

Index Policies & Practices METHODOLOGY

Contents

1	Introduction				
2	Governar	2			
	2.1 Over	2.1 Oversight			
	2.2 Committees		2		
	2.2.1	Committee Reporting Structure	3		
	2.3 Meth	10dologies	3		
	2.3.1	Annual Methodology Review	3		
	2.3.2	Consultations	3		
	2.4 Ente	rprise Policies	4		
	2.4.1	Code of Business Conduct and Ethics	4		
	2.4.2	Conflicts of Interest	4		
	2.4.3	Record Retention Policy	5		
3	Index Calculation Policies		5		
	3.1 Cess	ation	5		
	3.2 Erro	rs, Restatements, and Corrections	6		
	3.3 Expe	ert Judgement and Discretion	7		
4	Engagem	ent with External Stakeholders	7		
	4.1 Anno	ouncements	7		
	4.2 Feed	lback	8		
	4.3 Advis	sory Panels	8		
5	Appendix	1 – Restatement Guidelines	9		
6	Appendix	c 2 – Glossary of Terms	11		
	6.1 Gene	eral Terminology	11		
	6.2 Equi	ties Glossary	11		
	6.3 Deriv	vatives Glossary	12		
7	Annendix	3 – Material Changes	15		



1 Introduction

This document sets forth summary details for the governance of indices, indicators, and benchmarks (hereinafter each an "Index" and together, the "Indices") owned and administered by Cboe Global Indices, LLC or Cboe Europe Indices B.V., collectively referred to hereinafter as Cboe Indices ("CI").

For greater detail on the construction and rules of specific Indices, please refer to the methodology documents published at Cboe Indices.

2 Governance

Cboe Indices maintains a robust governance framework to ensure the accuracy and integrity of our benchmarks. We are committed to delivering transparent, high-quality indices that operate in compliance with applicable regulations in the relevant jurisdiction required and industry best practices.

2.1 Oversight

The Global Index Administration Oversight Body ("GIAOB") is responsible for maintaining effective oversight of the provision of Indices by Cboe Indices. Such provision includes administration, calculation, and determination of Indices. The GIAOB reports to the boards of Cboe Global Indices, LLC and Cboe Europe Indices B.V.

Details on the scope and membership of the GIAOB can be found within the Global Index Administration Oversight Body Charter published on our website.

2.2 Committees

Cboe Indices uses the following committee structure for the administration, calculation, and determination of Indices:

- The Global Index Policy Committee ("GIPC") is responsible for the development and maintenance of non-asset class specific policies and procedures related to Index provision and controls. This Index Policies & Practices document is reviewed at least annually by the GIPC and further approved by the GIAOB;
- The Equity Committee ("EC") is responsible for the development, maintenance, review, and interpretation of equity Index methodologies; and
- The Derivatives Committee ("DC") is responsible for the development, maintenance, review, and interpretation of derivative based Index methodologies,

each a "Committee" or "Index Committee", or collectively the "Committees" or "Index Committees".

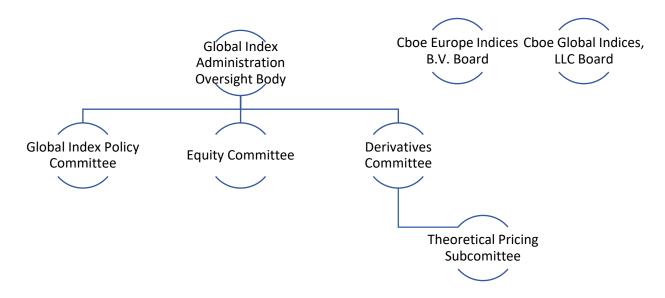
In addition to the above-described Index Committees, Cboe Indices has created a Theoretical Pricing Subcommittee ("TPS") that is responsible for the governance and practices related to our theoretical options pricing services.

Details on the scope and membership of each Committee can be found within their respective charters published on our website.



2.2.1 Committee Reporting Structure

The Global Index Policy Committee, Equity Committee, and Derivatives Committee report charter adherence and other matters to the Global Index Administration Oversight Body. The Theoretical Pricing Subcommittee reports charter adherence and other matters to the Derivatives Committee.



2.3 Methodologies

Cboe Indices develops methodologies in accordance with applicable laws, regulations, and best practices. Each Index is designed to achieve its objective as stated and published in its methodology at Cboe Indices.

2.3.1 Annual Methodology Review

Cboe Indices conducts an annual review of Index methodologies. Considerations during the annual methodology review include, but are not limited to, liquidity characteristics of relevant markets, market concentration, characteristics related to market structure, sufficiency of the underlying data, and whether the construction rules remain effective in supporting an Index's ability to achieve its objective.

2.3.2 Consultations

Cboe Indices may periodically determine that the methodology (e.g., constituent selection rules, inputs, formulas, etc.) of an Index requires updating to ensure that the Index reliably achieves its stated objective. The review of a potential methodology change may be the result of client feedback, evolving market conditions, findings during the annual methodology review, or other circumstances.

Potential methodology changes are discussed within the relevant Index Committee for determination of whether the change is material. In determining materiality for the purposes of Consultations, the Committee considers all known factors. In the context of consultations, a material change is generally one that:

- Changes the objective of an Index (excluding editorial clarifications),
- Significantly alters the composition or constituent weights (as evaluated case-by-case), or
- Impacts a user's ability to replicate the index (as evaluated case-by-case).



In very limited circumstances, the Index Committee may announce changes to a methodology without consultation. These circumstances may include if there is no market impact associated with the change (e.g., due to known Index usage or lack thereof) or if the change is time sensitive and required for the Index to continue to achieve its objective (as applicable). Any decision by the Index Committee not to invoke the consultation process for a change that is determined material will be reported to the Global Index Administration Oversight Body.

Consultations are open for public submission. Consultation announcements are posted on the Index governance website and emailed to clients included in our distribution lists. The consultation document will include details on the proposed change as well as specific instructions for providing feedback.

Following the close of the consultation period, as specified in the consultation announcement, the relevant Index Committee will evaluate the proposed Index change(s), consider the consultation responses, and determine whether to implement any changes. The results of any consultation will be posted to Index Governance (cboe.com). The results document will generally contain a summary of the consultation, the outcome, and timing for adopted changes (as relevant). Should a methodology change require altering the published methodology document, the altered document will be approved by the relevant Index Committee and posted to the website as soon as practicable, and no later than the effective date of the change.

2.4 Enterprise Policies

Cboe Global Indices, LLC and Cboe Europe Indices B.V., collectively referred to in this document as Cboe Indices ("CI"), are subsidiaries of Cboe Global Markets, Inc., a leading provider of regulated market infrastructure, market data and analytics, and clearing and investment solutions. Associates and processes of Cboe Global Indices, LLC and Cboe Europe Indices B.V. adhere to enterprise-wide policies including but not limited to the Code of Business Conduct and Ethics, the Conflicts of Interest Policy, and the Record Retention Policy, as further described below.

2.4.1 Code of Business Conduct and Ethics

The Code of Business Conduct and Ethics (the "Code") has been adopted and is overseen by the Board of Directors of Cboe Global Markets, Inc. to promote honest, legal, and ethical conduct in all of our business endeavors and transactions. All Associates are trained annually on this Code.

The Code describes consequences for non-compliance and enforcement of the policy and related activities including, but not limited to conflicts of interest, confidentiality of company information, compliance with antitrust and anti-corruption and bribery laws, insider trading, and unethical behavior. Disciplinary procedures for policy violations are documented within each policy and can include termination of employment.

2.4.2 Conflicts of Interest

Through the Conflicts of Interest Policy, Associates of Cboe Global Markets, Inc. and its subsidiaries are informed of their duty to avoid actual conflicts and potential or perceived conflicts of interest that may arise between personal and business interests. The policy better ensures that Associates can prevent or identify and manage and/or mitigate real or perceived conflict of interest.

Additionally, Index rules and methodologies are publicly available and provide transparency with respect to, among other things, constituent selection criteria, index constituent management, calculation methodology, corporate actions and events, extreme market events, etc. Cboe Indices strives to identify and prevent or manage conflicts of interest between themselves, including their managers, employees or any person directly or indirectly linked to them by control, and



contributors or users, and to ensure that, where any judgement or discretion in the benchmark determination process is required, it is independently and honestly exercised.

2.4.3 Record Retention Policy

The purpose of the Record Retention Policy is to require that necessary records are adequately protected and maintained per regulatory and legal requirements, are available to meet business needs, and are preserved with integrity. The rules within the policy set forth minimum retention requirements (typically five (5) years), and do not prohibit retention of certain records under longer schedules.

3 Index Calculation Policies

3.1 Cessation

From time to time, Cboe Indices may determine that an Index should be discontinued. Circumstances that may result in the cessation of an Index include but are not limited to:

- Market structure or regulatory changes,
- Geo-political events,
- Inadequate or unreliable supply of input data and/or other external factors beyond control,
- Methodology weaknesses, e.g., the index is no longer representative or is unlikely to achieve its intended objective, and/or
- Insufficient demand or investor interest.

In evaluating whether to discontinue an index, Cboe Indices will endeavor to engage external stakeholders to gather feedback where appropriate. This may include the relevant regulatory body, users of the index, data vendors who redistribute the data, etc. as appropriate.

Any proposed cessation of an Index will be raised to the relevant Index Committee. The Committee will review the circumstances and potential impact to stakeholders; all proposals are additionally assessed to determine any potential impact on the market. The Committee may determine to issue a consultation regarding an index cessation. Any decision to cease an Index will be approved by the Head of Cboe Indices with consideration of the Committee's review and feedback.

Once the decision to discontinue an Index has been made, the timing of the cessation will depend on various factors if known to Cboe Indices, including (as relevant) the:

- urgency and impact of the cessation,
- number and term of signed licensees,
- index-linked financial products or investment funds tracking the Index,
- required notice periods to be given,
- timing of transitional measures,
- timing of internal processes,
- relevant dates (e.g., expiration dates for an instrument using the index),
- regulatory or legal provisions,
- feedback from licensees and stakeholders, and
- potential alternative benchmarks



Index cessations are announced in advance, with notices posted on our website and emailed to clients and vendors included in our distribution lists. Where able, Cboe Indices will consider providing an alternative suitable Index but is not obligated to offer an alternative.

Cboe Indices reserves the right to revive a discontinued Index in the event the initial factors or circumstances that led to its cessation have changed.

3.2 Errors, Restatements, and Corrections

Notwithstanding that every effort is made to maintain accurate index levels that provide a true reflection of the relevant market, issues may arise in the determination or calculation of an Index. Among other things, such events are disclosed to relevant parties and individual regulators as necessary. There are various reasons that errors may occur which include but are not limited to:

- interpretation of complex corporate actions,
- late announced, missed, or revised dividends,
- incorrect pricing,
- external disturbance or market variations,
- data that is wrong, not complete, or delayed, either internal or external to Cboe Indices, and/or
- errors in constituent selection.

This Errors, Restatements, and Corrections policy guides how Cboe Indices reviews and responds to errors. These guidelines should not be seen as definitive rules that will be followed in all instances, but instead a framework that is utilized in evaluating an error and resolution whenever reasonably practicable. Errors are evaluated case-by-case, and the potential outcomes to an identified issue may include:

- A retroactive change, i.e., recalculation of the Index and restatement of impacted files,
- A future change or adjustment to the Index, or
- No action

The Index Operations Team will generally manage errors in line with the guidelines available in Section 5 Appendix I of this document. For circumstance not covered in the guidelines or where extenuating circumstances exist, the Index Operations Team will escalate to the relevant Index Committee for review and recommendation on handling. The Index Committee will determine the appropriate outcome for an identified issue based on an assessment of client impact, market impact, and the nature of the error. An Index is generally restated if the replicability, integrity, or accuracy of the Index calculation may be compromised.

In circumstances requiring an Index be recalculated, calculations are remedied as soon as practicable with the following impact:

- Real-time (intraday) values will reflect the change going forward and are not historically restated.
- End-of-day values will be retroactively adjusted and impacted files will be restated.

Announcements regarding errors, restatements, and corrections are emailed to clients included in our distribution lists.



3.3 Expert Judgement and Discretion

Cboe Indices' Rules and Methodologies are publicly available and designed to provide transparency with respect to, among other things, constituent selection criteria, index constituent management, pricing, calculation methodology, corporate actions and events treatments, extreme market events, etc.

When available and appropriate, Cboe Indices utilize transaction data (e.g., pricing for listed securities from the exchange) as inputs when calculating Indices. If transaction data is not sufficient or appropriate for a given Index, the Index's methodology may define the use of analytical data (e.g., theoretical pricing for non-listed options). In complex or unusual circumstances, Cboe Indices may exercise expert judgment in the determination of Indices.¹ Expert Judgement is generally defined as the use of alternative constituent pricing to calculate an Index other than what is defined in the methodology. Alternative pricing may be extrapolated from prior or related transactions, adjusted for factors that might influence the quality of data (such as market events), and/or could include estimated prices, quotes, or other values.

Separate from the use of expert judgement, Cboe Indices reserves the right to apply discretion when making decisions in unusual cases or in circumstances not addressed by the rules and methodologies applicable to an Index.² The relevant Index Committee may make a discretionary decision or exception in the determination of an Index to avoid unnecessary turnover, avoid excessive index changes or adjustments, as a result of market disruptions, enhance or enable index replicability, and/or when strict application of the rules results in inconsistency between the Index's behavior and its objective. Scenarios requiring potential use of discretion may be due to complex corporate events, unexpected structural changes in markets, operational issues, geo-political events, or other unforeseen events.

4 Engagement with External Stakeholders

4.1 Announcements

Cboe Indices aims to keep clients and market participants abreast of relevant information in a timely manner. Announcements are typically distributed via email and may be published on our website under following circumstances:

- Launch or Cessation of an Index or Indices
- Updates to closing levels and/or file restatements
- Consultations
- Methodology changes
- Technical updates/changes and release notes
- Complex Corporate Actions
- File Delays

Contact IndexOperations@cboe.com if you would like to be included in our distribution lists to receive announcements via email. Visit our websites at Cboe Derivatives Indices Notices and Cboe Equity Indices Notices to view historical announcements.

² Discretion is not exercised in the calculation of Cboe Indices' Volatility Indices (e.g., the Cboe Volatility Index (VIX)).



¹ Expert judgement is not exercised in the calculation of Cboe Indices' Volatility Indices (e.g., the Cboe Volatility Index (VIX)).

4.2 Feedback

Cboe Indices values feedback from clients and market participants. Contact us using our webform available at Cboe Indices or via email at IndexOperations@cboe.com if you have questions or feedback.

Formal complaints regarding the index determination process can be submitted via the webform available at Index Governance (cboe.com). Please review the Index Complaints Policy for additional information on the process.

4.3 Advisory Panels

Occasionally, Cboe Indices may host client meetings, conference calls, or Advisory Panels for the purposes of educating clients and market participants or gather feedback on methodology design or potential future changes. Any discussion of potential future changes would only occur in accordance with the public Consultation process described in Section 2.3.2 of this document.



5 Appendix 1 – Restatement Guidelines

The table below sets out the guidelines Cboe Europe Indices will follow to determine whether an index should be recalculated and/or the corresponding files restated.

Event type	Issue	Criteria	Action	Recalculation	File reissue
Dividend	Dividend amount incorrect	On or after ex-date	If within 2 business days, review and recalculate	Yes	Yes
	Dividend ex-date incorrect	Applied on or before correct ex-date	If within 2 business days, review and recalculate	Yes	Yes
	Dividend currency incorrect	On or after ex-date	If within 2 business days, review and recalculate	Yes	Yes
	Dividend missed	On or after ex-date	If within 2 business days, review and recalculate	Yes	Yes
	Dividend cancelled	On or after ex-date	If within 2 business days, review and recalculate	Yes	Yes
		After pay date	No adjustment applied	No	No
Index Constituent change	Security incorrectly added or missing from index	-	 Correct if within 2 business days of the event Correct on the rebalance date if discovered within the rebalance period* 	Yes	Yes
	Addition added with incorrect shares	-	- Correct if within 2 business days of the event - Correct on the rebalance date if discovered within the rebalance period	Yes	Yes
	Addition added with incorrect free float	-	- Correct if within 2 business days of the event - Correct on the rebalance date if discovered within the rebalance period	Yes	Yes
	Addition to wrong index/sector	-	- Correct if within 2 business days of the event - Correct on the rebalance date if discovered within the rebalance period	Yes	Yes
Rights issue, entitlement offer, capital repayment, bonus issue, stock split, consolidation	Missed/incorrect terms / incorrect date	On or after ex-date	If within 2 business days, review and recalculate	Yes	Yes
Close price	Price incorrect	One security	If within 2 business days, review and recalculate	Yes	Yes



Event type	Issue	Criteria	Action	Recalculation	File reissue
		Whole market (stock exchange issue)	If within 2 business days, review and recalculate	Yes	Yes
	Currency incorrect	One security	 If within 2 business days, review and recalculate Correct the currency going forward if later than 2 business days 	Yes	Yes
	Exchange rate incorrect		If within 2 business days, review and recalculate	Yes	Yes
Classification	Classification incorrect or missing (RBICS)	Intraday	Apply in the close file	No	No
Identifier	Identifier incorrect (ISIN, ticker, RIC, etc.)	Intraday	Apply in the close file	No	No
Withholding Tax Rate	Incorrect	-	If within 2 business days, review and recalculate	Yes	Yes
Index Calculation Issue	EOD index values not generated	-	Index values would be generated	Yes	Yes
	Real time index values not generated	-	Real time calculation would continue once the issue was resolved, there would be no recalculation of missing or incorrect intraday values	No	No
History file issues	Missing Index values	-	Correct on the following business day	No	No
	Incorrect Index values	Accompanied by Incorrect levels in Open/Close Index files	Correct and restate the affected files	Yes	Yes
	Incorrect Index values	Only history files affected	Correct on following business day for issues affecting only history files.	No	No

^{*}The rebalance period is defined as the close of the rebalance selection date to the close of the rebalance date



6 Appendix 2 – Glossary of Terms

Following is an aggregation of relevant terms used throughout the methodologies and policies & practices for Cboe Indices.

6.1 General Terminology

- Derivatives: A financial contract whose value is dependent on an underlying asset, group of assets, or benchmark. A
 derivative is set between two or more parties that can trade on an exchange or over the counter (OTC).
- **Discretion**: Refer to section 3.3 of this document.
- **Equities**: Shares representing ownership of a company. A stock is one of the most common types of equity, with "equity" referring to the general concept of ownership.
- **Exchange**: A marketplace where securities, commodities, derivatives, and other financial instruments are traded. Exchanges ensure fair and orderly trading and price transparency for all participants.
- Expert Judgement: Refer to section 3.3 of this document.
- Index: An indicator or measurement tool that tracks the performance of a group of assets or a basket of securities.
- Index Dates
 - Base Date: the first date Index levels are available from. The timeframe between base date and launch date encompasses back-tested history.
 - o Launch Date: the date an Index is first publicly disseminated; delineates back tested vs. live history.

Index Return Type:

- Price Return: A Price Return Index excludes the impact of regular cash dividends on the value of the Index.
- Gross Return: A Gross Return includes the impact of regular cash dividends and/or options premium through reinvestment into the index.
- **Net Return:** A Net Return includes the impact of regular cash dividends (taking into consideration deduction of withholding tax) and/or options premiums through reinvestment into the index.
- Materiality: Refer to sections 2.3.2 of this document for the definition of materiality as it relates to consultations.
- Options: A financial derivative based on the value of an underlying asset that gives buyers the right, but not the
 obligation, to buy or sell an underlying asset pursuant to the terms of the options contract (price, expiration date,
 exercise style, and settlement type).
- Stock: A security that represents partial ownership (measured in shares) of a company.
- Symbol: A unique symbol used on Cboe Exchanges.

6.2 Equities Glossary

Following are common terms associated with equities markets.

- Acquisition: An acquisition refers to the takeover of one company by another. Sometimes referred to as a Takeover.
- **Bankruptcy:** Bankruptcy is a legal proceeding initiated when a person or business is unable to repay outstanding debts or obligations.



- **Bonus Issue:** A bonus issue, also known as a scrip issue or a capitalization issue, is an offer of free additional shares to existing shareholders.
- **Capital Repayment:** A Capital Repayment is when a corporation purchases its own shares in the stock market. Sometimes referred to as a Buy Back.
- Corporate Action (also known as a Corporate Event): a voluntary or mandatory event that causes material change to the company's securities.
- **Delisting:** A Delisting is the removal of a listed security from a stock exchange. The delisting of a security can be voluntary or involuntary and usually results when a company ceases operations, declares bankruptcy, merges, does not meet listing requirements, or seeks to become private.

Dividends:

- **Cash:** A cash dividend is the distribution of funds or money paid to stockholders generally as part of the corporation's current earnings or accumulated profits. Sometimes referred to as a regular or ordinary dividend.
- Stock: A stock dividend is a payment to shareholders that consists of additional shares rather than cash.
- **Special/Extraordinary:** Special (Extraordinary) dividends are defined as those dividends that are outside of the normal ordinary dividend payment pattern established historically by the company.
- Free Float Factor (FFF): The % of total shares outstanding perceived to be available for trading by the general public.
- ISIN: International Securities Identification Number.
- **Line:** A company can have more than one share line each carrying different rights and privileges. Sometimes referred to as Class or Type.
- **Listing:** A company can list its shares on one exchange or can list the same line on multiple exchanges (sometimes referred to as a dual listing).
- Merger: A merger occurs when two separate entities combine forces to create a new, joint organization.
- Nationalization: A Nationalization occurs when the government takes control of an industry previously owned by private firms.
- Property Income Distribution (PID): PIDs are a dividend related to Real Estate Investment Trusts (REITs).
- **Return of Capital:** A return of capital is a cash distribution of a portion of a company's share capital or capital surplus. It is generally not subject to withholding tax.
- **Rights Issue**: A rights issue is when a company offers its existing shareholders the chance to buy additional shares for a reduced price.
- **Stock Split:** A stock split is when a company increases the number of its outstanding shares into more, proportionally less valuable, shares.
- **Reverse Stock Split:** A reverse stock split consolidates the number of existing shares of corporate stock into fewer, proportionally more valuable, shares.
- **Spin-off:** A spinoff is the creation of an independent company through the sale or distribution of new shares of an existing business or division of a parent company (sometimes referred to as a de-merger).

6.3 Derivatives Glossary

Following are common terms associated with derivatives markets. Learn more about Options at Options Trading Glossary | Choe Options Institute.



- **Black-Scholes Model**: The most widely known and utilized mathematical formula for options pricing, which uses specific variables: stock price, strike price, volatility, time to expiration, dividends to be paid, and the current risk-free interest rate.
- **BuyWrite Strategy**: An investment strategy where an investor buys a security and simultaneously writes (sells) a call option on that security with the objective of earning income. Also known as a covered call strategy.
- **Call Option**: A financial contract that gives the buyer the right to buy a security at a specified price within a specific time. The seller of a call option has the obligation to sell the security to the buyer if the call is exercised.
- **Cash Settled**: Referring to an option or future that is settled in cash when exercised or at expiration. No physical asset is received or delivered at expiration or upon exercise.
- **Covered**: A written (sold) option is considered covered if the writer also has an opposing market position equivalent to the number of shares of the underlying asset. E.g., a short call is covered if the underlying stock is owned, and a short put is covered if the underlying stock is also short in the account.
- **Covered Call**: A strategy in which one writes call options and simultaneously owns an equivalent number of shares of the underlying asset equal to the number of options contracts by the multiplier/unit of trading.
- **Covered Put**: A strategy in which one sells put options and simultaneously is short an equivalent number of shares of the underlying asset equal to the number of options contracts by the multiplier/unit of trading.
- Equity Option: An option that has an equity security (including stocks, ETFs, and ETNs) as its underlying asset.
- Early Exercise: The exercise or assignment of an option contract before its expiration date.
- **Exercise**: To invoke the right granted under the terms of an option contract. Call holders exercise to buy the underlying asset, while put holders exercise to sell the underlying asset.

Exercise Styles

- American Style: Refers to a style of an option that allows the option holder to exercise their contract rights at any time, before or on the expiration date.
- European Style: Option contracts that can only be exercised at maturity.
- **Expiration Date**: The day when an option contract terminates. An options holder generally must indicate their desire to exercise, if they wish to do so, on or by the expiration date.
- **FLEX Options**: Flexible Exchange Options allow investors to customize the details of the contract (e.g., strike price, maturity, style, etc.). Trades are executed on Cboe Global Markets Exchange and are cleared by the Options Clearing Corporation.
- **Futures Contract**: A standardized agreement to buy or sell a specified quantity of a commodity at a specified date in the future.
- **Implied Volatility**: The market's forecast of a likely movement in a security's price. Options with high implied volatility have higher premiums and vice versa.
- **Index Option**: An option whose underlying asset is an index. An index option is typically cash-settled because the index itself is not directly tradeable.
- **Listed Option:** A put or call option that is traded on an options exchange. Listed options have strike prices and expiration dates set by listing options exchange.

Moneyness

• At-the-Money (ATM): A term that describes an option with an exercise price that is equal to the current market price/value of the underlying asset.



- o **In-the-Money (ITM)**: A term describing any option that has intrinsic value. A call option is ITM if the underlying asset price/value is higher than the strike price of the call. A put option is ITM if the underlying asset price/value is below the strike price.
- Out-of-the-Money (OTM): A term describing an option that has no intrinsic value. A call option is OTM if the
 underlying asset price/value is below the strike price of the call. A put option is OTM if the underlying asset
 price/value is above the strike price.
- **Multiplier**: The amount specified in a cash-settled option contract by which the current underlying interest value is multiplied to arrive at the value required to be delivered upon valid exercise.
- **National Bid Best Offer (NBBO)**: The NBBO shows the best available (lowest) ask price and best available (highest) bid price available to customers from multiple exchanges.
- Notional: The value of the underlying asset at the current price. For an option and futures contract, the notional value
 is the number of units of the underlying asset covered by the contract, multiplied by the current price of the underlying
 asset.
- Options Clearing Corporation (OCC): Established in 1973, the OCC is the central clearing organization that clears and settles every listed options trade in the U.S. It plays a key role by promoting stability and financial integrity in the marketplaces, overseeing the exercise and settlement processes, and managing the risks involved in the clearing and settlement processes.
- Option Premium: The income received by the seller (writer) of an option contract. Paid by the buyer to the seller.
- Over-the-Counter Option: An option traded off-exchange, as opposed to a listed option.
- Pricing
 - o **Ask Price**: The price at which a market participant is offering to sell an asset.
 - o **Bid Price**: The price at which a market participant is willing to buy an asset.
 - Strike (also known as the Exercise Price): The price at which the option holder may buy or sell the underlying asset, as defined in the terms of the holder's option contract. It is the price at which the call holder may exercise to buy the underlying asset or the put holder may exercise to sell the underlying asset.
- Put: An option contract granting the holder the right to sell the underlying asset at a certain price for a specified period.
- **Settlement:** A process where the terms of the derivatives contract are executed and cash and/or securities change hands between buyers and sellers.
- Trading Session: The term "trading session" means the hours during which the Exchange is open for trading. Refer to
 the C1_Exchange_Rule_Book.pdf (cboe.com) for additional details on Regular Trading Hours (RTH) and Global Trading
 Hours (GTH).
- **Uncovered Option (also known as a Naked Option):** A written option is uncovered if the investor does not have an offsetting position in the underlying asset.
- **Underlying Asset:** The asset, performance, or interest on which one has the right to buy or sell via the terms of a listed option contract.
- Volatility: A measure of the amount by which an underlying asset is expected to fluctuate in each period of time. Generally measured by the annual standard deviation of the daily price changes in the asset. There are two types of volatility: historical and implied. Historical is calculated using past, or historical, prices. Implied is a forward-looking measure that is calculated using an options pricing model and the current option price as an input to "imply" the future volatility of the stock.
- **Write:** To sell an option. The investor who sells is called the writer.



7 Appendix 3 – Material Changes

Material changes to the policies and practices described in this document since April 1, 2023, are as follows:

Change Summary	Effective Date	Preview Language	Updated Language
-	-	-	-



Disclosures and Disclaimers Related to Choe Indices

Cboe Global Indices, LLC and Cboe Europe Indices, B.V. (collectively, the "Cboe Index Providers", and individually a "Cboe Index Provider"), are both subsidiaries of Cboe Global Markets, Inc. (Cboe Global Markets, Inc., the Cboe Index Providers, and the other subsidiaries and affiliates of Cboe Global Markets, Inc. are collectively referred to herein as the "Cboe Companies" and those entities are individually referred to as a "Cboe Company").

The Cboe Index Providers are each an index provider that administers, calculates and distributes indices and other values (as applicable) (collectively, "Cboe Indices" and individually a "Cboe Index"). Additional information regarding the Cboe Index Providers and their operations is available at www.cboe.com/indices/.

Nothing herein constitutes an offer of services. The information herein is provided solely for informational purposes. Cboe Indices are calculated and administered (as described in relevant methodologies, rules and other information) without regard to the needs of any particular person, entity, or group of persons, using market information, including, without limitation, market data from exchanges owned and operated by other Cboe Companies.

Index and benchmark values for dates or time periods prior to an index launch date, if any, are calculated using a theoretical approach involving back-testing historical data in accordance with the methodology in place on the launch date (unless otherwise stated). Back-testing involves the theoretical application of the index methodology in hindsight and therefore does not involve actual performance and may not produce performance commensurate with prospective application of the methodology. No back-tested approach can completely account for the impact of decisions that might have been made if calculations were made at the same time as certain underlying market conditions occurred. Supporting documentation for statements, comparisons, statistics or other technical data provided in this document is available by request at www.cboe.com/contact/.

Past performance of an index or financial product is not indicative of future results. Indices are not financial products that can be invested in directly, but they can be used as the basis for financial products (for example, without limitation, options, futures, mutual funds or exchange-traded funds) or to help manage portfolios.

The Cboe Index Providers are not investment advisers or tax advisers. No decision to buy, hold, or sell any financial product should be made in reliance on any of the information provided herein, and no representation is made regarding the advisability or tax consequences of any investment, whether based on an index or not. Nothing herein should be construed as investment advice. No representation or assurance is made that any financial product will accurately track the performance of an underlying index or provide positive investment returns. Index values and returns are theoretical, and do not reflect the results of actual trading of financial products, nor the value of an actual portfolio, and may not reflect the fees, taxes or other expenses associated with buying, holding or selling investments or the effect of actual market conditions or events. The Cboe Index Providers are not broker-dealers, intermediaries, investment firms or securities exchanges and they do not manage actual financial products. None of the Cboe Companies sponsor, endorse, promote, manage, sell or administer any financial product that is created, sponsored, issued or sold by a third-party, whether based on any Cboe Index or not.

No data, values, or other content contained herein ("Content") may be copied, modified, reverse-engineered, reproduced, distributed, or stored in a database or retrieval system, in any form or by any means, nor may any Content be used to create a derivative work (e.g., a financial product, service or index) or used to verify or correct other data or information, without the Cboe Index Provider's prior written consent. Without derogating from the aforementioned, Content shall not be used for any unlawful or unauthorized purposes.

The Cboe Companies, their third-party service or data providers, or any party from whom they have licensed trademarks or indices (collectively, the "Cboe Parties") do not guarantee the accuracy, completeness, or timeliness of the Content, trademarks, strategies or values, or the methodologies or input data used to calculate index values. The Cboe Parties are not responsible for any errors or omissions, regardless of the cause, or for the results obtained from the use of the Content, index strategies or values, methodologies or input data. THE CONTENT, INDICES AND RELATED STRATEGIES AND METHODOLOGIES ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. USERS OF CONTENT AND/OR THE CBOE INDICES BEAR ALL RISKS OF LOSS.

WITHOUT LIMITING THE FOREGOING AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL THE CBOE PARTIES BE RESPONSIBLE OR LIABLE TO ANY PERSON OR ENTITY FOR ANY DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, LOST PROFITS OR LOST OPPORTUNITIES, WHETHER OR NOT A CBOE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING LIMITATIONS SHALL APPLY REGARDLESS OF WHETHER A CLAIM ARISES IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE.

The Cboe Index Providers receive compensation in connection with licensing Cboe Indices to third parties and providing calculation services to third parties. Some Cboe Companies operate markets for the trading of financial products and provide services to many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may provide or receive fees or other economic benefits to or from those organizations. These organizations may also be Cboe Index Provider licensees or customers, and the Cboe Index Providers may include securities of or relating to such organizations in Cboe Indices.



Cboe®, C2SM, Cboe ClearSM, Cboe Closing Cross®, Cboe DigitalSM, Cboe LIS®, Cboe Futures ExchangeSM, Cboe Global IndicesSM, Cboe Global Markets®, Cboe Options Institute®, Cboe Volatility Index®, Bats®, BIDS Trading®, Buffer ProtectSM, BuyWriteSM, BYX®, BZX®, CFE®, EDGA®, EDGX®, Eris Exchange®, ErisX®, f(t)optionsSM, FLEX®, FLexible EXchange®, HanweckSM, Hybrid®, LiveVol®, NANO®, Options Institute®, PutWriteSM, Silexx®, SRVIXSM, Trade AlertSM, VIX®, and XSPSM are trademarks and service marks of the Cboe Companies. Trademarks of the Cboe Companies may only be used with written permission, subject to applicable Cboe Company trademark usage guidelines as published from time to time. Third-party trademarks and service marks used in this document are described below. The values and methodologies for indices branded with the "Cboe" trademark are the property of the relevant Cboe Index Provider.

The Cboe Companies have licensed several trademarks from third parties from whom they have also licensed indices which may be included in this document or in other materials related to Cboe Indices, as follows:

- Dow Jones®, Dow Jones Industrial Average® and DJIA® are trademarks or service marks of Dow Jones Trademark Holdings LLC ("<u>Dow Jones</u>"), have been licensed for use for certain purposes by the Cboe Companies. Derivative indices created, used and distributed by Cboe Companies and any investment products based thereon are not sponsored, endorsed, sold or promoted by Dow Jones, and Dow Jones makes no representation regarding the advisability of investing in any investment product that is based on any such derivative indices.
- FTSE® and the FTSE indices are trademarks and service marks of FTSE International Limited, used under license.
- IHS, IHS Markit, CDX, iBoxx, and iTraxx are trademarks of IHS Markit Limited and its affiliates ("IHS") and have been licensed for use by the Cboe Companies. Any IHS Markit index referenced herein is the property of IHS Markit and is used under license. Any products that have an IHS Markit index as their underlying interest are not sponsored, endorsed, or promoted by IHS Markit.
- MSCI and the MSCI index names are service marks of MSCI Inc. ("MSCI") or its affiliates and have been licensed for use by the Cboe Companies. Any derivative indexes and any financial products based on the derivative indexes ("Products") are not sponsored, guaranteed or endorsed by MSCI, its affiliates or any other party involved in, or related to, making or compiling such MSCI index. Neither MSCI, its affiliates nor any other party involved in, or related to, making or compiling any MSCI index makes any representations regarding the advisability of investing in such Products; or any warranty, express or implied; or bears any liability as to the results to be obtained by any person or any entity from the use of any such MSCI index or any data included therein. No purchaser, seller or holder of any Product, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote Products without first contacting MSCI to determine whether MSCI's permission is required.
- Nasdaq®, Nasdaq-100®, and Nasdaq-100 Index®, are trademarks of Nasdaq, Inc. (together with its affiliates, the "Corporations") and are licensed for use by Cboe Exchange, Inc. The CBOE Nasdaq-100 Volatility Index (the "Volatility Index") and CBOE Nasdaq-100 BuyWrite Index (the "BuyWrite Index") are not derived, maintained, published, calculated or disseminated by the Corporations. Neither the Volatility Index, the BuyWrite Index nor any product based on such indexes have been passed on by the Corporations as to their legality or suitability. Such products are not issued, endorsed, sold, or promoted by the Corporations. THE CORPORATIONS MAKE NO WARRANTIES AND BEAR NO LIABILITY WITH RESPECT TO THE VOLATILITY INDEX OR BUYWRITE INDEX.
- Russell, Russell 1000®, Russell 2000®, Russell 3000® and Russell MidCap® are registered trademarks of the Frank Russell Company, used under license.
- S&P, S&P 500, US500, 500, THE 500, SPDR, SPX, and DSPX are trade names or trademarks of S&P Dow Jones Indices, LLC or its affiliates ("S&P"). Any products that have an S&P index as their underlying interest are not sponsored, endorsed, sold or promoted by S&P and S&P makes no representation regarding the advisability of investing in any investment product that is based on any such indices.

© 2023 Choe Exchange, Inc. and its affiliates. All Rights Reserved.

v20230405

Document Information <DO NOT EDIT>

SharePoint-populated data:

Major Version #	1
Last Revised Date	5/12/2023
Last Review Date	5/4/2023





Cboe Global Indices

CONTACT US

IndexData@cboe.com www.cboe.com/indices