

January 9, 2008

Mail Stop 4563

*By U.S. Mail and facsimile to (312) 930-4556*

Craig S. Donohue  
Chief Executive Officer  
Chicago Mercantile Exchange Holdings, Inc.  
20 South Wacker Drive  
Chicago, Illinois 60606

**Re: Chicago Mercantile Exchange Holdings, Inc.  
Definitive 14A  
Filed March 15, 2007  
File No. 00-33379**

Dear Mr. Donohue:

We have reviewed your response letter dated November 12, 2007 and have the following comment. Please respond to our comment by January 23, 2008 or tell us by that time when you will provide us with a response.. The comment requests revised disclosure in future filings, please confirm in writing that you will comply with the comment in your future filings and also explain to us how you intend to comply. We welcome any questions you may have about our comment or any other aspect of our review.

Benchmarking, page 27

1. It appears from your response to prior comment four that the 50<sup>th</sup> percentile benchmark is one of the factors considered by the Committee in setting and approving compensation. Please clarify the extent to which the Committee relies upon this target for compensation competitiveness. Also, please clarify which of the peer groups the Committee actually uses as the relevant benchmark. Finally, please identify the members of each of the peer groups. Please refer to Item 402(b)(2)(xiv) of Regulation S-K.

Please contact me at (202) 551-3419 with any questions.

Sincerely,

Christian N. Windsor  
Special Counsel