Cboe DataShop

CFE Summary Layout & Specifications

Description

CFE Summary files aggregate and bucket anonymized trading volume and trade count in all CFE products including spreads and trade at settlement products. TAS volume is combined into the volume of the specific futures contracts in EOD Summary files. Files are available for the extended Global Trading Hours (GTH) and the Regular Trading Hours (RTH) session in 10-minute interval snapshots and end-of-day (EOD). DataShop product page: CFE Summary

Subscription

- Delivery Times:
  - Overnight: Files for the GTH and RTH sessions are delivered end-of-day after the market closes.
  - Intraday: Files are delivered for each 10-minute interval throughout the session (15-minute delay), available for the RTH session only.

Trading Hours & Holidays

Please refer to Cboe's CFE Hours & Holidays for more information on GTH and RTH hours and modified hours around U.S. Holidays.

File Types & Filename Pattern

- End-of-Day (EOD):
  - RTH:
    - 1 zipped CSV file per trade date
    - Filename: CFE_report_YYYY-MM-DD.csv.zip
    - Average daily size per trade date: ~15KB (zipped)
    - A summary of activity which occurred during regular trading hours for the specified trading date
  - GTH:
    - 1 zipped CSV file per trade date
    - Filename: CFE_GTH_report_YYYY-MM-DD.csv.zip
    - Average daily size per trade date: ~17KB (zipped)
    - A summary of activity during all global trading hours, including of regular trading hours.
- 10 minute Intervals:
  - RTH:
    - 41 files for each 10-minute snapshot during regular trading hours
      - May contain less than 41 files around holidays. Please refer to Hours & Holidays for modified schedules
    - Filename: CFE_report_YYYY-MM-DD_HH_MM.csv.zip (Timestamp in U.S. Central time)
    - Average daily size per trade date: ~660KB (zipped)
  - GTH:
    - 137 files for each 10-minute snapshot during the global trading hours
      - May contain less than 137 files around holidays. Please refer to Hours & Holidays for modified schedules
    - Filename: CFE_GTH_report_YYYY-MM-DD_HH_MM.csv.zip (Timestamp in U.S. Central time)
    - Average daily size per trade date: ~2MB (zipped)

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Volume Details

Overview

Volumes are broken out and aggregated by:

- Participant: Customer | Firm
- Side: Buy | Sell

Example: customer_buy_volume = total size filled on customer buy orders

Total volume fields are included as a supplement for direct visibility into higher-level rollups of key volume metrics.

Example: total_sell_volume = sum of volume across all bucketed sell fields

Order Matching and Volumes

Volumes are reported for simple futures contracts as well as listed spreads.

Volumes reported for a given symbol reflect filled buy/sell orders for that symbol only. This allows for visibility into volume that came from simple vs complex orders. Examples to illustrate:

Example #1: Simple orders matched

-Customer submits VX/G2 buy order for 10

-Firm submits VX/G2 sell order for 10. Matches above order

Result: (selected report fields)

Field	Values
symbol	VX/G2
total_contract_volume	10
total_order_volume	20
total_buy_volume	10
total_sell_volume	10
customer_buy_volume	10
firm_sell_volume	10

Comments: Volume for each filled order gets placed into an appropriate bucket field. When a simple futures contract like the one above has not traded as a leg on a complex order, total buy volume = total sell volume and total contract volume = total order volume / 2. However, this may not hold true if spread orders are matched to single leg orders as in the next example.

Order Matching Examples Continued…

Example #2: Spread order matched to single leg orders

-Customer submits VX/G2 buy order for 7

-Customer submits VX/H2 sell order for 7

-Firm submits VX/G2:1:S - VX/H2:1:B buy order for 7. Matches with above orders

Result:

Field	Values	Values	Values
symbol	VX/G2	VX/H2	VX/G2:1:S - VX/H2:1:B
total_contract_volume	7	7	
total_order_volume	7	7	7
total_buy_volume	7	0	7
total_sell_volume	0	7	0
customer_buy_volume	7	0	0
customer_sell_volume	0	7	0
firm_buy_volume	0	0	7

Comments: This example highlights that volumes are reported on orders filled for that particular symbol. There was only a buy order for the spread so all sell-related fields are zero for the spread record.

If instead there were no simple orders and the spread buy order was matched to a spread sell order, then the sell volume would appear under the spread but not the simple contracts. Regardless of how orders are matched, total_contract_volume will be populated for simple contracts with volumes inclusive of spreads.

Examples Combined:

If above examples took place during the same session and reporting period (day or interval) they would be aggregated as follows:

Field	Values	Values	Values
symbol	VX/G2	VX/H2	VX/G2:1:S - VX/H2:1:B
total_contract_volume	17	7	
total_order_volume	27	7	7
total_buy_volume	17	0	7
total_sell_volume	10	7	0
customer_buy_volume	17	0	0
customer_sell_volume	0	7	0
firm_buy_volume	0	0	7
firm_sell_volume	10	0	0

File Layout

Field Name	Data Type	Description
trade_datetime	DateTime	The Date and Timestamp of the interval of the report. For EOD files, it will be the trade date. For 10-minute intervals, it will be the date and specific end of interval timestamp (U.S Central time). Examples: EOD: yyyy-mm-dd 00:00:00 10-minute: yyyy-mm-dd hh:mm:ss
session	String	For GTH reports, if a given symbol had volume both during regular and global trading hours, there will be two rows for that symbol, one for GTH and one for RTH. Data in these rows is exclusive (volume from any given trade will only count in one of the rows). If a contract is listed but does not trade then it will appear in the report with an empty session value.
symbol	String	For simple futures, the symbol of the contract. It comprises the Futures Root + Settlement Month Code + Settlement Year. For complex futures, it contains a list of legs that comprise the spread: Simple Futures Symbol + Quantity + Buy/Sell Indicator Reports are sorted alphabetically on this column.
symbol_id	String	The unique identifier of the contract on the CFE trading platform
futures_root	String	The product symbol for the underlying
settlement_date	Date	The settlement date of the contract
total_contract_volume	Integer	The cumulative total number of contracts traded for the given session. This field is only populated for simple contracts and is inclusive of related spread volumes. See "Order Matching and Volumes" for illustrative examples.
total_order_volume	Integer	total_buy_volume + total_sell_volume See "Order Matching and Volumes" for illustrative examples.
total_buy_volume	Integer	The cumulative total number of contracts traded via matched buy orders for the symbol. The sum of all bucketed 'buy_' fields
total_sell_volume	Integer	The cumulative total number of contracts traded via matched sell orders for the symbol. The sum of all bucketed 'sell_' fields
customer_buy_volume	Integer	The total number of contracts bought at the Customer capacity
customer_sell_volume	Integer	The total number of contracts sold at the Customer capacity
total_customer_volume	Integer	The number of contracts bought or sold at the Customer capacity
customer_buy_trades	Integer	The number of Customer buy trades
customer_sell_trades	Integer	The number of Customer sell trades
firm_buy_volume	Integer	The total number of contracts bought at the Firm capacity
firm_sell_volume	Integer	The total number of contracts sold at the Firm capacity
total_firm_volume	Integer	The number of contracts bought or sold at the Firm capacity
firm_buy_trades	Integer	The number of Firm buy trades
firm_sell_trades	Integer	The number of Firm sell trades
first_trade_of_session	Numeric	The price of the first trade that occurred within the time window
low_trade_of_session	Numeric	The lowest price that the contract traded for in the session
high_trade_of_session	Numeric	The highest price that the contract traded for in the session
last_trade_of_session	Numeric	The price of the last trade that occurred within the time window
eod_settlement_value	Numeric	The settlement price for the contract
bid	Numeric	The best bid price for the contract at the time indicated in the bid_ask_timestamp column
bid_size	Integer	The number of contracts available at the best bid price
ask	Numeric	The best ask price for the contract at the time indicated in the bid_ask_timestamp column
ask_size	Integer	The number of contracts available at the best ask price
bid_ask_timestamp	DateTime	The time when the bid/ask prices were obtained
start_of_day_open_interest	Integer	The previous day's open interest, as reported by the OCC. Only populated in EOD reports.