

Kayne Anderson MLP Investment CO
Form N-Q
October 29, 2009

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM N-Q
QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED
MANAGEMENT INVESTMENT COMPANY
INVESTMENT COMPANY ACT FILE NUMBER 811-21593
KAYNE ANDERSON MLP INVESTMENT COMPANY**

(Exact name of registrant as specified in charter)

717 Texas Avenue, Suite 3100, Houston, Texas

77002

(Address of principal executive offices)

(Zip code)

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

(Name and address of agent for service)

Registrant's telephone number, including area code:

(713) 493-2020

Date of fiscal year end: November 30, 2009

Date of reporting period: August 31, 2009

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SCHEDULE OF INVESTMENTS****AUGUST 31, 2009****(amounts in 000 s except number of option contracts)****(UNAUDITED)**

Description	No. of Shares/Units	Value
Long-Term Investments 146.0%		
Equity Investments(a) 141.4%		
Midstream MLP(b) 91.6%		
Boardwalk Pipeline Partners, LP	369	\$ 8,648
Buckeye Partners, L.P.	736	34,555
Copano Energy, L.L.C.	3,370	52,329
Crosstex Energy, L.P.(c)	3,084	12,088
DCP Midstream Partners, LP	618	13,842
Duncan Energy Partners L.P.	262	4,758
El Paso Pipeline Partners, L.P.	538	10,456
Enbridge Energy Partners, L.P.(d)	1,214	52,040
Energy Transfer Partners, L.P.	1,812	73,459
Enterprise Products Partners L.P.	3,829	103,379
Exterran Partners, L.P.	905	14,142
Global Partners LP	1,376	30,356
Holly Energy Partners, L.P.	278	10,184
Magellan Midstream Partners, L.P.	957	34,664
MarkWest Energy Partners, L.P.	2,733	56,468
Martin Midstream Partners L.P.	341	8,182
ONEOK Partners, L.P.(d)	632	31,661
Plains All American Pipeline, L.P.(e)	2,876	136,455
Quicksilver Gas Services LP	248	3,643
Regency Energy Partners LP	2,858	46,521
Spectra Energy Partners, LP	297	6,881
Targa Resources Partners LP	242	4,093
TC PipeLines, LP	836	30,521
TEPPCO Partners, L.P.	183	6,039
TransMontaigne Partners L.P.	233	6,273
Western Gas Partners, LP	815	13,735
Williams Partners L.P.	1,565	31,066
Williams Pipeline Partners L.P.	548	10,121

		846,559
Propane MLP 9.7%		
Inergy, L.P.	3,216	89,668
Shipping MLP 6.1%		
Capital Product Partners L.P.	785	6,207
K-Sea Transportation Partners L.P.	582	11,157
Navios Maritime Partners L.P.	472	5,521
OSG America L.P.	624	5,225
Teekay LNG Partners L.P.	907	20,817
Teekay Offshore Partners L.P.	534	7,511
		56,438

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
AUGUST 31, 2009
(amounts in 000 s except number of option contracts)
(UNAUDITED)

Description	No. of Shares/Units	Value
Coal MLP 0.5%		
Alliance Resource Partners, L.P.	87	\$ 2,870
Clearwater Natural Resources, LP Unregistered(c)(f)(g)	(h)	
Penn Virginia Resource Partners, L.P.	87	1,292
		4,162
Upstream MLP 0.3%		
Legacy Reserves LP	206	3,165
MLP Affiliates(b) 12.3%		
Enbridge Energy Management, L.L.C.(i)	625	26,312
Kinder Morgan Management, LLC(d)(i)	1,844	87,282
		113,594
General Partner MLP(b) 20.3%		
Alliance Holdings GP L.P.	629	12,742
CNR GP Holdco, LLC Unregistered(c)(f)(g)(j)	N/A	
Energy Transfer Equity, L.P.	2,490	66,949
Enterprise GP Holdings L.P.	1,243	34,796
Inergy Holdings, L.P.	67	2,940
Magellan Midstream Holdings, L.P.	3,224	70,188
		187,615
Other MLP 0.6%		
Calumet Specialty Products Partners, L.P.	373	5,283
Total Equity Investments (Cost \$1,152,730)		1,306,484

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
AUGUST 31, 2009
(amounts in 000 s except number of option contracts)
(UNAUDITED)

Description	Interest Rate	Maturity Date	Principal Amount	Value
Energy Debt Investments 4.6%				
Coal MLP 0.6%				
Clearwater Natural Resources, LP(c)(f)(g)	(k)	12/3/09	\$ 13,601	\$ 6,120
Midstream MLP 2.0%				
El Paso Corporation	7.75 %	1/15/32	5,000	4,452
MarkWest Energy Partners, L.P.	8.75	4/15/18	6,149	5,842
MarkWest Energy Partners, L.P.	6.88	11/1/14	3,500	3,185
Regency Energy Partners LP	9.38	6/1/16	5,000	5,000
				18,479
Upstream MLP(b) 2.0%				
Atlas Energy Resources, LLC	12.13	8/1/17	9,000	9,495
Atlas Energy Resources, LLC	10.75	2/1/18	8,747	8,834
				18,329
Total Energy Debt Investments (Cost \$46,472)				42,928
Total Long-Term Investments (Cost \$1,199,202)				1,349,412
Short-Term Investment 0.2%				
Repurchase Agreement 0.2%				
J.P. Morgan Securities Inc. (Agreement dated 8/31/09 to be repurchased at \$1,700), collateralized by \$1,750 in U.S. Treasury note (Cost \$1,700)	0.12	9/1/09		1,700

Total Investments 146.2% (Cost
\$1,200,902)

1,351,112

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KAYNE ANDERSON MLP INVESTMENT COMPANY
SCHEDULE OF INVESTMENTS
AUGUST 31, 2009
(amounts in 000 s except number of option contracts)
(UNAUDITED)

Description	No. of Contracts	Value
Liabilities		
Option Contracts Written(c)		
Midstream MLP		
Enbridge Energy Partners, L.P., call option expiring 9/19/09 @ \$40.00	500	\$ (137)
Enbridge Energy Partners, L.P., call option expiring 9/19/09 @ \$45.00	500	(10)
ONEOK Partners, L.P., call option expiring 9/19/09 @ \$50.00	1,000	(85)
Total Call Option Contracts Written (Premiums Received \$231)		(232)
Senior Unsecured Notes		(304,000)
Unrealized Depreciation on Interest Rate Swap Contracts		(1,536)
Revolving Credit Line		(2,000)
Deferred Taxes		(19,330)
Other Liabilities		(28,276)
Total Liabilities		(355,374)
Other Assets		3,337
Total Liabilities in Excess of Other Assets		(352,037)
Preferred Stock at Redemption Value		(75,000)
Net Assets Applicable to Common Stockholders		\$ 924,075

(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 contracts.
- (e) The Company believes that it is an affiliate of Plains All American, L.P.
- (f) Fair valued securities, restricted from public sale.
- (g) Clearwater Natural Resources, LP is a privately-held MLP that the Company believes is a controlled affiliate. On January 7, 2009, Clearwater Natural Resources, LP (Clearwater) filed a voluntary petition under Chapter 11 of the U.S. Bankruptcy Code.
- (h) The Company owns 3,889 common units, 34 warrants (which expire on

September 30, 20018) and 41 unregistered, deferred participation units of Clearwater which were assigned no value as of August 31, 2009.

(i) Distributions are paid-in-kind.

(j) CNR GP Holdco, LLC is the general partner of Clearwater. The Company owns 83.7% of CNR GP Holdco, LLC and believes it is a controlled affiliate.

(k) 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 August 31, 2009). The Company is not accruing interest on this investment.

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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, and cannot, as a result, 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.

At August 31, 2009, the Company held the following restricted investments:

Investment	Security	Type of Restriction	Number of Units,	Acquisition Date	Cost Basis	Fair Value	Fair Value Unit/ Warrant	Percent of Assets	Percent of Total Net Assets
			Principal (\$) (in 000s)						
Clearwater Natural Resources, L.P.	Common Units	(1)	3,889	(2)	\$ 72,860	\$	\$	%	%
Clearwater Natural Resources, L.P.	Unsecured Term Loan	(1)	\$ 13,601	(3)	13,689	6,120	n/a	0.7	0.5
Clearwater Natural Resources, L.P.	Deferred Participation Units	(1)	150	3/5/2008					
Clearwater Natural Resources, L.P.	Warrants	(1)	34	9/29/2008					
CNR GP Holdco, LLC	LLC Interests	(1)	n/a	3/5/2008	1,083				
Total of securities valued in accordance with procedures established by the Board of Directors(4)					\$ 87,632	\$ 6,120		0.7%	0.5%
Atlas Energy Resources, LLC	Senior Notes	(5)	\$ 8,747	(6)	\$ 7,128	\$ 8,834	n/a	1.0%	0.7%
MarkWest Energy Partners, L.P.	Senior Notes	(5)	\$ 3,500	(6)	2,904	3,185	n/a	0.3	0.2
	Senior Notes	(5)	\$ 5,000	(6)	5,025	5,000	n/a	0.5	0.4

Regency
 Energy
 Partners LP

Total of securities valued by prices provided by market maker or independent pricing services	\$ 15,057	\$ 17,019	1.8%	1.3%
Total of all restricted securities	\$ 102,689	\$ 23,139	2.5%	1.8%

(1) On January 7, 2009, Clearwater Natural Resources, LP (Clearwater) filed a voluntary petition under Chapter 11 of the U.S. Bankruptcy Code. Clearwater has continued operations as a debtor-in-possession. Clearwater is conducting a sales process for the Company s assets. No assurances can be made as to the success of such sales process and the proceeds received in such process.

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

(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 on this investment.

- (4) Restricted securities that represent Level 3 under SFAS No. 157. Security is valued using inputs reflecting the Company's own assumptions.

 - (5) Unregistered security of a public company. Restricted securities that represent Level 2 under SFAS No. 157. Securities with 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. These securities have limited trading volume and are not listed on a national exchange.

 - (6) Acquired at various dates throughout the nine months ended August 31, 2009.
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At August 31, 2009, the cost basis of investments for federal income tax purposes was \$1,074,711. At August 31, 2009, gross unrealized appreciation and depreciation of investments and options for federal income tax purposes were as follows:

Gross unrealized appreciation of investments	\$ 398,679
Gross unrealized depreciation of investments	(122,277)
Net unrealized appreciation	\$ 276,402

The identified cost basis for federal tax purposes is estimated based on information available from the Company's portfolio companies. In some cases, this information is very limited. Accordingly, the actual cost basis may prove higher or lower than the estimated cost basis included in this footnote.

SFAS No. 157. In September 2006, the FASB issued Statement on Financial Accounting Standards, Fair Value Measurements (SFAS No. 157). This standard establishes a single authoritative definition of fair value, sets out a framework for measuring fair value and requires additional disclosures about fair value measurements. SFAS No. 157 applies to fair value measurements already required or permitted by existing standards. SFAS No. 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007 and interim periods within those fiscal years. The changes to current generally accepted accounting principles from the application of this Statement relate to the definition of fair value, the methods used to measure fair value, and the expanded disclosures about fair value measurements.

As of December 1, 2007, the Company adopted SFAS No. 157. The Company has performed an analysis of all existing investments and derivative instruments to determine the significance and character of all inputs to their fair value determination. Based on this assessment, the adoption of this standard did not have any material effect on the Company's net asset value. However, the adoption of the standard does require the Company to provide additional disclosures about the inputs used to develop the measurements and the effect of certain measurements on changes in net assets for the reportable periods as contained in the Company's periodic filings. Further, valuation techniques to measure fair value shall maximize the use of relevant observable inputs that do not require significant adjustment and minimize the use of unobservable inputs.

SFAS No. 157 establishes a fair value hierarchy that 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.

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The following table presents the Company's assets measured at fair value on a recurring basis at August 31, 2009. 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>				
Investments	\$ 1,349,412	\$ 1,306,484	\$ 36,808	\$ 6,120
Repurchase Agreement	1,700		1,700	
Total assets at fair value	\$ 1,351,112	\$ 1,306,484	\$ 38,508	\$ 6,120
<u>Liabilities at Fair Value</u>				
Unrealized depreciation on interest rate swaps	\$ 1,536		\$ 1,536	
Option contracts written	232		232	
Total liabilities at fair value	\$ 1,768		\$ 1,768	

(1) The Company's investments in Level 3 represent its investments in Clearwater Natural Resources, L.P. and CNR GP Holdco, LLC.

The following table presents the Company's assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) at November 30, 2008 and at August 31, 2009.

<u>Assets at Fair Value Using Unobservable Inputs (Level 3)</u>	Long-Term Investments
Balance November 30, 2008	\$ 32,987
Transfers out of Level 3	
Realized gains/(losses)	
Unrealized losses, net	(26,867)
Purchases, issuances or settlements	
Balance August 31, 2009	\$ 6,120

The \$26,867 of unrealized losses presented in the table above relate to investments that are still held at August 31, 2009.

The Company did not have any liabilities that were measured at fair value on a recurring basis using significant unobservable inputs (Level 3) at November 30, 2008 and at August 31, 2009.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities*. This standard amends and expands the disclosure requirements of SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, to illustrate how and why an entity uses derivative instruments; how derivative instruments and related hedged items are accounted for under SFAS No. 133; and how derivative instruments and related hedged items affect an entity's financial position, financial performance and cash flows. SFAS No. 161 is effective for financial statements issued for fiscal years beginning after November 15, 2008 and interim periods within those fiscal years. As of December 1, 2008, the Company adopted SFAS No. 161.

The following table sets forth the fair value of the Company's derivative instruments.

Derivatives Not Accounted for as Hedging		Fair Value as of August 31, 2009
Instruments under SFAS No. 133	Statement of Assets and Liabilities Location	
Liabilities		
Call options	Call option contracts written	\$(232)
Interest rate swap contracts	Unrealized depreciation on interest rate swap contracts	(1,536)
		\$(1,768)

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

		For the Nine Months Ended August 31, 2009	
		Net Realized Losses on Derivatives Recognized in Income	Change in Unrealized Gains on Derivatives Recognized in Income
Derivatives not accounted for as			
hedging instruments under SFAS No. 133	Location of Gains/(Losses) on Derivatives Recognized in Income		
Call options	Options	\$ (1,841)	\$ 598
Interest rate swap contracts	Payments on interest rate swap contracts	(14,070)	7,341
		\$ (15,911)	\$ 7,939

Securities valuation policies and other investment related disclosures are hereby incorporated by reference to the Company's semi-annual report previously filed with the Securities and Exchange Commission on form N-CSR on July 27, 2009 with a file number 811-21593.

Other information regarding the Company is available in the Company's most recent annual report. This information is also available on the Company's website at www.kaynefunds.com; or on the website of the Securities and Exchange Commission, www.sec.gov.

Item 2: Controls and Procedures

(a) As of a date within 90 days from the filing date of this report, the principal executive officer and principal financial officer concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940 (the "Act")), were effective based on their evaluation of the disclosure controls and procedures required by Rule 30a-3(b) under the Act and Rules 13a-15(b) or 15d-15(b) under the Securities and Exchange Act of 1934.

(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the Act) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3: Exhibits

1. The certifications of the registrant as required by Rule 30a-2(a) under the Act are exhibits to this report.

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SIGNATURES

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

KAYNE ANDERSON MLP INVESTMENT COMPANY

/s/ Kevin S. McCarthy

Name: Kevin S. McCarthy
Title: Chairman of the Board of
Directors,
President and Chief Executive
Officer
Date: October 29, 2009

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

/s/ Kevin S. McCarthy

Name: Kevin S. McCarthy
Title: Chairman of the Board of
Directors,
President and Chief Executive
Officer
Date: October 29, 2009

/s/ Terry A. Hart

Name: Terry A. Hart
Title: Chief Financial Officer and
Treasurer
Date: October 29, 2009