



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

DIVISION OF
CORPORATION FINANCE

February 15, 2007

Mail Stop 7010

By U.S. Mail and facsimile to (312) 407-8522

Kathleen M. Cronin
Managing Director, General Counsel and Corporate Secretary
Chicago Mercantile Exchange Holdings Inc.
20 South Wacker Drive
Chicago, Illinois 60606

**Re: Chicago Mercantile Exchange Holdings Inc.
Amendment No. 1 to Registration Statement on Form S-4
Filed January 30, 2007
File No. 333-139538**

Dear Ms. Cronin:

We have reviewed your filings and have the following comments. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. We note the recommendation of CBOT's board of directors with respect to the proposal to vote upon an adjournment or postponement to solicit additional proxies. Please confirm that neither the board of directors of CME nor CBOT Holdings has issued a recommendation with respect to the proposals to vote upon an adjournment or postponement of the meetings of the CME stockholders or CBOT Holdings Class A Stockholders or, otherwise, revise the letters to the companies' respective stockholders to disclose the respective recommendations.

Summary, page 1

Questions and Answers About the Merger, page 1

What will CBOT Holdings Class A stockholders receive in the merger?, page 1

2. We note your responses to comments 5 and 6 of our letter dated January 23, 2007, as well as the calculation of the total preliminary purchase price on page 140. To provide investors with a more thorough understanding of the value of the merger

consideration, please revise your disclosure here and on page 140 to disclose such consideration as of the most recent practicable date since there have been significant fluctuations in CME's stock price.

Other Information Regarding the Merger, page 9
CBOT Holdings Financial Advisor . . ., page 10

3. We note your response to comment 8 of our letter dated January 23, 2007. Please revise to disclose the percentage of the total consideration that will be paid by CBOT Holdings to JPMorgan if the merger is consummated.

Opinion of Lehman Brothers, Financial Advisor to CME Holdings, page 69
Comparable Company Analysis, page 71

4. We note your response to comment 19 of our letter dated January 23, 2007. It is unclear to us whether the qualitative judgments made by Lehman Brothers were to disregard the quantitative results for the companies listed on page 71, other than those identified as most closely matching the financial and operating characteristics of CBOT Holdings or, alternatively, whether such judgments resulted in adjustments to a larger quantitative analysis. If the reference range for the implied share price of CBOT Holdings was calculated solely by reference to the three companies identified in your response, so state.

CBOT Discounted Cash Flow Analysis, page 73

5. We note your response to comment 20 of our letter dated January 23, 2007. Please expand your discussion to disclose the companies selected by Lehman Brothers for its determination of the future market volatility component of its weighted average cost of capital calculation. In addition, please revise the statement that "discount rates utilized in this analysis were chosen by Lehman Brothers based on its expertise and experience . . . and also on an analysis of the weighted average cost of capital of CBOT Holdings" to clarify whether the Lehman Brothers utilized its "expertise and experience" in calculating the weighted average cost of capital, which was used as the discount rate, or whether such "expertise and experience" was used in adjusting the calculation of the weighted average cost of capital to reach the range of discount rates used in the analysis.

Opinion of JP Morgan, Financial Advisor to CBOT Holdings, page 83

6. We note your response to comment 23 of our January 23 letter. Please revise to make the disclosures requested in that comment in your discussion of the opinions of JPMorgan and Lazard.

Publicly Traded Comparable Company Analysis, page 86

7. We note your revision on page 86 in response to comment 18 of our January 23 letter. Please revise to disclose the criteria that JPMorgan used in determining which companies were “relevant.”

Discounted Cash Flow Analysis, page 87

8. We note your revised disclosure regarding the range of discount rates selected. Please expand your disclosure to discuss the analyses of selected publicly traded companies engaged in relevant businesses that were performed, as well as the companies deemed relevant, in calculating the applicable discount rate.

The Merger Agreement, page 109

Representations and Warranties, page 117

9. We note your response to comment 28 of our letter dated January 23, 2007. Please provide us with a list briefly identifying the contents of all omitted schedules.

Conditions to Complete the Merger, page 120

10. We note your response to comment 29 of our January 23 letter. Please revise your discussion to briefly describe the facts under which the parties may waive an existing condition to the merger.

Exhibits

Exhibit 5.1, Form of Opinion of Kathleen M. Cronin . . . regarding legality of the securities being issued

11. Please confirm that the reference in the fifth paragraph of the opinion to the corporate laws of the State of Delaware includes all statutes, including the rules and regulations underlying those provisions, applicable judicial and regulatory determinations, and applicable provisions of the Delaware Constitution.

Exhibit 8.1, Form of Opinion of Skadden Arps . . . relating to tax matters

12. We note the opinion is that the merger will qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code. Please submit a revised opinion clarifying that the consequence of such a qualification is that the merger is tax free. Submit a similarly revised opinion with respect to the tax consequences of the merger to CBOT Holdings, Inc.

13. The assumptions that the merger will qualify as a statutory merger under Delaware law and that the merger agreement will be enforceable should be deleted, as the tax opinion cannot assume any legal conclusion underlying the opinion.
14. The statement of reliance upon the statements and representations of the officers and other representatives of the parties should be revised to indicate that such reliance is limited to factual matters or, alternatively, the statement should be deleted.
15. The revised tax opinion should delete the statement that the opinion “is expressed as of the date hereof,” as such opinion must speak as of the date of effectiveness of the registration statement.
16. We note the statement in the second to last paragraph that the “letter has been prepared for you solely in connection with the Merger.” It is unclear to us whom counsel is referring to in its use of “you.” Note that use of the tax opinion may not be limited to the board of directors or to the registrant.
17. Please also include the signature of counsel in your revised tax opinion.

Exhibit 8.2, Form of Opinion of Mayer, Brown, Rowe & Maw LLP relating to tax matters

18. Please submit a revised opinion of counsel that does not contain an assumption regarding the enforceability of the merger agreement.

Closing Comment

19. Please also review the representations requested on page 7 of our letter dated January 23, 2007, and provide these representations in the form requested.

Kathleen M. Cronin
Chicago Mercantile Exchange Holdings Inc.
February 15, 2007
Page 5

You may contact Bret Johnson, Staff Accountant, at (202) 551-3753 or Jennifer Thompson, Senior Staff Accountant, at (202) 551-3737 if you have questions regarding comments on the financial statements and related matters. Please contact Matt Franker, Staff Attorney, at (202) 551-3749 or me, at (202) 551-3767 with any other questions.

Sincerely,

Jennifer R. Hardy
Branch Chief

cc: Rodd M. Schreiber
Susan S. Hassan
Skadden, Arps, Slate, Meagher & Flom LLP
333 West Wacker Drive
Chicago, Illinois 60606