

Kayne Anderson MLP Investment CO  
Form N-23C-2  
May 07, 2010

Securities and Exchange Commission  
Washington, DC 20549

Rule 23c-2 Notice of Intention to  
Redeem Securities

of

Kayne Anderson MLP Investment Company  
717 Texas Avenue, Suite 3100  
Houston, Texas 77002

under the

Investment Company Act of 1940

Securities Act File No. 333-140488

Investment Company Act File No. 811-21593

- (1) Title of the class of securities of Kayne Anderson MLP Investment Company (the Company ) to be redeemed:  
Auction Rate Preferred Stock, Series D, in \$25,000 denominations (CUSIP 486606205) (the Series D Shares ).
- (2) Date on which the securities are to be called or redeemed:  
The Series D Shares will be redeemed on May 28, 2010\*.
- (3) Applicable provisions of the governing instrument pursuant to which the securities are to be redeemed:  
The Series D Shares are to be redeemed pursuant to Section 3(a)(i) of the Articles Supplementary of the Company, dated as of April 7, 2005.
- (4) The principal amount or number of shares and the basis upon which the securities to be redeemed are to be selected:  
The Company intends to redeem all of its outstanding Series D Shares, representing an aggregate principal amount of \$75,000,000.

\* Redemption  
Payment Date

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SIGNATURE

Pursuant to the requirement of Rule 23c-2 under the Investment Company Act of 1940, the Company has duly caused this Notice of Intention to Redeem Securities to be signed on its behalf by the undersigned on this 7th day of May, 2010.

KAYNE ANDERSON MLP INVESTMENT  
COMPANY

By: /s/ Kevin McCarthy

Name: Kevin McCarthy

Title: Chief Executive Officer and  
President

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