Cboe Titanium Cboe Futures Exchange Opening Process Specification

Version 1.1.5

December 30, 2025

Table of Contents

Cboe Titanium Cboe Futures Exchange Opening Process Specification

Opening Process

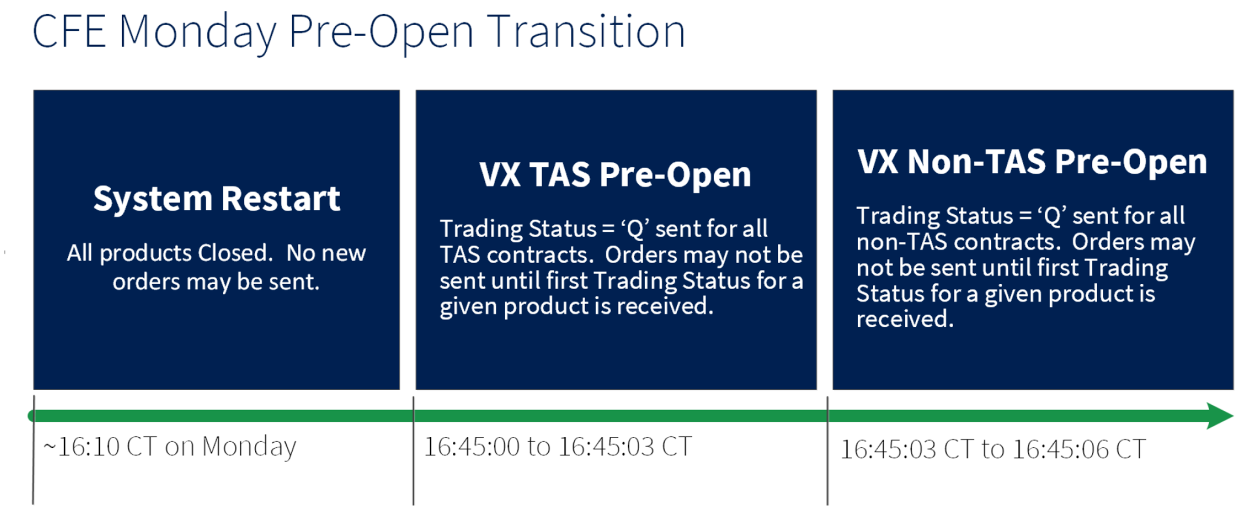
The CFE Opening Process begins with a Pre-Open session, during which Limit Orders and Quotes in simple instruments are accepted for Queuing. Spread orders are also accepted. The Exchange begins trading after the completion of the Opening Process. Pre-Open start times and the time of the transition to Open for each of the products traded on CFE can be found here. Trading hours of test classes (e.g., ZVX) will mirror those of the related production class (e.g., VX).

Pre-Open Queuing Period

TPHs may submit Limit Orders and Quotes in simple instruments and Orders in spread instruments during the Pre-Open session. Market and Immediate-Or-Cancel (IOC) orders during Pre-Open will be rejected. Orders will not be executable until after the determination of the Opening Price and uncross matching. During Pre-Open the PITCH book may appear to be crossed. Queued Orders and Quotes may be cancelled or modified at any time during the Pre-Open up until the instrument opening process.

Pre-Open Timing for Trade at Settlement (TAS) Contracts (Futures instruments only)

The Pre-Open session commences at the time designated by the Exchange, but the Pre-Open commencement times for TAS and non-TAS contracts are uniquely defined. The Pre-Open time for any TAS contracts in that product will commence randomly during the first three seconds following the start time of the Pre-Open session and the Pre-Open time for any non-TAS contract in a product will commence randomly between three to six seconds following the start time of Pre-Open. Please see the diagrams below for TAS and Non-TAS Instrument examples of this behavior.



Instrument Opening Process

At the scheduled product opening time, each active instrument associated with a product is opened. All simple Futures instruments are opened first followed by spread instruments. After all Futures instruments are opened, simple Options instruments are opened, followed by Options spread instruments. For each instrument that is locked or crossed at the end of Pre-Open an equilibrium price (Opening Price) is computed that maximizes the number of matched contracts in the uncrossing process. To uncross each instrument book, orders that are priced equal to or more aggressively than the Opening Price will be matched at the Opening Price based on price-time priority, after which the uncrossed instrument transitions to a Trading state.

The opening trade price for these matched trades will be determined in the following manner:

1. The opening trade price will be the price that maximizes the number of matched contracts.
2. If multiple prices exist that maximize the number of matched contracts, the price among those prices which has the lowest absolute imbalance between total bid size and total offer size will be the opening trade price.
3. If multiple prices exist that maximize the number of matched contracts and minimize the absolute imbalance

between total bid size and total offer size, and the volume-based tie breaker (VBTB) is within the range of prices that maximizes the number of matched contracts and minimizes the absolute imbalance between total bid size and total offer size, the opening trade price will be the VBTB.

Spread instrument legging into simple instruments is not in-effect during the Opening Process. As a result, it is possible for spread instrument Opening Prices to violate the Best-Bid/Offer (BBO) implied by the associated leg books. Spread instruments for which the computed Opening Price violates the implied BBO will remain in the Queuing state and the opening process will be retried periodically. After a number of reattempts without a valid Opening Price, queued orders in the spread instrument will be submitted to the order book for trading in time priority and will be handled according to normal trading rules including Matched Trade Prevention and simple instrument legging.

What if there are no crossing orders?

In the event that an instrument has no crossing orders at the conclusion of Pre-Open, queued orders will be submitted to the order book for trading in time priority and will be handled according to normal trading rules including Matched Trade Prevention and simple instrument legging.

How are Risk Limits handled during the Queuing Period and Opening Process?

During the Opening Process, executions will not be avoided to prevent exceeding risk limits. Customers that have exceeded their risk limits as a result of the Opening Process will transition into the Open session in a tripped state. In the case of risk limit violations, all remaining orders not executed during the Opening Process will be canceled and will not be moved onto the order book for trading. New orders received during the Open session, prior to the issuance of a risk reset, will be rejected. Customer-initiated Order Lockout with Mass Cancel requests received during the Pre-Open will function the same as in the Open session. See the Cboe Titanium Cboe Futures Exchange Risk Management Specification for more information.

Is Matched Trade Prevention In-Effect During the Opening Process?

Matched Trade Prevention (MTP) is not in-effect during the Opening Process. MTP is in-effect immediately upon transition to Open.

Is Threshold Width Protection In-Effect During the Opening Process?

All simple instruments comprising a product are opened before spread instruments. As each simple instrument is opened, its resulting BBO width is checked for threshold width violation. If a simple instrument BBO width exceeds the threshold width, associated spread instruments will remain in the Queuing state until all constituent leg threshold width violations abate, after which the Opening Process will be triggered.

Is the LMM Priority overlay In-Effect During the Opening Process for Options?

The LMM priority overlay is not in-effect during the Opening Process for Options instruments. It goes into effect immediately upon transition to Open.

Intraday Threshold Width Violation Handling

When the BBO width of a simple Futures instrument exceeds the threshold width intraday, all associated spread instruments are immediately transitioned into a Queuing state. Each affected spread instrument will remain in a Queuing State until threshold width conditions are cleared in all constituent legs, at which time the Opening Process presented above is executed to determine a re-opening price. Uncrossing matching occurs and the instrument transitions back to a Trading state.

This does not apply to Options spread instruments.

Supervisory Halt Re-Opening Process

In the event of a product or exchange level Supervisory Halt initiated by CFE Trade Desk, affected open orders are not canceled back to customers. However, customers have the opportunity to cancel orders during the Halt and subsequent Queuing states. All orders received on affected products during a Supervisory Halt will be rejected. CFE Trade Desk will provide notice to customers announcing the time that the affected product(s) will reenter a Queuing state and the time of the subsequent transition to the Trading state.

Multicast PITCH and TOP Market Data Dissemination

Trading Status

The CFE Multicast PITCH and TOP **Trading Status** message type is used to indicate a current trading state of an instrument and will be sent whenever an instrument's trading state changes.

CFE Multicast PITCH and TOP ***Trading Status*** field supports the following status codes:

S - Suspended (Not accepting orders. Outside of trading hours.)

Q - Queuing Period (In a Queuing Period.)

T - Trading (Distributed after the Opening Process and at the conclusion of intraday supervisory halts.)

H - Halted (Issued immediately following Supervisory Halts.)

All active instruments available for trading during the Opening Process and post Supervisory Halt Queuing state will explicitly disseminate a ***Trading Status*** of Q. At the time an instrument opens for trading the Exchange will update the ***Trading Status*** to T following both the Opening Process and post Supervisory Halt Quoting state. New spread instruments added intraday will be communicated with a ***Trading Status*** of Q, which may even occur during the Opening Process Queuing Period.

Upon initiating a Supervisory Halt, CFE will halt trading and attempt to update ***Trading Status*** to H on all affected instruments. A Queuing Period will begin at a time determined by the exchange, at which time affected instruments will transition from ***Trading Status*** of H to Q. Affected instruments will transition from Queuing state to Trading via the Opening Process described above.

Order Quoting/Trade Printing

Limit orders queued during the Opening Process and post Supervisory Halt Queuing state will be disseminated via CFE Multicast PITCH and TOP feeds. All executions from the Opening Process and post Supervisory Halt Opening Process will be disseminated over Multicast PITCH and TOP.

References

For more information, please refer to the following documents:

- Cboe Titanium Cboe Futures Exchange FIX Specification
- Cboe Titanium Cboe Futures Exchange BOE Version 3 Specification
- Cboe Titanium Cboe Futures Exchange Multicast Depth of Book (PITCH) Specification
- Cboe Titanium Cboe Futures Exchange Multicast TOP Specification
- Fee Schedule
- Cboe Futures Exchange Rule Book

Contacts

Please direct questions or comments regarding this specification to cfetradedesk@cboe.com.

Revision History

Document Version	Date	Description
1.0.1	10/17/17	Put specification in new Cboe brand format.
1.0.2	12/29/21	Added XBT to Opening Process table. Updated link to CFE Risk Management specification.
1.0.3	07/16/18	Added section 1.1.1, Pre-Open Timing for TAS Products Added IBHY & IBIG to Opening Process table.
1.0.4	10/17/18	Updated pre-open times for non-VX and non-VXBT contracts.
1.0.5	02/24/20	Updated link to fee schedule and added Ameribor to Opening Process table.
1.0.6	05/05/20	Added Test Class Instruments table to section 1.
1.0.7	05/13/20	Added ZVXT to Test Class Instruments table.
1.0.8	07/14/20	Added VXM/VXMT to Non-Test Class Instruments table. Added ZVXM/ZVMXT to Test Class Instruments table. Updated links in References section
1.0.9	11/01/21	Added note indicating removal of queuing period between 3:15 p.m. and 3:30 p.m. CT, for VX, VXM, and AMERIBOR futures (effective 12/06/21) . Added note indicating reversal of Pre-Open sequence for TAS and non-TAS contracts (effective 12/06/21). Added Revision History table.
1.0.10	02/07/22	Removed CFE BOEv2 Specification link from References.
1.0.11	05/26/22	Updated ZVXT Test Product Pre-Open start times (effective 06/12/22).
1.1.0	07/29/22	Added support for CFE Options on Futures (effective 07/10/2304/03/23). Removed references to VA/VAO products.
1.1.1	01/19/23	Updated effective date for Options on Futures (effective 07/10/23).
1.1.2	05/29/24	Removed IBHYT, IBIGT, ZIBHYT, and ZIBIGT from list of products traded on CFE (sunset 03/04/24). Added IEMD and ZIEMD to Non-Test Class Instruments table and Test Class Instruments table (effective 06/17/24). Updated pre-open and open times in Non-Test Class Instruments table and Test Class Instruments table.
1.1.3	01/15/25	Updated with Cboe Titanium branding.
1.1.4	05/07/25	Added details regarding opening trade price determination for matched trades to Instrument Opening Process.
1.1.5	12/30/25	Added link to CFE website in Opening Process.