

## KAYNE ANDERSON MLP INVESTMENT COMPANY ANNOUNCES ITS NET ASSET VALUE AT AUGUST 31, 2008

LOS ANGELES, CA – September 2, 2008 – Kayne Anderson MLP Investment Company (the “Company”) (NYSE: KYN) today announced its net asset value as of August 31, 2008.

As of close of business August 31, 2008, the Company’s net assets were \$1.1 billion and its net asset value per share was \$25.09, based on 43.9 million shares outstanding.

As of August 31, 2008, the Company’s total assets and long-term investments were \$1.8 billion. Long-term investments were comprised of Midstream MLPs (68%), MLP Affiliates (10%), Upstream MLPs (6%), Propane MLPs (5%), General Partner MLPs (5%), Coal MLPs (4%), Shipping MLPs (1%) and Other (1%).

The Company’s ten largest holdings by issuer at August 31, 2008 were:

	August 31, 2008		
	Units (in thousands)	Amount (\$ Millions)	Percent of Long- Term Investments
1. Energy Transfer Partners, L.P. (Midstream MLP)	3,514	156.4	8.8%
2. Kinder Morgan Management, LLC (MLP Affiliate)	2,708	150.3	8.5%
3. Plains All American Pipeline, L.P. (Midstream MLP)	3,112	148.3	8.4%
4. Enterprise Products Partners L.P. (Midstream MLP)	4,963	146.2	8.2%
5. Magellan Midstream Partners, L.P. (Midstream MLP)	3,199	118.9	6.7%
6. Copano Energy Partners, L.L.C. (Midstream MLP)	3,587	113.3	6.4%
7. Crosstex Energy, L.P. (Midstream MLP)	2,963	75.5	4.3%
8. MarkWest Energy Partners, L.P. (Midstream MLP)	2,190	75.4	4.3%
9. Inergy, L.P. (Propane MLP)	2,842	74.9	4.2%
10. Enbridge Energy Partners L.P. (Midstream MLP)	1,418	68.9	3.9%

*Kayne Anderson MLP Investment Company (“the Company”) is a non-diversified, closed-end management investment company registered under the Investment Company Act of 1940, whose common stock is traded on the NYSE. The Company’s investment objective is to obtain a high after-tax total return by investing at least 85% of its total assets in energy-related master limited partnerships and their affiliates, and in other companies that, as their principal business, operate assets used in the gathering, transporting, processing, storing, refining, distributing, mining or marketing natural gas, natural gas liquids (including propane), crude oil, refined petroleum products or coal.*

*CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This press release 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 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 publicly update or revise any forward-looking statements made herein. There is no assurance that the Company’s investment objectives will be attained.*

### Contact:

KA Fund Advisors, LLC  
<http://www.kaynefunds.com>  
 Monique Vo, 877-657-3863

Kayne Anderson MLP Investment Company  
 877-657-3863