As filed with the Securities and Exchange Commission on May 20, 2004

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CHICAGO MERCANTILE EXCHANGE HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 36-4459170 (I.R.S. Employer Identification No.)

20 South Wacker Drive Chicago, Illinois 60606 (312) 930-1000 (Address of Principal Executive Offices)

Agreement between Chicago Mercantile Exchange Holdings Inc. and James J. McNulty (Full Title of Plan)

Kathleen M. Cronin, Esq. Managing Director, General Counsel and Corporate Secretary Chicago Mercantile Exchange Holdings Inc. 20 South Wacker Drive Chicago, Illinois 60606 (312) 930-1000 (Name, Address and Telephone Number, including Area Code, of Agent for Service)

Copy to:

Rodd M. Schreiber, Esq. Skadden, Arps, Slate, Meagher & Flom LLP 333 West Wacker Drive Chicago, Illinois 60606 (312) 407-0700

CALCULATION OF REGISTRATION FEE

Title of Shares To Be Registered	Amount To Be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (3)
Class A Common Stock, par value \$.01 per share (including rights to acquire Series A Junior Participating Preferred Stock pursuant to our rights plan)	280,000	\$117.60	\$32,928,000	\$4,172

(1) Represents shares of our Class A common stock issuable upon exercise of the Class B portion of the option (the "Option") Mr. McNulty received under his employment agreement, together with an indeterminate number of shares of our Class A common stock that may become issuable under Mr. McNulty's employment agreement as a result of a stock split, stock dividend or similar adjustment of the outstanding shares of our Class A common stock. In accordance with Rule 416 under the Securities Act of 1933, as amended, such indeterminable number of additional shares as may be issuable as a result of such adjustments is also registered hereby. This amount does not include 50,000 shares of Class A common stock issuable pursuant to the Class B portion of the Option previously registered on Registration Statement on Form S-8 (File No. 333-104804) (the "Prior Registration Statement"). This amount includes 10,000 shares of Class A common stock issuable pursuant to the Class B portion of the Option included on Post-Effective Amendment No. 1 to the Prior Registration Statement and 100,000 shares of Class A common stock issuable pursuant to the Class B portion of the Option included on Post-Effective Amendment No. 2 to the Prior Registration Statement.

- (2) Estimated solely for the purpose of calculating the amount of the registration fee, pursuant to Rule 457(c) of the Securities Act of 1933, as amended, based upon the average of the high and low prices of our Class A common stock on May 17, 2004, as reported on the New York Stock Exchange.
- (3) A registration fee of \$1,458 was previously paid in connection with the 110,000 shares registered hereby that were included on the post-effective amendments to the Prior Registration Statement.

EXPLANATORY NOTE

This Registration Statement on Form S-8 (the "Registration Statement") of Chicago Mercantile Exchange Holdings Inc., a Delaware corporation (the "Company"), is being filed by the Company to register an additional 280,000 shares of the Company's Class A common stock, par value \$0.01 per share, issuable upon exercise of the Class B portion of the option granted to the Company's former Chief Executive Officer under his employment agreement (the "Employment Agreement"). The Company previously filed a registration statement on Form S-8 (File No. 333-104804) (the "Prior Registration Statement"), covering 50,000 shares of the Company's Class A common stock initially authorized for issuance under the Employment Agreement.

INCORPORATION OF PRIOR REGISTRATION STATEMENT BY REFERENCE

Pursuant to Instruction E to Form S-8, the Company hereby incorporates by reference into this Registration Statement the contents of the Prior Registration Statement, including all amendments, attachments and exhibits thereto.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE.

The following documents heretofore filed with the Securities and Exchange Commission (the "Commission") by the Company pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act") are incorporated herein by reference:

(a) The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003, including portions of the Company's 2003 Annual Report to Shareholders and definitive Proxy Statement for the 2004 Annual Meeting of Shareholders incorporated therein by reference.

(b) The Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2004.

(c) The Company's Current Report on Form 8-K filed with the Commission on January 12, 2004.

(d) The description of the Company's Class A common stock contained in the prospectus included in the Company's Registration Statement on Form S-1 (File No. 333-90106), as amended, which description is incorporated by reference in the Company's Registration Statement on Form 8-A filed with the Commission on November 29, 2002 (File No. 001-31553), including any amendments or reports filed for purposes of updating such description.

(e) The description of the Company's Rights Agreement and Series A Junior Participating Preferred Stock contained in the Company's Registration Statement on Form 8-A filed on December 4, 2001 (File No. 000-33379), including any amendments or reports filed for purposes of updating such description.

In addition, all documents filed by the Company subsequent to the date hereof pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing of such documents or reports with the Commission. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein so modified or superseded or deemed to be incorporated by reference herein statement so modified or superseded or deemed to be incorporated by reference herein and to be a part subsequently filed document which also is incorporated or deemed to be incorporated by reference herein so modified or superseded or deemed to be incorporated by reference herein which also is incorporated or deemed to be incorporated by reference herein which also is incorporated or deemed to be incorporated by reference herein which also is incorporated or deemed to be incorporated by reference herein which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded

shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

ITEM 8. EXHIBITS.

The following exhibits are filed as part of this Registration Statement:

Exhibit Number	Description
5.1	Opinion of Skadden, Arps, Slate, Meagher & Flom LLP.
23.1	Consent of Ernst & Young LLP.
23.2	Consent of Skadden, Arps, Slate, Meagher & Flom LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included in signature page).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Chicago, State of Illinois, on May 19, 2004.

By

CHICAGO MERCANTILE EXCHANGE HOLDINGS INC.

/s/ Kathleen M. Cronin

Kathleen M. Cronin Managing Director, General Counsel and Corporate Secretary

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Craig S. Donohue, David G. Gomach and Kathleen M. Cronin, and each of them, his or her true and lawful attorney-in-fact and agents with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney may be executed in counterparts.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated below on May 19, 2004.

Signature	Title
/s/ Craig S. Donohue	Chief Executive Officer and Director
Craig S. Donohue	
/s/ Terrence A. Duffy	Chairman of the Board and Director
Terrence A. Duffy	
/s/ David G. Gomach	Managing Director and Chief Financial Officer
David G. Gomach	
/s/ Nancy W. Goble	Managing Director and Chief Accounting Officer
Nancy W. Goble	
/s/ Dennis H. Chookaszian	Director
Dennis H. Chookaszian	

/s/ Martin J. Gepsman	Director
Martin J. Gepsman	
/s/ Bruce F. Johnson	Director
Bruce F. Johnson	
/s/ Patrick B. Lynch	Director
Patrick B. Lynch	
/s/ Leo Melamed	Director
Leo Melamed	
/s/ James E. Oliff	Director
James E. Oliff	
/s/ Alex J. Pollock	Director
Alex J. Pollock	
/s/ William G. Salatich, Jr.	Director
William G. Salatich, Jr.	
/s/ John F. Sandner	Director
John F. Sandner	
/s/ Terry L. Savage	Director
Terry L. Savage	
/s/ Myron S. Scholes	Director
Myron S. Scholes	
/s/ William R. Shepard	Director
William R. Shepard	
/s/ Howard J. Siegel	Director
Howard J. Siegel	
/s/ David J. Wescott	Director

David J. Wescott

INDEX TO EXHIBITS

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Skadden, Arps, Slate, Meagher & Flom LLP 333 West Wacker Drive Chicago, Illinois 60606

May 19, 2004

Chicago Mercantile Exchange Holdings Inc. 20 South Wacker Drive Chicago, Illinois 60606

> Re: Chicago Mercantile Exchange Holdings Inc. Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as special counsel to Chicago Mercantile Exchange Holdings Inc., a Delaware corporation (the "Company"), in connection with the registration of 280,000 shares (the "Shares") of the Company's Class A common stock, par value \$.01 per share (the "Common Stock"), which are issuable upon exercise of stock options granted under the Agreement, dated February 7, 2000, between the Company and James J. McNulty, as amended (the "Agreement").

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act of 1933, as amended (the "Act").

In rendering the opinions set forth herein, we have examined originals or copies, certified or otherwise identified to our satisfaction, of (i) a draft of the Company's Registration Statement on Form S-8 to be filed with the Securities and Exchange Commission (the "Commission") on the date hereof under the Act (the "Registration Statement"); (ii) the Company's prior Registration Statement on Form S-8 (Registration No. 333-104804) as filed with the Commission on April 29, 2003 under the Act; (iii) the Amended and Restated Certificate of Incorporation of the Company, as amended to date and currently in effect; (iv) the Amended and Restated By-Laws of the Company, as amended to date and currently in effect; (v) certain resolutions of the Board of Directors of the Company, relating to the issuance of the Shares and related matters; and (vi) the Agreement. We also have examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates of public officials, certificates of officers or other representatives of the Company and others, and such other documents, certificates and records as we have deemed necessary or appropriate as a basis for the opinions set forth herein.

Chicago Mercantile Exchange Holdings Inc. May 19, 2004 Page 2

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, conformed or photostatic copies and the authenticity of the originals of such latter documents. In making our examination of executed documents, we have assumed that the parties thereto, other than the Company, had the power, corporate or other, to enter into and perform all obligations thereunder and have also assumed the due authorization by all requisite action, corporate or other, and the execution and delivery by such parties of such documents and the validity and binding effect thereof on such parties. As to any facts material to the opinions expressed herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials.

We do not express any opinion as to the laws of any jurisdiction other than the General Corporation Law of the State of Delaware, and we do not express any opinion as to the effect of any other laws on the opinions stated herein.

Based upon and subject to the foregoing, we are of the opinion that when (i) the Registration Statement becomes effective under the Act and (ii) the Shares have been registered by the transfer agent and registrar for the Common Stock and have been issued and paid for in accordance with the terms and conditions of the Agreement, the issuance and sale of such Shares will have been duly authorized, and such Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Skadden, Arps, Slate, Meagher & Flom LLP

Consent of Independent Auditors

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-00000) of our report dated February 2, 2004, with respect to the consolidated financial statements and schedules of Chicago Mercantile Exchange Holdings Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2003, filed with the Securities and Exchange Commission.

ERNST & YOUNG LLP

Chicago, Illinois May 18, 2004