CME Group Data Licensing Policy Guidelines Entitlement Systems

This document is designed to supplement CME Group's Internal Controls policy for licensed distributors and data feed access set forth in the Information License Agreement (ILA) located in the ILA Guide.

Policy summary

CME Group requires licensed data distributors, recipients of information via data feeds and all firms directly connected to the exchange, to use an entitlement system. An entitlement system is an internal control system that manages access to, use of, and distribution of CME Group Information. In addition to facilitating compliance with the ILA and Subscriber Agreement, entitlement systems must maintain accurate access records for audit purposes, for the most recent five (5) year period. These systems also make it easier to meet CME Group's monthly reporting requirements and ensure the accuracy of those reports. This reduces operational and commercial risks, which result from not complying with CME Group's Information Policies. Entitlement systems are crucial to providing the necessary internal controls as defined in the ILA.

How does an entitlement system work?

Entitlement systems monitor and control the downstream flow of information from each data feed access point to all applications, the application users, and recipient devices. These systems must ensure that only those applications, the application users, and their devices that are entitled and licensed to receive information can do so. There should be no feed-based access to information that is not governed by effective entitlement system controls.

Types of entitlement systems

Firms have the option of using either a proprietary entitlement system or a service provided by a third party such as a data vendor or software provider. These systems are particularly important for multicast receipt of data where firms connect to exchange data feed platforms and market data channels but only require licensing for specific subsets of data.

Below is a list of the common entitlement system setups, however this is not an exhaustive list:

· Proprietary entitlement system

The firm develops and maintains an in-house system that controls, monitors, and reports access to information.

· Data distributor/third party - On-site service

A CME Group-licensed data provider develops and maintains a system and deploys it on-site at the firm. The firm is responsible for administrating the system that controls, monitors, and reports access to information.

· Hosted/managed - Off-site

An administrative team at the data distributor/third party hosts and manages the entitlements to Information for the firm. In this setup, internal procedures at the data distributor/third party are required to control, monitor, and report access to information by the firm.



Downstream entitlement systems

All entitlement systems sit downstream from the origin of the information source. CME Group appreciates that firms have different configurations of their entitlement systems at varying levels of the data distribution (internal and/or external); that is an entitlement system may offer the primary point of control of access to data that then feeds other entitlement systems and downstream devices and applications. All systems involved in any stage of the distribution of information should meet the entitlement system requirements described in the next section.

Entitlement system requirements

Entitlement systems must be capable of controlling all system, administrative, and access changes for all Access IDs/Units of Counts with access to information. It is a requirement the system maintains logs of such activity, which must include date and timestamps.

An Access ID is a unique authentication identifier typically used in combination with a password and supplied to a firm's downstream applications and users of those applications, An application user may have multiple accesses to the same information via different services, each of which must be recorded and reported to CME Group for the assessment of applicable fees. Firms must keep such logs/audit trail records for the most recent five (5) year period.

The items below represent the information an entitlement system is required to record for monthly reporting purposes and make available to CME Group during an audit:

- · Access ID and corresponding unique user
- Corresponding device
- · Corresponding service
- Category of use internal display, internal non-display, and external distribution
- Designated Contract Market (DCM) entitlement e.g. CME, CBOT, COMEX, NYMEX, or third-party information.
- If applicable, any further content limitations entitled such as E-Mini or Top of Book
- Information timing Real Time, Delayed, End of Day, Historical
- Timing frequency applicable to certain license types, e.g. per quote access to information
- · Access ID activation date per DCM
- · Access ID deactivation date per DCM
- Profile/type of access, e.g. trader, order execution application, internal technical support, developer, non-professional, etc.
- Data feed site access/location ID
- Number of simultaneous accesses entitled per Access ID/login, along with amendment dates for each increase or decrease to the maximum number of simultaneous accesses permitted for the Access ID

Administrative records such as invoices for payment of services are not an acceptable form of evidence of information access for audit purposes.

When licensees are unable to demonstrate internal controls or records of entitlement, CME Group will assess applicable fees for all devices permissioned to access information via data feeds.

Effective entitlement systems and supporting processes will enable firms to comply with data licensing requirements and reduce operational, commercial, and other risks associated with insufficient internal controls for the distribution and access to information.

CME Group reserves the right to refuse or terminate access to information if internal controls are determined to be inadequate.¹

Types of profiles for entitlement systems

Device is the default Unit of Count for access to CME Group information packages. Entitlement systems must ensure that unique Access IDs are used to identify all permissioned devices. A device can take many forms, and there are a range of fees and licensing requirements depending on the nature of the device.

Additional license categories for entitlement systems

Information Sets – CME, CBOT, COMEX, NYMEX, DME, Crypto Ref Rates, S&P, DJI, Benchmark Information, CME Cash Market Data Products, and BrokerTec Trading Data.

Timing of information:

- Real-Time Information: Information that is made available within 10 minutes of initial transmission by the originator of the information
- **Delayed Information:** Information that is made available for more than 10 minutes, but less than eight hours, after initial transmission by the originator of the information.
- End-of-Day Information: Summary data available at the end of the then-current trading day and that includes but is not limited to settlement, open, high, low, close, open interest, total volume, volume breakdown by venue, delta, and implied volatility information.
- **Historical Information:** Information that is not Real-Time Information, Delayed Information, or End-of-Day Information, that is first accessed at least eight hours after initial transmission by the originator of the information.
- · Benchmark Information:
 - **Real-Time Benchmark Information:** Benchmark Information that is made available within 24 hours of initial publication of the index/benchmark.
 - **Delayed Benchmark Information:** Benchmark Information that is made available 24 hours, but not more than seven days, after initial publication of the index/benchmark.
 - **Historical Benchmark Information:** Benchmark Information that is made available more than seven days after initial publication of the index/benchmark.

Please note that CME Cash Market Data Products and BrokerTec Trading Data Information have other timing conventions which should be adhered to. For further details, please contact the CME Group Market Data team at marketdata@cmegroup.com.

For exact details of what needs to be reported to CME Group (as generated by an entitlement system) please refer to Schedule 3 To Information License Agreement Reporting, a link can be found here.

For more information please contact the CME Group Market Data team at marketdata@cmegroup.com

cmegroup.com

These guidelines are intended for educational purposes only. The information contained herein is subject to change without notice, and while a great deal of care has been taken to provide accurate and current information, no CME Group entity makes any claims, representations, or warranties as to accuracy, completeness, usefulness or adequacy of any of the information contained herein. Under no circumstances will any CME Group entity be liable for any losses or damages whatsoever, whether in contract, tort or otherwise, from the use of, or reliance on, the information contained herein. The contents of these guidelines are for informational and educational purposes only. They do not constitute and should not be considered legal, tax, investment advice or a solicitation of the sale or purchase of any futures, options or swaps contracts