KPI Binary Options - Technical Integration Specification (5)

1 Overview

KPI[1] Binary Options are Cboe Clear U.S. (CCUS) cleared, fully-margined binary options trading on the Cboe Exchange (C1). The underlying is the value of a corporate KPI, typically sourced from an earnings call related 8-K report.

KPI Binary Options (KPI Options) are presented to customers in the same manner as equity options on C1. Existing order entry protocols and market data feed handling can be utilized for KPI Options trading; no changes are required.

Each KPI Option OSI Root is associated with a company and a corporate metric (KPI). Options expire with the value of the KPI reported by the associated company on an earnings reporting date and the exercise settlement value. Expiration dates of KPI Options are generally set to earnings call dates.

KPI Options contracts have product-specific symbol reference data that may be of interest to certain customers. The example below illustrates reference data for example KPIs for Apple, Inc. and Advanced Micro Devices, Inc.

Company	Company Symbol	Report Time	KPI Symbol	KPI Metric	Scale	Offset
Apple, Inc.	AAPL	PM	KAAPL	Earnings Per Share ($/share)	1	0
			KBAPL	Revenue ($b)	1.0E+09	0
			KCAPL	iPhone Net Sales ($b)	1.0E+09	0
			KDAPL	Services Net Sales ($b)	1.0E+09	0
			KEAPL	Americas Net Sales ($b)	1.0E+09	0
			KFAPL	Greater China Net Sales ($b)	1.0E+09	0
Advanced Micro Devices, Inc.	AMD	PM	KAAMD	Earnings Per Share ($/share)	1	0
			KBAMD	Revenue ($m)	1.0E+06	0
			KCAMD	Data Center Revenue ($b)	1.0E+09	0
			KDAMD	Gaming Revenue ($b)	1.0E+09	0
			KEAMD	Operating Margin (%)	1	0

Associated with each OSI Root is an underlying company symbol (e.g., AAPL), AM or PM reporting style, a KPI metric descriptor (e.g., Earnings Per Share ($/share)), a scale factor that relates the units of the strike values to the raw value of the KPI, and an offset value that will be set to zero for all KPI Options.

[1] KPI is an acronym for “Key Performance Indicator”

This document contains technical integration information for several aspects of Cboe KPI Binary Options including the following:

Section	Description
Symbol Reference Data	KPI-specific reference data (e.g., KPI description, company and company symbol, scale factor, etc.) that are not available through other sources.
Securities Master File	Symbol reference data and updates presented in OCC DDS compatible Security Master file. Securities definition and changes, including expiration date updates and corporate actions are communicated in this file.
Mutable Expiration Dates	Earnings call dates are announced a few weeks prior to the call. KPI Options are listed before the call date is known and thus must be adjusted while symbols are active.
Exercise Settlement Values	KPI Options settlement values are disseminated on Cboe Global Index Feed (CGI Feed) and a purpose-built page on Cboe.com (KPI Settlement Values).
Negative KPIs	Support for options on KPIs that are negative is presented in this section. For KPI Options we will invert the description so that positive strikes represent negative values.
Open Interest	Open interest for all KPI Options at the symbol level and rolled up to the OSI Root + Expiry level are accessible through endpoints that return CSV formatted data.
KPI Historical Values	Historical KPI values released prior to the listing date of KPI Binary Options on the KPI are provided as a convenience for customers.

2 Technical Integration

2.1 Symbol Reference Data

Symbol reference data for KPI Options is disseminated the same as other options trading on the C1 exchange. Specifically, symbol reference data for symbols currently trading on C1 are disseminated using Symbol Mapping messages on PITCH and TOP data feeds. The same information is accessible from the "All Series (CSV)" link on the U.S. Options Reference Data page. Both of these symbol reference data access methods provide the mapped Cboe symbol and its associated OSI Symbol that contains OSI Root, Expiration, Put/Call and Strike details. KPI Options will appear as symbols in these normal reference data interfaces. However, KPI Option-specific reference data is not presented in the existing standard symbol reference data dissemination methods.

Customers access KPI Options specific reference data using a link to a "CSV" endpoint exposed on the U.S. Options Reference Data page in a row titled "KPI Binary Option Series". Prior to product launch, the reference data file can be accessed from the C1 certification environment for testing purposes:

U.S. Options Reference Data Page	
Prod	https://www.cboe.com/markets/us/options/market-statistics/reference-data
Cert	https://certification.cboe.com/markets/us/options/market-statistics/reference-data

Accessing the endpoint results in a CSV file download containing reference data for currently active KPI Options symbols. The format of the downloaded file is identical to the "All Series (CSV)" format (first 5 fields) followed by 8 KPI Option specific fields.

Field	**Description**
Cboe Symbol	Cboe 6-char mapped symbol id
OSI Symbol	Standard OSI symbol
Underlying	Underlying identifier (same as OSI Root for KPI Binary Options)
Matching Unit	Matching unit on which product is hosted (12 for KPI Binary Options)
Closing Only	Flag indicating whether closing order only will be accepted, typically used in the case of delisting series.
Company Name	Textual name of underlying company (e.g., "Apple, Inc.")
Company Symbol	Symbol of underlying company stock (e.g., "AAPL")
Company Metric	Textual display name of KPI (e.g., "Earnings Per Share ($/share)")
Metric Scale	Numeric scale factor relating strike scale to raw KPI units. Note the value will be negative to indicate an inverted KPI where strike values represent negative values (e.g., "Loss Per Share ($/share)")
Metric Offset	Not used for KPI Binary Options, will always be zero
Report Time	"AM" for companies that report before the open, and "PM" for those that report after the close.
Orig Expire	Originally disseminated expiration date, embedded in the OSI symbol
Adj Expire	Adjusted expiration date, which is set to the original expiration date on the date of listing. See Mutable Expiration Dates section below for detail.

The additional fields include the KPI underlying Company Name (e.g., "Apple, Inc.") and Symbol (e.g., "AAPL"), Company Metric textual description of the metric suitable for trading interface and reporting display (e.g., "Earnings Per Share ($/share)"), Metric Scale that maps strike values to raw KPI values, Metric Offset (which is not used for KPI Options), Report Time indicating "AM" or "PM" settlement, Orig Expire and Adj Expire, which are the originally disseminated and adjusted expiration dates respectively.

The adjusted expiration date field (Adj Expire) is identical to the originally disseminated expiration date at listing time. The original expiration date is the expiration date embedded in the OSI Symbol. This value is immutable and will never change. The adjusted expiration date, however, may change at some point after listing based on company published date of the next quarterly earnings report. See the Mutable Expiration Dates section below for additional details.

2.2 Securities Master File

Cboe provides OCC DDS formatted KPI Options symbol reference data at the same location that KPI-specific reference data are presented (see section

Symbol Reference Data above). Specifically, customers access OCC DDS formatted KPI Options product and symbol reference data using a link to an "XML" endpoint on the U.S. Options Reference Data page in a row titled "KPI Binary Option Series".

Changes to KPI Binary Option symbol reference data are indicated with "update" records (i.e., SecDefUpd and SecListUpd) in the Securities Master File. For example, when a KPI Option expiration date is adjusted to align with a company-announced earnings call date, SecListUpd records with action = "M" (modify) are sent for each affected symbol. Similarly, updates resulting from corporate actions are notified using update records. See the OCC DDS format specification for details.

Note *– Future revisions of this document will include appendices with Securities Master File example update records associated with supported modifications and corporate action motivated reference data changes.*

2.3 Mutable Expiration Dates

When a KPI Option expiration is listed, the date of the associated earnings call will generally not have been announced by the company. An originally assigned expiration date is an estimate of the earnings call date based on historical reporting schedule. An "adjusted" expiration date is used to capture the actual date when the associated KPI Options will expire based on a company-announced earnings call date.

> ***Note*** *– Customers use the originally assigned expiration date when submitting orders over FIX or Binary Order Entry (BOE) protocols using long form symbols (i.e., when identifying instruments using product, expiration date, put/call and strike instead of the mapped Cboe symbol id).*

Customers that require knowledge of the adjusted expiration date can use either the KPI-specific supplemental symbol reference data file (see *2.1 Symbol Reference Data* above) or the OCC DDS-formatted Securities Master File (see *Securities Master File* above) both of which are accessible from the U.S. Options Reference Data page on Cboe.com.

Note that the adjusted expiration date may change more than once in the event of company announced changes to the earnings call date.

In the event that a company delays their earnings call or report publication on short notice close to the adjusted expiration, KPI Options will stop trading on their disseminated adjusted expiration date as usual (4:00pm ET on the adjusted expiration date for PM-settled, 4:00pm ET on the trading date prior to the adjusted expiration date for AM-settled). KPI Option exercise settlement values will be published when available (see the Exercise Settlement Values section below).

2.4 Exercise Settlement Values

The reported KPI values used to settle expiring KPI Options are disseminated on the Cboe Global Indices Feed (CGIF) on the "CGI" channel. In addition, the same settlement values can be accessed via Cboe.com presented endpoints that that return CSV and JSON formatted that settlement values along with additional attributes including the underlying company ticker, the KPI description and the adjusted expiration date associated with each reported settlement value. KPI settlement values will appear on CGIF and Cboe.com presented endpoints within minutes of being validated and introduced to the trading system.

Exercise Settlement Values are sent on the CGI channel using Message Template ID 22 (Index Value, MessageType=X).

Field ID	Field Name	Comments
55	Symbol	The OSI Root associated with the KPI (e.g., KAAPL)
268	NoMDEntries	1 – Only 1 Exercise Settlement Value will sent per message
269	MDEntryType	3=IndexValue
270	MDEntryPx	Settlement Value

Using the Cboe.com presented endpoints presented below, data are returned with following fields for each reported settlement value. The JSON formatted data presets a list of dictionaries where the "Field" column is the dictionary key.

Field	Description
SYMBOL	The OSI Root associated with the KPI (e.g., KAAPL)
COMPANY	The underlying stock ticker symbol (e.g., AAPL)
KPI	The textual description of the KPI from symbol reference data (e.g., Earnings Per Share ($/share)
EXPIRATION	The actual (i.e., adjusted) expiration date associated with the KPI settlement value. This expiration date may be the same as the originally dissemination expiration date that is embedded in the OSI Symbol or it may differ if an adjustment was made based on a company earnings call date announcement.
SETTLEMENT	The numerical value of the exercise settlement value for the KPI. The exercise settlement value is the value of the underlying KPI at option expiration that is used to compute the payout of expiring options.

Endpoints are provided that access settlement values reported over a 24-hour rolling window, a 1-year rolling window and the complete history of KPI settlement values for all KPIs since product launch.

All endpoints are accessible from the Cboe.com "KPI Settlement Values" page at the following production and certification environment URLs.

KPI Settlement Values Page	
Prod	https://www.cboe.com/markets/us/options/market-statistics/product-data/kpi-settlement-values
Cert	https://certification.cboe.com/markets/us/options/market-statistics/product-data/kpi-settlement-values

The following summarizes the endpoints for access to KPI settlement values in CSV and JSON format for both C1 production and certification environments:

Production and Certification Domains	
Prod	https://cdn.cboe.com
Cert	https://res-certification.cboe.com
CSV Paths	
24-hr	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values_recent.csv
1-yr	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values_recent.csv
All	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values_history.csv
JSON Paths	
24-hr	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values_recent.json
1-yr	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values.json
All	/api/us/options/market-statistics/product-data/kpi-settlement-values/cone/kpi_settlement_values_history.json

The following is the contents of a hypothetical data file returned from a call to the CSV format recent endpoint on expiration day 2026-04-30:

```
SYMBOL,COMPANY,KPI,EXPIRATION,SETTLEMENT
KAAPL,AAPL,Earnings Per Share ($/share),2026-04-30,2.01
KBAPL,AAPL,Revenue ($b),2026-04-30,111.18
KCAPL,AAPL,iPhone Net Sales ($b),2026-04-30,209.59
KDAPL,AAPL,Services Net Sales ($b),2026-04-30,26.34
KEAPL,AAPL,Americas Net Sales ($b),2026-04-30,14.82
KFAPL,AAPL,Greater China Net Sales ($b),2026-04-30,20.50
```

2.5 Negative KPIs

For KPI Options for which strikes must represent negative values, the KPI Description will be inverted to reflect the degree of negativeness rather than using alternative approaches to translate negative values into the positive range of the real number line[2].

For example, for a company with negative EPS values, a KPI Option OSI Root may be listed with the KPI description "Loss Per Share ($/share)", for which positive strikes represent the magnitude of the loss. In other words, a positive strike value represents the negative underlying KPI value. A call option on a "Loss Per Share" (or inverted OSI Root) struck at 2.0 settles in the money for a loss per share equal to or larger than $2 per share. Conversely, a put option struck at 2.0 settles in the money for a loss per share that is less than $2 per share.

Consistent with the KPI inversion, the symbol reference data "Metric Scale" value will be negative to reflect that the positive strike values represent a negative underlying KPI value. For example, a "Loss Per Share" KPI would have a Metric Scale value of -1.0.

If a KPI requires strike listings that span both negative and positive values two distinct OSI Roots will be listed with one representing positive values for the loss (e.g., KAXYZ = "Loss Per Share

[2] This is the purpose of the Metric Offset value in the KPI-specific symbol reference data download file. The value will be set to zero for all KPI Binary Options since the offset approach to representing negative strike values with OSI Symbology is not used. Instead, the inverted KPI description approach will be used.

($/share)" and the other representing positive earnings (e.g. KBXYZ = "Earnings Per Share ($/share)").

2.6 Open Interest

KPI Option open interest data is accessible via endpoints that return data in CSV format. Two endpoints are exposed that return 1) open interest for each active symbol, and 2) open interest rolled up to a single cumulative value for each active OSI Root + Expiration Date. All open interest data returned from the endpoints is on a T-1 basis (i.e., data presented corresponds to the open interest at the end of the prior trading date).

The following table presents the C1 production and certification domains and the paths to the symbol level and rollup open interest files. The open interest files are available in the certification environment (domain) prior to launch, whereas the production environment files will be available post-launch.

Production and Certification Domains	
Prod	https://cdn.cboe.com
Cert	https://res-certification.cboe.com
Endpoint Paths	
Symbol	/api/us/options/market-statistics/product-data/kpi-open-interest/cone/kpi_symbol_oi.csv
Rollup	/api/us/options/market-statistics/product-data/kpi-open-interest/cone/kpi_rollup_oi.csv

The format of the symbol-level open interest file is the following:

Field	Description
Effective Date	Trading date to which the Open Interest value applies
Cboe Symbol	Cboe 6-character mapped symbol id (e.g., 04erQe)
OSI Symbol	OSI symbol containing OSI Root, Expiration Date, Put/Call and Strike (e.g., KAAPL 260806C00001000)
Open Interest	Integer symbol-level open interest.

The following is an example of the symbol-level format:

```
Effective Date,Cboe Symbol,OSI Symbol,Open Interest
2026-07-27,04erQe,KAAPL 260806C00001000,10000
2026-07-27,04erQf,KAAPL 260806C00001500,20000
2026-07-27,04erQg,KAAPL 260806C00002000,30000
2026-07-27,04erQh,KAAPL 260806C00002500,40000
...
```

The format of the rollup open interest file is the following:

Field	Description
Effective Date	Trading date to which the Open Interest value applies
OSI Root	OSI Root symbol (e.g., KAAPL)
Expiry Date	Expiration date in YYYY-MM-DD format
Open Interest	Integer open interest summed from all active symbols of the OSI Root + Expiry Date

The following is an example of the rollup format:

```
Effective Date,OSI Root,Expiration Date,Open Interest
2026-07-27,KAAPL,2026-08-06,50000
2026-07-27,KBAPL,2026-08-06,60000
2026-07-27,KCAPL,2026-08-06,70000
2026-07-27,KDAPL,2026-08-06,80000
...
```

2.7 Historical KPI Values

Some customers will find a history of KPI values prior to the listing date of KPI Binary Options on the KPI useful for historical analysis. After the first trading day of a KPI Binary Option class on C1 (e.g., KAAPL) the KPI values used as the final exercise settlement value for expiring options will be available from the KPI Settlements Values Cboe.com page (see Exercise Settlement Values above).

As a convenience, Cboe will make available up to 8 quarters of KPI reported values for historical analysis purposes. Customers can access historical KPI values from a link in the "Quick Links" section of the KPI Settlement Values page on Cboe.com. That link will reference the following endpoint, which will download a CSV formatted file that uses the identical format as the KPI Settlement Values endpoints:

Production and Certification Domains	
Prod	https://cdn.cboe.com
Cert	https://res-certification.cboe.com
Endpoint Path	
URL	/api/us/options/market-statistics/product-data/kpi-hist-values/cone/kpi_hist_values.csv

For example, the following is a subset of the CSV file that would be returned from the historical KPI values showing only values for a single KPI. In practice, available historical values (up to 8) will be provided for all listed KPI options symbols:

```
SYMBOL,COMPANY,KPI,EXPIRATION,SETTLEMENT
KAAPL,AAPL,Earnings Per Share ($/share),2026-04-30,2.01
KAAPL,AAPL,Earnings Per Share ($/share),2026-01-29,2.84
KAAPL,AAPL,Earnings Per Share ($/share),2025-10-30,1.85
KAAPL,AAPL,Earnings Per Share ($/share),2025-07-31,1.57
KAAPL,AAPL,Earnings Per Share ($/share),2025-05-01,1.65
KAAPL,AAPL,Earnings Per Share ($/share),2025-01-30,2.40
KAAPL,AAPL,Earnings Per Share ($/share),2024-10-31,0.97
KAAPL,AAPL,Earnings Per Share ($/share),2024-08-01,1.40
...
```

Revision History

Version	Date	Description
1	2026-07-06	Baseline revision
2	2026-07-15	Updated KPI Settlement Value access endpoints
3	2026-07-21	• Added description of OCC DDS format compatible Securities Master file for symbol reference data. • Added detail on use of original expiration date when using long form symbols order orders submitted using FIX and Binary Order Entry (BOE) protocols.
4	2026-07-27	Added section that describes endpoints customers can use to access open interest data by symbol and rolled up to the OSI Root + Expiration Data level.
5	2026-07-30	• Added description of CGI Message Template ID (22) used to communicate Exercise Settlement Values. • Added description of access to historical KPI values reported by the KPI-associated company prior to initial listing of company KPI options.

This document is intended for discussion and informational purposes only. It provides an overview of Cboe's plans to launch binary KPI options. All information included in this document is subject to change at Cboe's discretion. Cboe intends to provide additional information and detail regarding binary KPI options as it becomes available. The launch of binary KPI options, including all the terms described above, remain subject to regulatory review.