

## Kayne Anderson MLP Investment Company Repurchases \$80 Million in Floating Rate Senior Notes and Confirms Payment of Quarterly Dividend/Distribution as Scheduled

Houston, TX – October 10, 2008 – Kayne Anderson MLP Investment Company (the “Company”) (NYSE: KYN) announced today that it has completed the repurchase of \$80 million aggregate principal amount of Floating Rate Series L Senior Notes at 101% of par value. The Company decided to utilize cash on hand to repay debt and keep in compliance with Asset Coverage Ratios as required by the Investment Company Act of 1940 (the “1940 Act”) in light of extreme volatility in the MLP market. After repayment of the Senior Notes, the Company’s 1940 Act Asset Coverage Ratio was 301% based on closing prices on Wednesday, October 8, 2008.

The Company also announced today that it has paid as scheduled its \$0.50 per share quarterly dividend/distribution for the quarter ended August 31, 2008. Cash payments to Shareholders who did not elect to participate in the Company’s Dividend Reinvestment Plan were made today. On Wednesday, the day on which the dividend was set aside for payment, the 1940 Act Asset Coverage Ratio was 305% based on closing prices on Monday, October 6, 2008.

“We have been working diligently to maintain asset coverage ratios for the purposes of both the 1940 Act and the covenants on our Senior Notes. While this has not been easy in such a difficult market, we want to assure our shareholders and noteholders that we are striving hard to meet the needs of both by maintaining our coverage ratios while selling as few securities as possible into this market,” said Kevin McCarthy, CEO of the Company.

*Kayne Anderson MLP Investment 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 materially differ from the Fund's historical experience and its present expectations or projections indicated in any forward-looking statement. These risks include, but are not limited to, changes in economic and political conditions; regulatory and legal changes; energy industry risk; commodity pricing risk; leverage risk; valuation risk; non-diversification risk; interest rate risk; tax risk; and other risks discussed in the Fund'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 Fund undertakes no obligation to publicly update or revise any forward-looking statements made herein. There is no assurance that the Fund's investment objectives will be attained.*

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