

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

Houston, TX – September 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 August 31, 2015.

As of August 31, 2015, the Company’s net assets were \$2.8 billion, and its net asset value per share was \$24.96. As of August 31, 2015, the Company’s asset coverage ratio under the 1940 Act with respect to senior securities representing indebtedness was 358% and the Company’s asset coverage ratio under the 1940 Act with respect to total leverage (debt and preferred stock) was 254%.

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

	(in millions)	Per Share
Investments	\$ 5,124.8	\$ 46.09
Cash	207.9	1.87
Deposits	0.3	-
Accrued income	0.4	-
Receivable for securities sold	10.5	0.09
Other assets	13.8	0.12
Total assets	<u>5,357.7</u>	<u>48.17</u>
Senior notes	1,281.0	11.52
Preferred stock	524.0	4.71
Total leverage	<u>1,805.0</u>	<u>16.23</u>
Other liabilities	33.8	0.30
Deferred income tax liability	743.0	6.68
Total liabilities	<u>776.8</u>	<u>6.98</u>
Net assets	<u>\$ 2,775.9</u>	<u>\$ 24.96</u>

The Fund had 111,201,735 common shares outstanding as of August 31, 2015.

Long-term investments were comprised of Midstream MLP (83%), Midstream Company (10%), General Partner MLP (3%), Shipping MLP (2%) and Other (2%).

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

	Units (in thousands)	Amounts (\$ millions)	Percent of Long-Term Investments
1. Enterprise Products Partners L.P. (Midstream MLP)	23,265	\$654.0	12.8%
2. Energy Transfer Partners, L.P. (Midstream MLP)	12,271	603.0	11.8%
3. Kinder Morgan, Inc. (Midstream Company)	13,927	451.4	8.8%
4. Williams Partners L.P. (Midstream MLP) *	10,708	426.7	8.3%
5. Plains All American Pipeline, L.P. (Midstream MLP)	8,623	311.0	6.1%
6. MarkWest Energy Partners, L.P. (Midstream MLP)**	4,759	268.3	5.2%
7. ONEOK Partners, L.P. (Midstream MLP)	7,019	227.1	4.4%
8. Buckeye Partners, L.P. (Midstream MLP)	2,875	202.4	3.9%
9. Western Gas Partners, LP (Midstream MLP)	3,405	200.3	3.9%
10. DCP Midstream Partners, LP (Midstream MLP)	6,561	185.0	3.6%

* On May 13, 2015, The Williams Companies, Inc. ("WMB") announced the acquisition of Williams Partners L.P. ("WPZ"). Subsequent to this announcement, WMB received an unsolicited acquisition proposal that was conditioned upon the termination of the agreement between WPZ and WMB. On June 21, 2015, WMB announced that it is exploring a range of strategic alternatives. As a result, closing of WMB's acquisition of WPZ is not certain. As of August 31, 2015, the Company did not hold any shares of WMB.

** On July 13, 2015, MPLX LP ("MPLX") and MarkWest Energy Partners, L.P. announced the signing of a definitive merger agreement. At August 31, 2015, the Company did not own any MPLX units.

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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.

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