

Kayne Anderson MLP Investment Company Prices Public Offering of Common Stock

Houston, TX – February 20, 2014 – Kayne Anderson MLP Investment Company (the “Company”) (NYSE: KYN) announced the pricing of a public offering of common stock. The Company agreed to sell a total of 8,000,000 shares at a price of \$37.05 per share (exclusive of 1,200,000 additional shares that the underwriters may purchase pursuant to a 45-day option to cover over-allotments). Net proceeds from the offering of \$284.7 million will be used to make additional portfolio investments that are consistent with the Company’s investment objective and policies and for general corporate purposes. The offering is scheduled to close on February 25, 2014.

Morgan Stanley, BofA Merrill Lynch, Citigroup, UBS Investment Bank and Wells Fargo Securities are acting as joint book-running managers. A copy of the prospectus supplement and the base prospectus relating to the offering may be obtained from the following addresses:

Morgan Stanley
Attn: Prospectus Department
180 Varick Street, 2nd Floor
New York, NY 10014
Email: prospectus@morganstanley.com
Telephone: 866-718-1649

BofA Merrill Lynch
Attn: Prospectus Department
222 Broadway
New York, NY 10038
Email: dg.prospectus_requests@baml.com

Citigroup
c/o Broadridge Financial Solutions
1155 Long Island Avenue
Edgewood, NY 11717
Telephone: 800-831-9146
Email: batprospectusdept@citi.com

UBS Investment Bank
Attn: Prospectus Department
299 Park Avenue
New York, NY 10171
Telephone: 888-827-7275

Wells Fargo Securities
Attention: Equity Syndicate Dept.
375 Park Ave
New York, NY 10152
Telephone: 800-326-5897
Email: cmclientsupport@wellsfargo.com

Investors may also obtain these documents free of charge from the Company’s website at www.kaynefunds.com/kyn/sec-filings/ or the Securities and Exchange Commission’s (“SEC”) website at www.sec.gov. The information contained in, or accessed through, the Company’s website does not form a part of the Company’s registration statement or any prospectus supplement relating to the Company’s securities.

An investor should read the Company’s prospectus supplement and the base prospectus carefully before investing. The prospectus supplement and the base prospectus contain important information about the Company and its investment objective and policies, risks, charges and expenses.

This press release does not constitute an offer to sell or a solicitation to buy the securities described herein, nor shall there be any sale of these securities in any state or jurisdiction in which such offer or solicitation or sale would be unlawful prior to registration or qualification under the laws of such state or jurisdiction. A registration statement relating to these securities was filed with, and has been declared effective by, the SEC.

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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 New York Stock Exchange. 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 (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, 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 objective will be attained.

CONTACT:

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