

Kayne Anderson MLP Investment Company Announces Distribution of \$0.55 per Share for Q4 2015; Announces Investment in Closed-End Funds by Kayne Anderson

Houston, TX – December 17, 2015 – Kayne Anderson MLP Investment Company (the “Company”) (NYSE: KYN) announced today its quarterly distribution of \$0.55 per share for the quarter ended November 30, 2015. The distribution will be payable on January 15, 2016 to common stockholders of record on January 8, 2016, with an ex-dividend date of January 6, 2016.

“The board has elected to reduce the quarterly distribution from \$0.6575 per share to \$0.55 per share, a reduction of \$0.1075 per share, in light of the weak conditions in the energy and MLP markets,” said Kevin McCarthy, CEO of the Company. “Our net distributable income has declined over the past twelve months due to a variety of factors, including merger activity (where the acquirer has a lower yield), the effects of deleveraging (where lower rate debt has been repaid by selling higher rate MLPs) and the dividend cut by Kinder Morgan, Inc. Further, we’ve become more convinced that MLP management teams will slow their distribution growth rates in 2016, and many MLPs will opt to build coverage instead and keep distribution levels flat. As a result of these factors, we’ve reduced the Company’s dividend to a level that we believe is sustainable, given current market conditions, and can grow over time as the market recovers.”

Separately, the advisor to the Company, KA Fund Advisors (or “KAFA”), and its principals have agreed to purchase newly issued shares of KYN, KYE, KMF and KED, funded in part with 100% of the after-tax management fees received during the quarter. These purchases total \$14 million across all the four closed-end funds managed by KAFA, and of this amount, \$10 million will be invested in KYN. The purchases will be made at the greater of market price or net asset value as of the close of business on Friday, December 18. As of Wednesday, December 16, the purchase price for KYN would have represented a premium of 11.9% to the closing market price. Bob Sinnott, President and CEO of Kayne Anderson Capital Advisors commented, “Kayne Anderson continues to believe in the long-term prospects of the Company as well as the sustainability of the MLP market. Because Kayne Anderson is purchasing primary shares, this transaction at the same time strengthens the Company’s balance sheet.” The transaction is expected to close on December 23, 2015.

The Company estimates that 100% of its distribution for the quarter ended November 30, 2015 will be treated as a return of capital for tax purposes. This estimate is based on the Company’s anticipated earnings and profits for fiscal 2016 and its accumulated earnings and profits as of November 30, 2015. The final determination of the tax character of the distribution will be made in early 2017 when the Company can determine its actual earnings and profits for the full year (including gains and losses on the sale of securities during fiscal 2016) and may differ substantially from this preliminary information.

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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 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 (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 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.

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