- (9) Calculated pursuant to section 18(a)(1)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by senior notes or any other senior securities representing indebtedness divided by the aggregate amount of senior notes and any other senior securities representing indebtedness. Under the 1940 Act, the Company 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 revolving credit facility is considered a senior security representing indebtedness.
- (10) Calculated pursuant to section 18(a)(2)(A) of the 1940 Act. Represents the value of total assets less all liabilities not represented by senior notes, any other senior securities representing indebtedness and preferred stock divided by the aggregate amount of senior notes, any other senior securities representing indebtedness and preferred stock. Under the 1940 Act, the Company may not declare or make any distribution on its common stock nor can it incur additional preferred stock if at the time of such declaration or incurrence its asset coverage with respect to all senior securities would be less than 200%. For purposes of this test, the revolving credit facility is considered a senior security representing indebtedness.

See accompanying notes to financial statements.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

1. Organization

Kayne Anderson MLP Investment Company (the Company) was organized as a Maryland corporation on June 4, 2004, and is a non-diversified closed-end management investment company registered under the Investment Company Act of 1940, as amended (the 1940 Act). The Company's investment objective is to obtain a high after-tax total return by investing at least 85% of its net assets plus any borrowings (total assets) in energy-related master limited partnerships and their affiliates (collectively, MLPs), and in other companies that, as their principal business, operate assets used in the gathering, transporting, processing, storing, refining, distributing, mining or marketing of natural gas, natural gas liquids (including propane), crude oil, refined petroleum products or coal (collectively with MLPs, Midstream Energy Companies). The Company commenced operations on September 28, 2004. The Company's shares of common stock are listed on the New York Stock Exchange, Inc. (NYSE) under the symbol KYN.

2. Significant Accounting Policies

A. Use of Estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual results could differ materially from those estimates.

B. Calculation of Net Asset Value The Company determines its net asset value as of the close of regular session trading on the NYSE no less frequently than the last business day of each month, and makes its net asset value available for publication monthly. Currently, the Company calculates its net asset value on a weekly basis. Net asset value is computed by dividing the value of the Company's assets (including accrued interest and distributions), less all of its liabilities (including accrued expenses, distributions payable, current, deferred and other accrued income taxes, and any borrowings) and the liquidation value of any outstanding preferred stock, by the total number of common shares outstanding.

C. 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 asked 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. Energy debt securities that are considered corporate bonds are valued by using the mean of the bid and ask prices provided by an independent pricing service. For energy debt securities that are considered corporate bank loans, the fair market value is determined by the mean of the bid and ask prices provided by the syndicate bank or principal market maker. When price quotes are not available, fair market value will be based on prices of comparable securities. In certain cases, the Company may not be able to purchase or sell energy debt securities at the quoted prices due to the lack of liquidity for these securities.

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.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

The Company holds securities that are privately issued or otherwise restricted as to resale. For these securities, as well as any other portfolio security held by the Company for which reliable market quotations are not readily available, valuations are determined 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 initially valued by KA Fund Advisors, LLC (KAFAs or the Adviser) investment professionals responsible for the portfolio investments.

Investment Team Valuation Documentation. Preliminary valuation conclusions are documented and discussed with senior management of KAFAs. Such valuations generally are submitted to the Valuation Committee (a committee of the Company s Board of Directors) or the Board of Directors on a monthly basis, and stand for intervening periods of time.

Valuation Committee. The Valuation Committee meets, generally, on or about the end of each month to consider new valuations presented by KAFAs, if any, which were made in accordance with the Valuation Procedures in such month. Between meetings of the Valuation Committee, a senior officer of KAFAs is authorized to make valuation determinations. The Valuation Committee s valuations stand for intervening periods of time unless the Valuation Committee meets again at the request of KAFAs, the Board of Directors, or the Valuation Committee itself. All valuation determinations of the Valuation Committee are subject to ratification by the Board at its next regular meeting.

Valuation Firm. No less than quarterly, a third-party valuation firm engaged by the Board of Directors reviews the valuation methodologies and calculations employed for these securities.

Board of Directors Determination. The Board of Directors meets quarterly to consider the valuations provided by KAFAs and the Valuation Committee, if applicable, 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.

Unless otherwise determined by the Board of Directors, securities that are convertible into or otherwise will become publicly traded (e.g., through subsequent registration or expiration of a restriction on trading) are valued through the process described above, using a valuation based on the fair value of the publicly traded security less a discount. The discount is initially equal in amount to the discount negotiated at the time the purchase price is agreed to. To the extent that such securities are convertible or otherwise become publicly traded within a time frame that may be reasonably determined, KAFAs may determine an applicable discount in accordance with a methodology approved by the Valuation Committee.

At February 28, 2010, the Company held 0.3% of its net assets applicable to common stockholders (0.2% of total assets) in securities valued at fair value, as determined pursuant to procedures adopted by the Board of Directors, with fair value of \$4,420. See Note 7 Restricted Securities.

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

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

E. *Short Sales* A short sale is a transaction in which the Company sells securities it does not own (but has borrowed) in anticipation of or to hedge against a decline in the market price of the securities. To complete a short sale, the Company may arrange through a broker to borrow the securities to be delivered to the buyer. The proceeds received by the Company for the short sale are retained by the broker until the Company replaces the borrowed securities. In borrowing the securities to be delivered to the buyer, the Company becomes obligated to replace the securities borrowed at their market price at the time of replacement, whatever the price may be.

All short sales are fully collateralized. The Company maintains assets consisting of cash or liquid securities equal in amount to the liability created by the short sale. These assets are adjusted daily to reflect changes in the value of the securities sold short. The Company is liable for any dividends or distributions paid on securities sold short.

The Company may also sell short against the box (*i.e.*, the Company enters into a short sale as described above while holding an offsetting long position in the security which it sold short). If the Company enters into a short sale against the box, the Company segregates an equivalent amount of securities owned as collateral while the short sale is outstanding. At February 28, 2010, the Company had no open short sales.

F. *Security Transactions* Security transactions are accounted for on the date these securities are purchased or sold (trade date). Realized gains and losses are reported on an identified cost basis.

G. *Return of Capital Estimates* Distributions received from the Company's investments in MLPs generally are comprised of income and return of capital. The Company records investment income and return of capital based on estimates made at the time such distributions are received. Such estimates are based on historical information available from each MLP and other industry sources. These estimates may subsequently be revised based on information received from MLPs after their tax reporting periods are concluded.

For the three months ended February 28, 2010, the Company estimated that 90% of the MLP distributions received would be treated as a return of capital. The Company recorded as return of capital the amount of \$27,311 of dividends and distributions received from its investments. Net Realized Gains and Net Change in Unrealized Gains in the accompanying Statement of Operations were increased by \$3,235 and \$24,076, respectively, attributable to the recording of such dividends and distributions as reduction in the cost basis of investments.

H. *Investment Income* The Company 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 Company 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 Company's debt securities 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 premiums are based on the effective interest method. The amount of these non-cash adjustments can be found in the Company'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 Company discontinues accruing the non-cash accretion of the discount to par value of the debt security.

During the three months ended February 28, 2010, the Company did not record any interest income related to its investment in Clearwater Natural Resources, LP (Clearwater). Since the second quarter of 2009, the Company has not accrued interest income on its investment in Clearwater.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

During the three months ended February 28, 2010, the Company received \$740 paid-in-kind stock dividends in total from Enbridge Energy Management, L.L.C. and \$2,264 from Kinder Morgan Management, LLC. Paid-in-kind stock dividends consist of additional units of Enbridge Energy Management, L.L.C. and Kinder Morgan Management, LLC. The additional units are not reflected in investment income during the period received but are recorded as unrealized gains upon receipt.

I. Distributions to Stockholders Distributions to common stockholders are recorded on the ex-dividend date. Distributions to stockholders of the Company's auction rate preferred stock are accrued on a daily basis and are determined as described in Note 12 Preferred Stock. The estimated characterization of the distributions paid to preferred and common stockholders will be either a dividend (ordinary income) or distribution (return of capital). This estimate is based on the Company's operating results during the period. The actual characterization of the preferred and common stock distributions made during the current year will not be determinable until after the end of the fiscal year when the Company can determine earnings and profits and, therefore, it may differ from the preliminary estimates.

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

K. Federal and State Income Taxation The Company, as a corporation, is obligated to pay federal and state income tax on its taxable income. The Company invests its assets primarily in MLPs, which generally are treated as partnerships for federal income tax purposes. As a limited partner in the MLPs, the Company includes its allocable share of the MLP's taxable income in computing its own taxable income. Deferred income taxes reflect (i) taxes on unrealized gains/(losses), which are attributable to the temporary difference between fair value and tax basis, (ii) the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and (iii) the net tax benefit of accumulated net operating and capital losses. To the extent the Company has a deferred tax asset, consideration is given as to whether or not a valuation allowance is required. The need to establish a valuation allowance for deferred tax assets is assessed periodically by the Company based on the Income Tax Topic of the Financial Accounting Standards Board (FASB) Accounting Standards Codification that it is more likely than not that some portion or all of the deferred tax asset will not be realized. In the assessment for a valuation allowance, consideration is given to all positive and negative evidence related to the realization of the deferred tax asset. This assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability (which are highly dependent on future cash distributions from the Company's MLP holdings), the duration of statutory carryforward periods and the associated risk that operating and capital loss carryforwards may expire unused.

The Company may rely to some extent on information provided by the MLPs, which may not necessarily be timely, to estimate taxable income allocable to the MLP units held in the portfolio and to estimate the associated deferred tax liability. Such estimates are made in good faith. From time to time, as new information becomes available, the Company modifies its estimates or assumptions regarding the deferred tax liability.

The Company'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. As of February 28, 2010, the Company does not have any interest or penalties associated with the underpayment of any income taxes. All tax years since inception remain open and subject to examination by tax jurisdictions.

L. Derivative Financial Instruments The Company may utilize derivative financial instruments in its operations.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

Interest rate swap contracts. The Company uses interest rate swap contracts to hedge against increasing interest expense on its leverage resulting from increases in short term interest rates. The Company does not hedge any interest rate risk associated with portfolio holdings. Interest rate transactions the Company uses for hedging purposes expose it to certain risks that differ from the risks associated with its portfolio holdings. A decline in interest rates may result in a decline in the value of the swap contracts, which, everything else being held constant, would result in a decline in the net assets of the Company. In addition, if the counterparty to an interest rate swap defaults, the Company 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 are recorded as realized gains or losses in the Statement of Operations. The Company 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 Company is also exposed to financial market risks including changes in the valuations of its investment portfolio. The Company 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 Company would normally purchase call options in anticipation of an increase in the market value of securities of the type in which it may invest. The Company would ordinarily 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 Company would realize either no gain or a loss on the purchased call option. The Company 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 Company.

The Company may also write (sell) call options with the purpose of generating income or reducing its ownership of certain securities. The writer of an option on a security has the obligation upon exercise of the option to deliver the underlying security upon payment of the exercise price.

When the Company writes a call option, an amount equal to the premium received by the Company 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 Company on the expiration date as realized gains from investments. If the Company 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 Company has realized a gain or loss. The Company, 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.

M. Indemnifications Under the Company's organizational documents, its officers and directors are indemnified against certain liabilities arising out of the performance of their duties to the Company. In addition, in the normal course of

business, the Company enters into contracts that provide general indemnification to other parties. The Company's maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Company that have not yet occurred, and may not occur. However, the Company has not had prior claims or losses pursuant to these contracts and expects the risk of loss to be remote.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

3. Fair Value

As required by the Fair Value Measurement and Disclosures of the FASB Accounting Standards Codification, the Company 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.

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

Level 1 Quoted unadjusted prices for identical instruments in active markets to which the Company has access at the date of measurement.

Level 2 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 Company'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 Company's assets measured at fair value at February 28, 2010. Note that the valuation levels below are not necessarily an indication of the risk or liquidity associated with the underlying investment. For instance, the Company's repurchase agreements, which are collateralized by U.S. Treasury notes, are generally high quality and liquid; however, the Company reflects these repurchase agreements as Level 2 because the inputs used to determine fair value may not always be quoted prices in an active market.

	Total	Quoted Prices in Active Markets (Level 1)	Prices with Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)⁽¹⁾
<u>Assets at Fair Value</u>				
Equity investments	\$ 1,910,453	\$ 1,910,453	\$	\$
Energy debt investments	51,851		47,431	4,420
Repurchase agreement	2,087		2,087	
Total assets at fair value	\$ 1,964,391	\$ 1,910,453	\$ 49,518	\$ 4,420

Liabilities at Fair Value

Unrealized depreciation on interest rate swaps	\$	416	\$	\$	416	\$
Option contracts written		430			430	
Total liabilities at fair value	\$	846	\$	\$	846	\$

(1) The Company's investments in Level 3 represent its investments in Clearwater Natural Resources, L.P. and CNR GP Holdco, LLC as more fully described in Note 7 Restricted Securities.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

The following table presents the Company's assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the period ended February 28, 2010.

Assets at Fair Value Using Unobservable Inputs (Level 3)	Long-Term Investments
Balance November 30, 2009	\$ 4,080
Transfers out of Level 3	
Realized gains/(losses)	
Unrealized gains, net	340
Purchases, issuances or settlements	
 Balance February 28, 2010	 \$ 4,420

The \$340 of unrealized gains presented in the table above relate to investments that are still held at February 28, 2010 and the Company includes these unrealized gains in the Statement of Operations Net Change in Unrealized Gains/(Losses).

The Company did not have any liabilities that were measured at fair value on a recurring basis using significant unobservable inputs (Level 3) at February 28, 2010 and at November 30, 2009.

In January 2010, the FASB issued Accounting Standards Update (ASU) No. 2010-06 Improving Disclosures about Fair Value Measurements. ASU 2010-06 amends FASB Accounting Standards Codification Topic, Fair Value Measurements and Disclosures, to require additional disclosures regarding fair value measurements. Certain disclosures required by ASU No. 2010-06 are effective for interim and annual reporting periods beginning after December 15, 2009, and other required disclosures are effective for fiscal years beginning after December 15, 2010, and for interim periods within those fiscal years. Management is currently evaluating the impact ASU No. 2010-06 will have on its financial statement disclosures.

4. Concentration of Risk

The Company's investment objective is to obtain a high after-tax total return with an emphasis on current income paid to its stockholders. Under normal circumstances, the Company intends to invest at least 85% of its total assets in securities of MLPs and other Midstream Energy Companies, and to invest at least 80% of its total assets in MLPs, which are subject to certain risks, such as supply and demand risk, depletion and exploration risk, commodity pricing risk, acquisition risk, and the risk associated with the hazards inherent in midstream energy industry activities. A substantial portion of the cash flow received by the Company is derived from investment in equity securities of MLPs. The amount of cash that an MLP has available for distributions and the tax character of such distributions are dependent upon the amount of cash generated by the MLP's operations. The Company may invest up to 15% of its

total assets in any single issuer and a decline in value of the securities of such an issuer could significantly impact the net asset value of the Company. The Company may invest up to 20% of its total assets in debt securities, which may include below investment grade securities. The Company may, for defensive purposes, temporarily invest all or a significant portion of its assets in investment grade securities, short-term debt securities and cash or cash equivalents. To the extent the Company uses this strategy, it may not achieve its investment objectives.

5. Agreements and Affiliations

A. Administration Agreement The Company has entered into an administration agreement with Ultimus Fund Solutions, LLC (Ultimus). Pursuant to the administration agreement, Ultimus will provide certain

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

administrative services for the Company. The administration agreement has automatic one-year renewals unless earlier terminated by either party as provided under the terms of the administration agreement.

B. Investment Management Agreement The Company has entered into an investment management agreement with KAFA under which the Adviser, subject to the overall supervision of the Company's Board of Directors, manages the day-to-day operations of, and provides investment advisory services to, the Company. For providing these services, the Adviser receives a management fee from the Company. On June 15, 2009, the Company renewed its agreement with the Adviser for a period of one year. The agreement may be renewed annually upon approval of the Company's Board of Directors. For the three months ended February 28, 2010, the Company paid management fees at an annual rate of 1.375% of average total assets.

For purposes of calculating the management fee, the Company's total assets are equal to the Company's gross asset value (which includes assets attributable to or proceeds from the Company's use of preferred stock, commercial paper or notes and other borrowings and excludes any net deferred tax asset), minus the sum of the Company's accrued and unpaid distributions on any outstanding common stock and accrued and unpaid distributions on any outstanding preferred stock and accrued liabilities (other than liabilities associated with borrowing or leverage by the Company and any accrued taxes, including, a deferred tax liability). Liabilities associated with borrowing or leverage by the Company include the principal amount of any borrowings, commercial paper or notes issued by the Company, 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 Company.

C. Portfolio Companies From time to time, the Company may control or may be an affiliate of one or more portfolio companies, each as defined in the 1940 Act. In general, under the 1940 Act, the Company would be presumed to control a portfolio company if the Company owned 25% or more of its outstanding voting securities and would be an affiliate of a portfolio company if the Company 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 Company's investment adviser), principal underwriters and affiliates of those affiliates or underwriters.

The Company believes that there is significant ambiguity in the application of existing Securities and Exchange Commission (SEC) staff interpretations of the term voting security to complex structures such as limited partnership interests of the kind in which the Company invests. As a result, it is possible that the SEC staff may consider that certain securities investments in limited partnerships are voting securities under the staff's prevailing interpretations of this term. If such determination is made, the Company 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 light of the ambiguity of the definition of voting securities, the Company does not intend to treat any class of limited partnership interests that it holds as voting securities unless the security holders of such class currently have the ability, under the partnership agreement, to remove the general partner (assuming a sufficient vote of such securities, other than securities held by the general partner, in favor of such removal) or the Company has an economic interest of sufficient size that otherwise gives it the de facto power to exercise a controlling influence over the partnership. The Company believes this treatment is appropriate given that the general partner controls the partnership, and without the ability to remove the general partner or the power to otherwise exercise a controlling

influence over the partnership due to the size of an economic interest, the security holders have no control over the partnership.

Clearwater Natural Resources, LP At February 28, 2010, the Company held approximately 42.5% of the limited partnership interest of Clearwater. The Company controls CNR GP Holdco, LLC, which is the general

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

partner of Clearwater. The Company believes that it controls and is an affiliate of Clearwater under the 1940 Act by virtue of its controlling interest in the general partner of Clearwater.

CNR GP Holdco, LLC At February 28, 2010, the Company held an 83.7% interest in CNR GP Holdco, LLC (CNR), which is the general partner of Clearwater. The Company believes that it controls and is an affiliate of CNR under the 1940 Act by virtue of its controlling interest.

On January 12, 2010, Clearwater closed on the sale of all of its reserves and a substantial portion of its operating assets to International Resource Partners, L.P. (IRP). On March 16, 2010, the Bankruptcy Court confirmed Clearwater's plan of reorganization (including such sale of assets to IRP). As part of Clearwater's plan of reorganization, the Company will receive consideration for its unsecured term loan. Such consideration will be in the form of cash and a royalty interest in the reserves sold. Pursuant to the plan of reorganization, the Company will not receive any consideration for its equity investment in Clearwater or CNR GP Holdco, LLC. See Note 7 Restricted Securities.

Plains All American, L.P. Robert V. Sinnott is a senior executive of Kayne Anderson Capital Advisors, L.P. (KACALP), the managing member of KAFA. Mr. Sinnott also serves as a director on the board of Plains All American GP LLC, the general partner of Plains All American Pipeline, L.P. Members of senior management and various advisory clients of KACALP and KAFA indirectly own units of Plains All American GP LLC. Various advisory clients of KACALP and KAFA, including the Company, own units in Plains All American Pipeline, L.P. The Company believes that it is an affiliate of Plains All American Pipeline, L.P. under the 1940 Act.

6. Income Taxes

Deferred income taxes reflect (i) taxes on unrealized gains/(losses), which are attributable to the difference between fair market value and tax basis, (ii) the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and (iii) the net tax benefit of accumulated net operating losses. Components of the Company's deferred tax assets and liabilities as of February 28, 2010 are as follows:

Deferred tax assets:		
Net operating loss carryforwards	Federal	\$ 52,448
Net operating loss carryforwards	State	4,353
Capital loss carryforwards		50,216
Other		105
Deferred tax liabilities:		
Net unrealized gains on investment securities, interest rate swap contracts and option contracts		(272,133)
Basis reductions resulting from estimated return of capital		(9,297)
Total net deferred tax liability		\$ (174,308)

At February 28, 2010, the Company had federal net operating loss carryforwards of \$154,700 (deferred tax asset of \$52,448). Realization of the deferred tax assets and net operating loss carryforwards are dependent, in part, on generating sufficient taxable income prior to expiration of the loss carryforwards. If not utilized, \$54,194; \$52,182; \$26,118 and \$22,206 of the net operating loss carryforward will expire in 2026, 2027, 2028 and 2029, respectively. As of February 28, 2010, the Company had a capital loss carryforward of approximately \$135,820. If not utilized, \$50,267 and \$85,553 of capital loss carry forwards will expire in 2013 and 2014, respectively. For corporations, capital losses can only be used to offset capital gains and cannot be used to offset ordinary income. In

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

In addition, the Company has state net operating losses of \$141,466 that represent a deferred tax asset of \$4,353. These state net operating losses begin to expire in 2011 through 2029.

Although the Company currently has a net deferred tax liability, it periodically reviews the recoverability of its deferred tax assets based on the weight of available evidence. When assessing the recoverability of its deferred tax assets, significant weight was given to the effects of potential future realized and unrealized gains on investments and the period over which these deferred tax assets can be realized, as the expiration dates for the federal capital and operating loss carryforwards range from five to nineteen years.

Based on the Company's assessment, it has determined that it is more likely than not that its deferred tax assets will be realized through future taxable income of the appropriate character. Accordingly, no valuation allowance has been established for the Company's deferred tax assets. The Company will continue to assess the need for a valuation allowance in the future. Significant declines in the fair value of its portfolio of investments may change the Company's assessment regarding the recoverability of its deferred tax assets and may result in a valuation allowance. If a valuation allowance is required to reduce any deferred tax asset in the future, it could have a material impact on the Company's net asset value and results of operations in the period it is recorded.

Total income taxes were different from the amount computed by applying the federal statutory income tax rate of 35% to the net investment loss and realized and unrealized gains (losses) on investments and interest rate swap contracts before taxes for the three months ended February 28, 2010, as follows:

Computed expected federal income tax	\$ 72,447
State income tax, net of federal tax expense	4,140
Total income tax expense	\$ 76,587

At February 28, 2010, the cost basis of investments for federal income tax purposes was \$1,224,870 and the net cash received on option contracts written was \$391. The cost basis of investments includes a \$181,179 reduction in basis attributable to the Company's portion of the allocated losses from its MLP investments. At February 28, 2010, gross unrealized appreciation and depreciation of investments and options for federal income tax purposes were as follows:

Gross unrealized appreciation of investments (including options)	\$ 803,185
Gross unrealized depreciation of investments (including options)	(63,702)
Net unrealized appreciation before tax and interest rate swap contracts	739,483
Net unrealized depreciation on interest rate swap contracts	(416)
Net unrealized appreciation before tax	\$ 739,067

Net unrealized appreciation after tax

\$ 465,612

7. Restricted Securities

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

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

At February 28, 2010, the Company held the following restricted investments:

Investment	Security	Acquisition Date	Type of Restriction	Number of Units, Principal (\$) (in 000s)	Cost Basis	Fair Value	Percent of Net Assets	Percent of Total Assets
Clearwater Natural Resources, L.P.	Common Units	(1)	(2)	3,889	\$ 72,860	\$		
Clearwater Natural Resources, L.P.	Unsecured Term Loan	(3)	(2)	\$13,601	13,690	4,420	0.3%	0.2%
Clearwater Natural Resources, L.P.	Deferred Participation Units	3/5/08	(2)	41				
Clearwater Natural Resources, L.P.	Warrants	9/29/08	(2)	34				
CNR GP Holdco, LLC	LLC Interests	3/5/08	(2)	n/a	1,082			
Total of securities valued in accordance with procedures established by the Board of Directors(4)					\$ 87,632	\$ 4,420	0.3%	0.2%
Niska Gas Storage U.S., LLC	Senior Notes	(5)	(6)	\$5,000	\$ 5,023	\$ 5,000	0.4%	0.3%
Total of securities valued by prices provided by market maker or independent pricing services					\$ 5,023	\$ 5,000	0.4%	0.3%
Total of all restricted securities					\$ 92,655	\$ 9,420	0.7%	0.5%

(1) The Company purchased common units on August 1, 2005 and October 2, 2006.

- (2) On January 7, 2009, Clearwater Natural Resources, LP (Clearwater) filed a voluntary petition under Chapter 11 of the U.S. Bankruptcy Code. Clearwater continued operations as a debtor-in-possession during fiscal 2009. On January 12, 2010, Clearwater closed on the sale of substantially all of its reserves and operating assets. See Clearwater Update below for a status update.
- (3) The Company purchased term loans on January 11, 2008; February 28, 2008; May 5, 2008; July 8, 2008; August 6, 2008; and September 29, 2008. The Company is not accruing interest income on this investment.
- (4) Restricted securities that are classified as a Level 3. Security is valued using inputs reflecting the Company's own assumptions as more fully described in Note 2 Significant Accounting Policies.
- (5) These securities were acquired during the three months ended February 28, 2010.
- (6) Unregistered security of a public company that are classified as a Level 2. These securities have a fair market value determined by the mean of the bid and ask prices provided by a syndicate bank, principal market maker or an independent pricing service as more fully described in Note 2 Significant Accounting Policies. These securities have limited trading volume and are not listed on a national exchange.

Clearwater Update. On January 12, 2010, Clearwater closed on the sale of all of its reserves and a substantial portion of its operating assets to International Resource Partners, L.P. (IRP). On March 16, 2010, the Bankruptcy Court confirmed Clearwater's plan of reorganization (including such sale of assets to IRP). As part of Clearwater's plan of reorganization, the Company will receive consideration for its unsecured term loan. Such consideration will be in the form of cash and a royalty interest in the reserves sold. The Company will not receive any consideration for its equity investment in Clearwater or CNR GP Holdco, LLC. The Company will receive such consideration when Clearwater's plan of reorganization becomes effective, which is expected to be May or June 2010.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

8. Derivative Financial Instruments

Option Contracts Transactions in option contracts for the three months ended February 28, 2010 were as follows:

	Number of Contracts	Premium
Put Options Purchased		
Options outstanding at beginning of period	1,386	\$ 89
Options expired	(1,386)	(89)
Options outstanding at end of period		\$
Call Options Written		
Options outstanding at beginning of period	7,000	\$ 584
Options written	4,681	620
Options subsequently repurchased ⁽¹⁾	(276)	(40)
Options exercised	(7,249)	(729)
Options expired	(1,000)	(44)
Options outstanding at end of period	3,156	\$ 391

(1) The price at which the Company subsequently repurchased the options was \$11.

Interest Rate Swap Contracts The Company has entered into interest rate swap contracts to partially hedge itself from increasing interest expense on its leverage resulting from increasing short-term interest rates. A decline in future 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 Company. In addition, if the counterparty to the interest rate swap contracts defaults, the Company would not be able to use the anticipated receipts under the swap contracts to offset the interest payments on the Company's leverage. At the time the interest rate swap contracts reach their scheduled termination, there is a risk that the Company would not be able to obtain a replacement transaction or that the terms of the replacement transaction would not be as favorable as on the expiring transaction. In addition, if the Company is required to terminate any swap contract early, then the Company could be required to make a termination payment.

As of February 28, 2010, the Company had entered into an interest rate swap contract with UBS AG as summarized below.

Termination Date	Notional Amount	Fixed Rate Paid by the Company	Net Unrealized Depreciation
11/25/2011	\$ 125,000	0.99%	\$ 416

For the interest rate swap contract, the Company receives a floating rate, based on one-month LIBOR.

As required by the Derivatives and Hedging Topic of the FASB Accounting Standards Codification below are the derivative instruments and hedging activities of the Company. See Note 2 Significant Accounting Policies.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

The following table sets forth the fair value of the Company's derivative instruments in the Statement of Assets and Liabilities.

Derivatives Not Accounted for as Hedging Instruments	Statement of Assets and Liabilities Location	Fair Value as of February 28, 2010
Liabilities		
Call options	Call option contracts written	\$ 430
Interest rate swap contracts	Unrealized depreciation on interest rate swap contracts	416
		\$ 846

The following tables set forth the effect of derivative instruments in the Statement of Operations.

Derivatives Not Accounted For as Hedging Instruments	Location of Gains/(Losses) on Derivatives Recognized in Income	For the Three Months Ended February 28, 2010 Change in	
		Net Realized Gain/(Losses) on Derivatives Recognized in Income	Unrealized Gains/(Losses) on Derivatives Recognized in Income
Put options	Options	\$ (90)	\$ 76
Call options	Options	74	767
Interest rate swap contracts	Interest rate swap contracts	(240)	(211)
		\$ (256)	\$ 632

9. Investment Transactions

For the three months ended February 28, 2010, the Company purchased and sold securities in the amounts of \$243,791 and \$57,957 (excluding short-term investments, options and interest rate swaps), respectively.

10. Revolving Credit Facility

On June 26, 2009, the Company entered into an \$80,000 unsecured revolving credit facility (the Credit Facility) with a syndicate of lenders. JPMorgan Chase Bank, N.A. was lead arranger of the Credit Facility, and Bank of America N.A., UBS Investment Bank and Citibank, N.A. participated in the syndication. The Credit Facility has a 364-day commitment terminating on June 25, 2010. The interest rate may vary between LIBOR plus 2.25% and LIBOR plus 3.50% depending on asset coverage ratios. Outstanding loan balances will accrue interest daily at a rate equal to the one-month LIBOR plus 2.25% per annum based on current asset coverage ratios. The Company will pay a fee of 0.50% per annum on any unused amounts of the Credit Facility. The Credit Facility contains various covenants related to other indebtedness, liens and limits on the Company s overall leverage.

For the three months ended February 28, 2010, the average amount outstanding under the Company s credit facilities was \$20,750 with a weighted average interest rate of 3.11%. As of February 28, 2010, the Company had outstanding borrowings on its Credit Facility of \$40,000 at the LIBOR based interest rate of 2.48%.

On April 20, 2010, the Company reached a conditional agreement with institutional investors relating to a private placement of senior unsecured notes and mandatory redeemable preferred stock. A portion of the net proceeds from the private placement is expected to be used to repay borrowings under the Credit Facility. See Note 14 Subsequent Events.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

11. Senior Unsecured Notes

At February 28, 2010, the Company had \$370,000, aggregate principal amount, of senior unsecured fixed and floating rate notes (the Senior Unsecured Notes) outstanding. The table below sets forth the key terms of each series of the Senior Unsecured Notes.

Series	Principal Outstanding	Interest Rate	Maturity
G	\$ 75,000	5.645%	6/19/2011
I	60,000	5.847%	6/19/2012
K	125,000	5.991%	6/19/2013
M	60,000	4.560%	11/4/2014
N	50,000	3-month LIBOR + 185 bps	11/4/2014
	\$ 370,000		

Holders of the fixed rate Senior Unsecured Notes (Series G, Series I, Series K and Series M) are entitled to receive cash interest payments semi-annually (on June 19 and December 19) at the fixed rate. Holders of the floating rate Senior Unsecured Notes (Series N) are entitled to receive cash interest payments quarterly (on March 19, June 19, September 19 and December 19) at the floating rate equal to the 3-month LIBOR plus 1.85%.

During the period, the average principal balance outstanding was \$370,000 with a weighted average interest rate of 5.21%.

The Senior Unsecured Notes were issued in private placement offerings to institutional investors and are not listed on any exchange or automated quotation system. The Senior Unsecured Notes contain various covenants related to other indebtedness, liens and limits on the Company's overall leverage. Under the 1940 Act and the terms of the Senior Unsecured Notes, the Company may not declare dividends or make other distributions on shares of common stock or purchases of such shares if, at any time of the declaration, distribution or purchase, asset coverage with respect to the outstanding Senior Unsecured Notes would be less than 300%. The Senior Unsecured Notes are redeemable in certain circumstances at the option of the Company. The Senior Unsecured Notes are also subject to a mandatory redemption to the extent needed to satisfy certain requirements if the Company 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 Company's rating agency guidelines in a timely manner.

The Senior Unsecured Notes are unsecured obligations of the Company and, upon liquidation, dissolution or winding up of the Company, will rank: (1) senior to all the Company's outstanding preferred shares; (2) senior to all of the Company's outstanding common shares; (3) on a parity with any unsecured creditors of the Company and any

unsecured senior securities representing indebtedness of the Company; and (4) junior to any secured creditors of the Company.

At February 28, 2010, the Company was in compliance with all covenants under the Senior Unsecured Notes agreements.

On April 20, 2010, the Company reached a conditional agreement with institutional investors relating to a private placement of senior unsecured notes and mandatory redeemable preferred stock. See Note 14 Subsequent Events.

12. Preferred Stock

At February 28, 2010, the Company had 3,000 shares of Series D Auction Rate Preferred Stock (ARP Shares) outstanding, totaling \$75,000. The Company has 10,000 shares of authorized preferred stock. The

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

preferred stock has rights determined by the Board of Directors. The ARP Shares have a liquidation value of \$25,000 per share plus any accumulated, but unpaid dividends, whether or not declared.

Holders of the ARP Shares are entitled to receive cash dividend payments at an annual rate that may vary for each rate period.

Since February 14, 2008, there have been more ARP Shares offered for sale than there were buyers of those ARP Shares, and as a result, the auctions of the Company's ARP Shares have failed. As a result, the dividend rate on the ARP Shares has been set at such maximum rate. Based on the Company's current credit ratings, the maximum rate is equal to 200% of the greater of (a) the AA Composite Commercial Paper Rate or (b) the applicable LIBOR. If the credit rating of the Company's ARP Shares by Moody's or Fitch is downgraded below Aa3 or AA-, respectively, the maximum rate will increase. Such increase will be based on the resulting credit rating for the Company's ARP Shares, but the maximum rate is applied at 300%. The dividend rate as of February 28, 2010 was 0.42%. The weighted average dividend rate for the three months ended February 28, 2010 was 0.42%. This rate includes the applicable rate based on the latest results of the auction and does not include commissions paid to the auction agent. Under the 1940 Act, the Company may not declare dividends or make other distribution on shares of common stock or purchases of such shares if, at any time of the declaration, distribution or purchase, asset coverage with respect to the outstanding senior securities representing indebtedness and preferred stock would be less than 200%.

The ARP Shares are redeemable in certain circumstances at the option of the Company. The ARP Shares are also subject to a mandatory redemption if the Company fails to meet an asset coverage ratio required by law, or fails to cure deficiency as stated in the Company's rating agency guidelines in a timely manner.

The holders of the ARP Shares have voting rights equal to the holders of common stock (one vote per share) and will vote together with the holders of shares of common stock as a single class except on matters affecting only the holders of ARP Shares or the holders of common stock. See Note 14 Subsequent Events.

13. Common Stock

The Company has 199,990,000 shares of common stock authorized and 58,118,644 shares outstanding at February 28, 2010. As of that date, KACALP owned 4,000 shares. Transactions in common shares for the three months ended February 28, 2010 were as follows:

Shares outstanding at November 30, 2009	51,579,541
Shares issued through reinvestment of distributions	247,503
Shares issued in connection with offerings of common stock ⁽¹⁾	6,291,600
Shares outstanding at February 28, 2010	58,118,644

- (1) On January 20, 2010, the Company closed its public offering of 6,291,600 shares of common stock at a price of \$23.61 per share. Total net proceeds from the offering were \$142,431 and were used by the Company to make additional portfolio investments that are consistent with the Company's investment objective, and for general corporate purposes.

Table of Contents

KAYNE ANDERSON MLP INVESTMENT COMPANY
NOTES TO FINANCIAL STATEMENTS
FEBRUARY 28, 2010
(amounts in 000 s, except option contracts, share and per share amounts)
(UNAUDITED)

14. Subsequent Events

We have evaluated subsequent events through the date the Company's financial statements were issued.

On April 20, 2010, the Company reached a conditional agreement with institutional investors relating to a private placement of \$110,000 of senior unsecured notes and \$110,000 of mandatory redeemable preferred stock (MRPS). The table below sets forth the key terms of the Senior Notes and the MRPS.

Security	Amount	Rate	Term
Senior Unsecured Notes			
Fixed rate	\$ 65,000	4.21%	5 years
Floating rate	45,000	3-month LIBOR + 160 bps	5 years
Total	\$ 110,000		
Mandatory Redeemable Preferred Stock	\$ 110,000	5.57%	7 years

Net proceeds from such offerings will be used to repay borrowings under the Company's Credit Facility, to redeem the Company's ARP Shares, to make new portfolio investments and for general corporate purposes. Closing of the private placement is scheduled to occur on or about May 7, 2010 and is subject to investor due diligence, legal documentation and other standard closing conditions. Redemption of the ARP Shares is expected to occur in late May and is conditioned on closing of the MRPS offering.

On March 11, 2010, the Company declared its quarterly distribution of \$0.48 per common share for the period December 1, 2009 through February 28, 2010 for a total of \$27,897. The distribution was paid on April 16, 2010 to shareholders of record on April 6, 2010. Of this total, pursuant to the Company's dividend reinvestment plan, \$6,169 was reinvested into the Company through the issuance of 236,468 shares of common stock.

Table of Contents

Directors and Corporate Officers

Kevin S. McCarthy	Chairman of the Board of Directors, President and Chief Executive Officer
Anne K. Costin	Director
Steven C. Good	Director
Gerald I. Isenberg	Director
William H. Shea Jr.	Director
Terry A. Hart	Chief Financial Officer and Treasurer
David J. Shladovsky	Secretary and Chief Compliance Officer
J.C. Frey	Executive Vice President, Assistant Secretary and Assistant Treasurer
James C. Baker	Executive Vice President

Investment Adviser

KA Fund Advisors, LLC.
717 Texas Avenue, Suite 3100
Houston, TX 77002

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

Custodian

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

Administrator

Ultimus Fund Solutions, LLC
260 Madison Avenue, 8th Floor
New York, NY 10016

Stock Transfer Agent and Registrar

American Stock Transfer & Trust Company
59 Maiden Lane
New York, NY 10038

Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP
350 South Grand Avenue
Los Angeles, CA 90071

Legal Counsel

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

For stockholder inquiries, registered stockholders should call (800) 937-5449. For general inquiries, please call (877) 657-3863/MLP-FUND; or visit us on the web at <http://www.kaynefunds.com>.

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