

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4723300

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	CHANGE OF NAME

CONVEYING PARTY DATA

Name	Execution Date
CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED	10/16/2017

RECEIVING PARTY DATA

Name:	CBOE EXCHANGE, INC.
Street Address:	400 S. LASALLE STREET
City:	CHICAGO
State/Country:	ILLINOIS
Postal Code:	60605

PROPERTY NUMBERS Total: 75

Property Type	Number
Application Number:	09896061
Application Number:	11829669
Application Number:	09699533
Application Number:	12035996
Application Number:	13178289
Application Number:	14066184
Application Number:	09475534
Application Number:	14668359
Application Number:	12605127
Application Number:	14991688
Application Number:	15355952
Application Number:	12883048
Application Number:	13428444
Application Number:	12040365
Application Number:	12909619
Application Number:	12560981
Application Number:	10423201
Application Number:	13715476
Application Number:	11291086
Application Number:	62409194

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Property Type	Number
Application Number:	15786091
Application Number:	12893859
Application Number:	12836349
Application Number:	13532541
Application Number:	11102490
Application Number:	12030696
Application Number:	12892212
Application Number:	12267013
Application Number:	13553341
Application Number:	11409381
Application Number:	11513893
Application Number:	12020809
Application Number:	13113755
Application Number:	12648045
Application Number:	13210588
Application Number:	11545793
Application Number:	14849340
Application Number:	13399198
Application Number:	11875572
Application Number:	12649047
Application Number:	13630647
Application Number:	11321065
Application Number:	15018418
Application Number:	11249018
Application Number:	11122748
Application Number:	14849283
Application Number:	15659181
Application Number:	12887349
Application Number:	15628288
Application Number:	14722994
Application Number:	15049948
Application Number:	13560308
Application Number:	15376146
Application Number:	13528150
Application Number:	15243681
Application Number:	13041107
Application Number:	13226315
Application Number:	13975045

Property Type	Number
Application Number:	15697079
Application Number:	13491338
Application Number:	11849835
Application Number:	13422536
Application Number:	12575250
Application Number:	13399217
Application Number:	11122511
Application Number:	13168172
Application Number:	15066712
Application Number:	09912709
Application Number:	14505281
Application Number:	13009520
Application Number:	15383920
Application Number:	15201878
Application Number:	11416711
Application Number:	12481388
Application Number:	14203138

CORRESPONDENCE DATA

Fax Number: (312)321-4299

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: usassignments@brinksgilson.com, pchiovari@brinksgilson.com

Correspondent Name: KENT E. GENIN

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Address Line 4: CHICAGO, ILLINOIS 60610

ATTORNEY DOCKET NUMBER:	11927
NAME OF SUBMITTER:	KENT E. GENIN
SIGNATURE:	/Kent E. Genin/
DATE SIGNED:	12/07/2017

Total Attachments: 14

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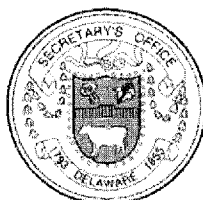
Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED", CHANGING ITS NAME FROM "CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED" TO "CBOE EXCHANGE, INC.", FILED IN THIS OFFICE ON THE SIXTEENTH DAY OF OCTOBER, A.D. 2017, AT 9:54 O`CLOCK P.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.




Jeffrey W. Bullock, Secretary of State

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SR# 20176643026

You may verify this certificate online at corp.delaware.gov/authver.shtml

Authentication: 203409578
Date: 10-17-17

PATENT
REEL: 044742 FRAME: 0580

**FOURTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
of
CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED**

The corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware on February 8, 1972. This Fourth Amended and Restated Certificate of Incorporation of the corporation, which restates and integrates and also further amends the provisions of the corporation's Third Amended and Restated Certificate of Incorporation, was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law of the State of Delaware and by the written consent of its sole stockholder in accordance with Section 228 of the General Corporation Law of the State of Delaware. The Third Amended and Restated Certificate of Incorporation of the corporation is hereby amended, integrated and restated to read in its entirety as follows:

FIRST: The name of the corporation (the "Corporation") is Cboe Exchange, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801-1297. The name of the Corporation's registered agent at such address shall be The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is:

(a) To conduct and carry on the function of an "exchange" within the meaning of that term in the Securities Exchange Act of 1934, as amended (the "Act");

(b) To provide a securities market place with high standards of honor and integrity among its Trading Permit Holders and other persons holding rights to access the Corporation's facilities and to promote and maintain just and equitable principles of trade and business. The term "Trading Permit Holders" shall have the meaning given to that term in Section 1.1 of the Corporation's Bylaws, as the same may be amended from time to time (the "Corporation's Bylaws"); and

(c) To engage in any other lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("GCL").

FOURTH: The total number of shares of stock which the Corporation shall have authority to issue is one thousand (1,000) shares of common stock having a par value of \$0.01 per share (the "Common Stock"). Cboe Global Markets, Inc. will be the sole owner of the Common Stock. Any sale, transfer or assignment by Cboe Global Markets, Inc. of any shares of Common Stock will be subject to prior approval by the Securities and Exchange Commission (the "Commission") pursuant to the rule filing procedure under Section 19 of the Act.

FIFTH: (a) The governing body of the Corporation shall be its Board of Directors. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

(b) The Board of Directors of the Corporation shall consist of not less than 5 directors, the exact number to be fixed in accordance with the Corporation's Bylaws.

(c) Only persons who are nominated by the Nominating and Governance Committee shall be eligible for election as directors. The Nominating and Governance Committee shall be bound to accept and nominate (a) the individual(s) recommended by the Representative Director Nominating Body (as defined in the Corporation's Bylaws) for nomination as Representative Director (as defined in the Corporation's Bylaws), provided that the individuals so nominated by the Representative Director Nominating Body are not opposed by a petition candidate or (b) the individual(s) who receive the most votes pursuant to a petition election as set forth in Section 3.2 of the Corporation's Bylaws; provided, however, that any individual(s) recommended by the Representative Director Nominating Body and any individual(s) who are petition candidates pursuant to clause (b) of the preceding sentence shall satisfy the compositional requirements determined by the Board of Directors from time to time pursuant to a resolution adopted by the Board in accordance with Section 3.1 of the Corporation's Bylaws, designating the number of Representative Directors that are Non-Industry Directors and Industry Directors (if any), as such terms are defined in the Corporation's Bylaws; and provided further, that the Board of Directors and/or Nominating and Governance Committee, as applicable, shall make such determinations as to whether a director candidate satisfies applicable qualifications for election as a director pursuant to and in accordance with Section 3.1 of the Corporation's Bylaws.

(d) In discharging his or her responsibilities as a member of the Board of Directors, and to the fullest extent permitted by law, each director shall take into consideration the effect that his or her actions would have on the ability of the Corporation to carry out the Corporation's responsibilities under the Act and on the ability of the Corporation: to engage in conduct that fosters and does not interfere with the Corporation's ability to prevent fraudulent and manipulative acts and practices; to promote just and equitable principles of trade; to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities; to remove impediments to and perfect the mechanisms of a free and open market and a national market system; and, in general, to protect investors and the public interest. In discharging his or her responsibilities as a member of the Board of Directors or as an officer or employee of the Corporation, each such director, officer or employee shall comply with the federal securities laws and the rules and regulations thereunder and shall cooperate with the Commission, and the Corporation pursuant to its regulatory authority.

SIXTH: (a) The Corporation shall, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, indemnify and hold harmless any person (a "Covered Person") who was or is made or is threatened to be made a party or is otherwise involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director, officer or member of a committee of the Corporation, or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director or

officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees), judgment, fines and amounts paid in settlement actually and reasonably incurred by such Covered Person in connection with a proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section (c) of this Article Sixth, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by the Board of Directors of the Corporation.

(b) Expenses (including attorneys' fees) incurred by a Covered Person in defending a proceeding, including appeals, shall, to the extent not prohibited by law, be paid by the Corporation in advance of the final disposition of such proceeding; provided, however, that the Corporation shall not be required to advance any expenses to a person against whom the Corporation directly brings an action, suit or proceeding alleging that such person (1) committed an act or omission not in good faith or (2) committed an act of intentional misconduct or a knowing violation of law. Additionally, an advancement of expenses incurred by a Covered Person shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Covered Person, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal or otherwise in accordance with Delaware law that such Covered Person is not entitled to be indemnified for such expenses under this Article Sixth.

(c) If a claim for indemnification (following the final disposition of such action, suit or proceeding) or advancement of expenses under this Article Sixth is not paid in full within thirty days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

(d) The provisions of this Article Sixth shall be deemed to be a contract between the Corporation and each Covered Person who serves in any such capacity at any time while this Article Sixth is in effect, and any repeal or modification of any applicable law or of this Article Sixth shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

(e) Persons not expressly covered by the foregoing provisions of this Article Sixth, such as those (x) who are or were employees or agents of the Corporation, or are or were serving at the request of the Corporation as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, or (y) who are or were directors, officers, employees or agents of a constituent corporation absorbed in a consolidation or merger in which the Corporation was the resulting or surviving corporation, or who are or were serving at the request of such constituent corporation as directors, officers, employees or agents of another corporation,

partnership, joint venture, trust or other enterprise, may be indemnified or advanced expenses to the extent authorized at any time or from time to time by the Board of Directors.

(f) The rights conferred on any Covered Person by this Article Sixth shall not be deemed exclusive of any other rights to which such Covered Person may be entitled by law or otherwise, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

(g) The Corporation's obligation, if any, to indemnify or to advance expenses to any Covered Person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or nonprofit entity shall be reduced by any amount such Covered Person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit entity.

(h) Any repeal or modification of the foregoing provisions of this Article Sixth shall not adversely affect any right or protection hereunder of any Covered Person in respect of any act or omission occurring prior to the time of such repeal or modification.

(i) The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, manager, officer, trustee, employee or agent of the Corporation or another corporation, or of a partnership, limited liability company, joint venture, trust or other enterprise against any expense, liability or loss (as such terms are used in this Article Sixth), whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the GCL.

SEVENTH: The Corporation reserves the right to amend this Certificate of Incorporation, and to change or repeal any provision of this Certificate of Incorporation, in the manner prescribed at the time by statute, and all rights conferred upon stockholders by this Certificate of Incorporation are granted subject to this reservation. Before any amendment to, or repeal of, any provision of this Certificate of Incorporation shall be effective, those changes shall be submitted to the Board of Directors of the Corporation and if such amendment or repeal must be filed with or filed with and approved by the Commission, then the proposed changes to this Certificate of Incorporation shall not become effective until filed with or filed with and approved by the Commission, as the case may be.

EIGHTH: A director of the Corporation shall not be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the GCL as the same exists or may hereafter be amended. Any amendment, modification or repeal of the foregoing sentence shall not adversely affect any right or protection of a director of the Corporation hereunder in respect of any act or omission occurring prior to the time of such amendment, modification or repeal.

NINTH: Unless and except to the extent that the Corporation's Bylaws shall so require, the election of directors of the Corporation need not be by written ballot.

TENTH: In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors of the Corporation is expressly authorized to make, alter and repeal the Corporation's Bylaws.

ELEVENTH: To the fullest extent permitted by law, all confidential information pertaining to the self-regulatory function of the Corporation (including but not limited to disciplinary matters, trading data, trading practices and audit information) contained in the books and records of the Corporation shall: (i) not be made available to any persons other than to those officers, directors, employees and agents of the Corporation that have a reasonable need to know the contents thereof; (ii) be retained in confidence by the Corporation and the officers, directors, employees and agents of the Corporation; and (iii) not be used for any commercial purposes. Nothing in this Article Eleventh shall be interpreted as to limit or impede the rights of the Commission to access and examine such confidential information pursuant to the federal securities laws and the rules and regulations thereunder, or to limit or impede the ability of any officers, directors, employees or agents of the Corporation to disclose such confidential information to the Commission.

IN WITNESS WHEREOF, Chicago Board Options Exchange, Incorporated has caused this certificate to be signed as of this 16th day of October, 2017.

CHICAGO BOARD OPTIONS EXCHANGE,
INCORPORATED

By: 

Name: Edward T. Tilly

Its: Chief Executive Officer

Cboe Patent Assets

Country	Application Number	Application Date	Patent Number	Issue Date	Status	Title
United States	09/896,061	6/29/2001	7,653,584	1/26/2010	Issued	AUTOMATED EXECUTION SYSTEM HAVING PARTICIPATION
United States	11/829,669	7/27/2007	7,921,055	4/5/2011	Issued	AUTOMATED TRADING EXCHANGE SYSTEM AND METHOD UTILIZING A RANDOMIZED OPENING PROCEDURE
United States	09/699,533	10/30/2000	7,321,872	1/22/2008	Issued	AUTOMATED TRADING EXCHANGE SYSTEM AND METHOD UTILIZING A RANDOMIZED OPENING PROCEDURES
United States	12/035,996	2/22/2008	7,980,457	7/19/2011	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
United States	13/178,289	7/7/2011	8,266,044	9/11/2012	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
United States	14/066,184	10/29/2013	9,727,916	8/8/2017	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
United States	09/475,534	12/30/1999	7,356,498	4/8/2008	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
United States	14/668,359	3/25/2015			Pending	AUTOMATED TRADING EXCHANGE SYSTEM FOR ROUTING AND MATCHING ORDERS
United States	12/605,127	10/23/2009	8,346,653	1/1/2013	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
United States	14/991,688	1/8/2016			Pending	AUTOMATED TRADING SYSTEM FOR ROUTING AND MATCHING ORDERS
United States	15/355,952	11/18/2016			Pending	AUTOMATED TRADING SYSTEM FOR ROUTING AND MATCHING ORDERS
United States	12/883,048	9/15/2010	8,719,144	5/6/2014	Issued	EXCHANGE TRADING SYSTEM AND METHOD HAVING A VARIABLE MAKER-TAKER MODEL

PATENT

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Cboe Patent Assets

United States	13/428,444	3/23/2012	8,326,743	12/4/2012	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING COMBINED ORDERS FOR FINANCIAL INSTRUMENTS THROUGH BOTH ELECTRONIC AND OPEN OUTCRY TRADING MECHANISMS
United States	12/040,365	2/29/2008	7,844,539	11/30/2010	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING COMBINED ORDERS FOR FINANCIAL INSTRUMENTS THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	12/909,619	10/21/2010	8,175,958	5/8/2012	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING COMBINED ORDERS FOR FINANCIAL INSTRUMENTS THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	12/560,981	9/16/2009	8,346,652	1/1/2013	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING SECURITIES OR DERIVATIVES THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	10/423,201	4/24/2003	7,613,650	11/3/2009	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING SECURITIES OR DERIVATIVES THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	13/715,476	12/14/2012			Pending	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING SECURITIES OR DERIVATIVES THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	11/291,086	11/30/2005	7,552,083	6/23/2009	Issued	HYBRID TRADING SYSTEM FOR CONCURRENTLY TRADING THROUGH BOTH ELECTRONIC AND OPEN-OUTCRY TRADING MECHANISMS
United States	62/409,194	10/17/2016			Pending	LOW LATENCY SYSTEM HAVING HIGH AVAILABILITY COMPUTER ARCHITECTURE
United States	15/786,091	10/17/2017			Pending	LOW LATENCY SYSTEM HAVING HIGH AVAILABILITY COMPUTER ARCHITECTURE
United States	12/893,859	9/29/2010	8,595,120	11/26/2013	Issued	MARKET ON CLOSE SYSTEM, METHOD AND PROGRAM PRODUCT
United States	12/836,349	7/14/2010	8,209,255	6/26/2012	Issued	MARKET PARTICIPANT ISSUE SELECTION SYSTEM AND METHOD
United States	13/532,541	6/25/2012	8,484,125	7/9/2013	Issued	MARKET PARTICIPANT ISSUE SELECTION SYSTEM AND METHOD
United States	11/102,490	4/7/2005	7,809,629	10/5/2010	Issued	MARKET PARTICIPANT ISSUE SELECTION SYSTEM AND METHOD
United States	12/030,696	2/13/2008	8,108,290	1/31/2012	Issued	MARKET SENTIMENT INDICATOR
United States	12/892,212	9/28/2010	8,321,322	11/27/2012	Issued	METHOD AND SYSTEM FOR CREATING A SPOT PRICE TRACKER INDEX

PATENT

REEL: 044742 FRAME: 0587

Cboe Patent Assets

United States	12/267,013	11/7/2008	8,249,972	8/21/2012	Issued	METHOD AND SYSTEM FOR CREATING A VOLATILITY BENCHMARK INDEX
United States	13/553,341	7/19/2012	8,694,407	4/8/2014	Issued	METHOD AND SYSTEM FOR CREATING A VOLATILITY BENCHMARK INDEX
United States	11/409,381	4/21/2006	8,027,904	9/27/2011	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING CORPORATE DEBT SECURITY DERIVATIVE INVESTMENT INSTRUMENTS
United States	11/513,893	8/31/2006	7,664,692	2/16/2010	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON AN INDEX OF INVESTMENT MANAGEMENT COMPANIES
United States	12/020,809	1/28/2008	7,949,586	5/24/2011	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON AN INDEX OF COLLATERALIZED OPTIONS
United States	13/113,755	5/23/2011	8,341,069	12/25/2012	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON AN INDEX OF COLLATERALIZED OPTIONS
United States	12/648,045	12/28/2009	8,001,026	8/16/2011	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON AN INDEX OF INVESTMENT MANAGEMENT COMPANIES
United States	13/210,588	8/16/2011	8,204,816	6/19/2012	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON AN INDEX OF INVESTMENT MANAGEMENT COMPANIES
United States	11/545,793	10/10/2006	8,326,716	12/4/2012	Issued	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET
United States	14/849,340	9/9/2015			Pending	METHOD AND SYSTEM FOR CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET
United States	13/399,198	2/17/2012	8,533,091	9/10/2013	Issued	METHOD AND SYSTEM FOR GENERATING AND TRADING DERIVATIVE INVESTMENT INSTRUMENTS BASED ON A VOLATILITY ARBITRAGE BENCHMARK INDEX

PATENT

REEL: 044742 FRAME: 0588

Cboe Patent Assets

United States	11/875,572	10/19/2007	8,140,425	3/20/2012	Issued	METHOD AND SYSTEM FOR GENERATING AND TRADING DERIVATIVES INVESTMENT INSTRUMENTS BASED ON A VOLATILITY ARBITRAGE BENCHMARK INDEX
United States	12/649,047	12/29/2009	8,296,218	10/23/2012	Issued	METHOD AND SYSTEM FOR PROVIDING AN AUTOMATED AUCTION FOR INTERNALIZATION AND COMPLEX ORDERS IN A HYBRID TRADING SYSTEM
United States	13/630,647	9/28/2012			Pending	METHOD AND SYSTEM FOR PROVIDING AN AUTOMATED AUCTION FOR INTERNALIZATION AND COMPLEX ORDERS IN A HYBRID TRADING SYSTEM
United States	11/321,065	12/29/2005	7,653,588	1/26/2010	Issued	METHOD AND SYSTEM FOR PROVIDING ORDER ROUTING TO A VIRTUAL CROWD IN A HYBRID TRADING SYSTEM
United States	15/018,418	2/8/2016			Pending	METHOD AND SYSTEM FOR PROVIDING ORDER ROUTING TO A VIRTUAL CROWD IN A HYBRID TRADING SYSTEM AND EXECUTING AN ENTIRE ORDER
United States	11/249,018	10/11/2005	7,676,421	3/9/2010	Issued	METHOD AND SYSTEM FOR PROVIDING AN AUTOMATED AUCTION FOR INTERNALIZATION AND COMPLEX ORDERS IN A HYBRID TRADING SYSTEM
United States	11/122,748	5/4/2005	8,326,715	12/4/2012	Issued	METHOD OF CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET
United States	14/849,283	9/9/2015			Pending	METHOD OF CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A STATISTICAL PROPERTY REFLECTING THE VARIANCE OF AN UNDERLYING ASSET
United States	15/659,181	7/25/2017			Pending	METHOD OF CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON AN AVERAGE PRICE OF AN UNDERLYING ASSET DURING A CALCULATION PERIOD
United States	12/887,349	9/21/2010	8,392,303	3/5/2013	Issued	METHOD, SYSTEM AND PROGRAM PRODUCT FOR DETERMINING A VALUE OF AN INDEX
United States	15/628,288	6/20/2017			Pending	METHODS AND SYSTEMS FOR CREATING A CREDIT VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	14/722,994	5/27/2015			Pending	METHODS AND SYSTEMS FOR CREATING A CREDIT VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON

PATENT

Cboe Patent Assets

United States	15/049,948		2/22/2016				Pending	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	13/560,308		7/27/2012	8,712,891	4/29/2014	Issued		METHODS AND SYSTEMS FOR CREATING A TAIL RISK HEDGE INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	15/376,146		12/12/2016			Pending		METHODS AND SYSTEMS FOR CREATING A TIME DEPOSIT VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	13/528,150		6/20/2012	8,510,210	8/13/2013	Issued		METHODS AND SYSTEMS FOR CREATING AN INTEREST RATE SWAP VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	15/243,681		8/22/2016			Pending		METHODS AND SYSTEMS FOR CREATING AN INTEREST RATE SWAP VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
United States	13/041,107		3/4/2011	8,438,094	5/7/2013	Issued		METHODS AND SYSTEMS FOR CREATING AND TRADING DERIVATIVE INVESTMENT PRODUCTS BASED ON A SKEW INDEX
United States	13/226,315		9/6/2011	8,473,403	6/25/2013	Issued		METHODS AND SYSTEMS FOR CREATING AND TRADING STRIPS OF FINANCIAL PRODUCTS
United States	13/975,045		8/23/2013			Pending		METHODS AND SYSTEMS FOR HANDLING COMPLEX ORDERS
United States	15/697,079		9/6/2017			Pending		METHODS AND SYSTEMS FOR HANDLING COMPLEX ORDERS
United States	13/491,338		6/7/2012	8,612,323	12/17/2013	Issued		METHODS AND SYSTEMS FOR TRADE FEE AND REBATE COMPUTATION AND ORDER ROUTING
United States	11/849,835		9/4/2007	8,165,953	4/24/2012	Issued		SYSTEM AND METHOD FOR CREATING AND TRADING A DERIVATIVE INVESTMENT INSTRUMENT OVER A RANGE OF INDEX VALUES
United States	13/422,536		3/16/2012	8,719,145	5/6/2014	Issued		SYSTEM AND METHOD FOR CREATING AND TRADING A DERIVATIVE INVESTMENT INSTRUMENT OVER A RANGE OF INDEX VALUES
United States	12/575,250		10/7/2009	8,788,381	7/22/2014	Issued		SYSTEM AND METHOD FOR CREATING AND TRADING A DIGITAL DERIVATIVE INVESTMENT INSTRUMENT
United States	13/399,217		2/17/2012	8,386,374	2/26/2013	Issued		SYSTEM AND METHOD FOR CREATING AND TRADING PACKAGED COLLAR OPTIONS ON AN EXCHANGE

PATENT

REEL: 044742 FRAME: 0590

Cboe Patent Assets

United States	11/122,511	5/4/2005	7,562,046	7/14/2009	Issued	SYSTEM AND METHOD FOR CREATING AND TRADING PACKAGED COLLAR OPTIONS ON AN EXCHANGE
United States	13/168,172	6/24/2011	8,738,524	5/27/2014	Issued	SYSTEM AND METHOD FOR CREATING PARITY ON CLOSE ORDERS
United States	15/066,712	3/10/2016			Pending	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE
United States	09/912,709	7/25/2001	7,401,046	7/15/2008	Issued	SYSTEM AND METHOD FOR DISPLAYING OPTION MARKET INFORMATION
United States	14/505,281	10/2/2014			Pending	SYSTEM AND METHOD FOR ORDER OR QUOTE REASONABILITY CHECKS
United States	13/009,520	1/19/2011	8,799,783	8/5/2014	Issued	SYSTEM AND METHOD FOR PRESENTING OPTION DATA USING ANIMATED 3-DIMENSIONAL GRAPHICAL DISPLAY
United States	15/383,920	12/19/2016			Pending	SYSTEM AND METHOD FOR REAL-TIME DATA ACQUISITION AND DISPLAY
United States	15/201,878	7/5/2016			Pending	SYSTEM AND METHOD FOR SETTLING AN INDEX DERIVATIVE BASED ON MISMATCHED SETTLEMENT TIMES
United States	11/416,711	5/3/2006	8,489,489	7/16/2013	Issued	SYSTEM AND METHOD FOR TRADING DERIVATIVES IN PENNY INCREMENTS WHILE DISSEMINATING QUOTES FOR DERIVATIVES IN NICKEL/DIME INCREMENTS
United States	12/481,388	6/9/2009	8,121,934	2/21/2012	Issued	SYSTEM AND METHOD FOR TRADING PACKAGED COLLAR OPTIONS ON AN EXCHANGE
United States	14/203,138	3/10/2014			Pending	VOLATILITY INDEX AND DERIVATIVE CONTRACTS BASED THEREON METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND
South Korea	10-2015-7026255	11/21/2013			Pending	VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
South Korea	2016-7009525	9/11/2014			Pending	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title: SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Singapore	200105226-5	12/18/2000	83270	8/31/2006	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
Singapore	11201507284X	11/21/2013	11201507284X	8/17/2017	Issued	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED

PATENT

REEL: 044742 FRAME: 0591

Cboe Patent Assets

Singapore	10201705887T	7/18/2017			Published	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Singapore	11201601837V	9/11/2014			Pending	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
Russian Federation	2015144062	11/21/2013			Pending	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Russian Federation	2016113368	9/11/2014			Pending	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
Japan	2016-500109	11/21/2013			Published	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Japan	2016-542107	9/11/2014			Published	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
Israel	240925	11/21/2013			Pending	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Israel	244542	9/11/2014			Pending	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
India	7605/DELNP/2015	11/21/2013			Pending	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
India	201617008449.0	9/11/2014			Published	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
Hong Kong	16109714.8	8/15/2016			Published	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE

PATENT

REEL: 044742 FRAME: 0592

Cboe Patent Assets

Hong Kong	17101917.9	2/22/2017			Published	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
China P.R.	201380075864.3	11/21/2013			Published	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
China P.R.	201480061255.7	9/11/2014			Published	SYSTEM AND METHOD FOR DETERMINING A TRADABLE VALUE Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE
Australia	2001022765	12/18/2000	773485	9/9/2004	Issued	AUTOMATED TRADING EXCHANGE SYSTEM HAVING INTEGRATED QUOTE RISK MONITORING AND INTEGRATED QUOTE MODIFICATION SERVICES
Australia	2013381695	11/21/2013			Pending	METHODS AND SYSTEMS FOR CREATING A GOVERNMENT BOND VOLATILITY INDEX AND TRADING DERIVATIVE PRODUCTS BASED THEREON
Australia	2014318699	9/11/2014			Pending	Previous title:SYSTEM AND METHOD FOR CALCULATING A SPECIAL OPENING QUOTE