

Kayne Anderson MLP Investment Company Provides Unaudited Balance Sheet Information and Announces its Net Asset Value and Asset Coverage Ratios at May 31, 2015

Houston, TX – June 2, 2015 – Kayne Anderson MLP Investment Company (the “Company”) (NYSE: KYN) today provided a summary unaudited statement of assets and liabilities and announced its net asset value and asset coverage ratios under the Investment Company Act of 1940 (the “1940 Act”) as of May 31, 2015.

As of May 31, 2015, the Company’s net assets were \$3.6 billion, and its net asset value per share was \$32.19. As of May 31, 2015, the Company’s asset coverage ratio under the 1940 Act with respect to senior securities representing indebtedness was 402% and the Company’s asset coverage ratio under the 1940 Act with respect to total leverage (debt and preferred stock) was 290%.

Kayne Anderson MLP Investment Company
Statement of Assets and Liabilities
May 31, 2015
(Unaudited)

| | (in millions) | Per Share |
|----------------------------------|-------------------|-----------------|
| Investments | \$ 6,652.0 | \$ 59.97 |
| Cash | 33.9 | 0.31 |
| Deposits | 0.3 | - |
| Accrued income | 0.4 | - |
| Receivable for securities sold | 0.4 | - |
| Other assets | 14.6 | 0.13 |
| Total assets | <u>6,701.6</u> | <u>60.41</u> |
| Senior notes | 1,356.0 | 12.22 |
| Preferred stock | 524.0 | 4.73 |
| Total leverage | <u>1,880.0</u> | <u>16.95</u> |
| Payable for securities purchased | 13.6 | 0.12 |
| Other liabilities | 46.2 | 0.42 |
| Deferred income tax liability | 1,190.6 | 10.73 |
| Total liabilities | <u>1,250.4</u> | <u>11.27</u> |
| Net assets | <u>\$ 3,571.2</u> | <u>\$ 32.19</u> |

The Fund had 110,930,378 common shares outstanding as of May 31, 2015.

Long-term investments were comprised of Midstream MLP (81%), Midstream Company (10%), General Partner MLP (4%), Shipping MLP (2%), Upstream MLP & Income Trust (1%) and Other (2%).

The Company's ten largest holdings by issuer at May 31, 2015 were:

| | <u>Units</u> (in thousands) | <u>Amounts</u> (\$ millions) | <u>Percent of</u> <u>Long-Term</u> <u>Investments</u> |
|---|--------------------------------|---------------------------------|---|
| 1. Energy Transfer Partners, L.P. (Midstream MLP) | 13,578 | \$763.5 | 11.5% |
| 2. Enterprise Products Partners L.P. (Midstream MLP) | 22,883 | 741.9 | 11.2% |
| 3. Kinder Morgan, Inc. (Midstream Company) | 14,327 | 594.4 | 8.9% |
| 4. Williams Partners L.P. (Midstream MLP) * | 10,362 | 579.0 | 8.7% |
| 5. Plains All American Pipeline, L.P. (Midstream MLP) | 8,430 | 395.8 | 6.0% |
| 6. MarkWest Energy Partners, L.P. (Midstream MLP) | 5,989 | 387.0 | 5.8% |
| 7. DCP Midstream Partners, LP (Midstream MLP) | 6,760 | 255.5 | 3.8% |
| 8. Western Gas Partners, LP (Midstream MLP) | 3,411 | 233.7 | 3.5% |
| 9. Buckeye Partners, L.P. (Midstream MLP) | 3,002 | 232.1 | 3.5% |
| 10. ONEOK Partners, L.P. (Midstream MLP) | 5,890 | 230.0 | 3.5% |

* On May 13, 2015, The Williams Companies, Inc. ("WMB") announced an agreement to acquire all of the outstanding public common units of Williams Partners L.P. As of May 31, 2015, the Company held 472 shares (\$24.1 million) of WMB. The acquisition is expected to close in the third quarter of 2015.

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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 Fund'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 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 objective will be attained.

Contact:

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