Montréal Exchange Historical Trading Data Products

Document ID: RPT-DL-001E
Document Revision: 1.2.1
Date of Issue: 2021-06-21

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Document Version 1.2.1

Document History

Version.	Date	Change Description
1.0	2014-12-22	Initial document
1.1	2021-06-21	Asian Hours
1.2	2021-06-21	Covered Trade
1.2.1	2022-10-14	Moved LastTradingDate Field before leg block for Trading summaries

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Section 1 General

1.1 Introduction

Datalinx will provide Montréal Exchange (MX) historical trading data products on a daily basis. For reporting purposes, the products are divided in two market segments: **Options** and **Futures (Futures include both Futures and Options on futures)**.

For each of those market segments, the following set of files will be provided:

- **Trading Summary** – contains the instrument summary statistics for the day activities;
- **Trades and Quotes** – contains all the trades and quotes records for the day**.**

Four product reports will be produced each day, including:

- Options Trading Summary
- Options Trades and Quotes
- Futures Trading Summary
- Futures Trades and Quotes

Historical daily product reports are available for the past seven (7) years.

1.2 Purpose

The purpose of this document is to describe the record layout structure of the two reports produced at the end of day. These reports are CSV files that can be downloaded and then imported into most databases.

1.3 Audience

The primary audience for these reports is TMX Datalinx clients.

1.4 Report Details

The historical daily product reports containing trading information will be made available on a daily basis at 9 p.m. The reports can be picked-up on line, received by e-mail or downloaded via FTP (File Transfer Protocol) at the end of each trading day, and can be easily imported into most databases.

The files will be generated in CSV format and use a semi-colon delimiter and not a comma. This is to avoid any confusion when dealing with systems that use a comma as a decimal place. The files will be zipped as gz (gunzip) files and file sizes range for Options and Futures range as follows:

File	Average Size Range
YYYYMMDDMXOptionsTradingSummary.csv.gz	1.5 MB–3 MB
YYYYMMDDMXOptionsTradesAndQuotes.csv.gz	3 GB–6 GB
YYYYMMDDMXFuturesTradingSummary.csv.gz	50 KB–100 KB
YYYYMMDDMXFuturesTradesAndQuotes.csv.gz	50 MB–100 MB

1.5 Terminology

The following terms are also used in the record structure tables:

Term	Definition
Leg	An Instrument which is part of a Strategy Instrument
Strategy Instrument	An Instrument with more than one Leg
Regular Instrument	An Instrument with one Leg

Section 2 Trading Summary Report

This section describes the structure of the generated **Trading Summary** reports. The file names will be assigned according to the following pattern:

- For Options: **YYYYMMDDMXOptionsTradingSummary.csv.gz**
- For Futures: **YYYYMMDDMXFuturesTradingSummary.csv.gz**

2.1 Basic Conventions

The **Trading Summary** report is generated according to the following rules:

- The instruments appear sorted in alphabetic order of the **External Symbol**.
- The strategy's **Class Symbol** and **Underlying Symbol** are blank.
- The layout contains the strategy's **Legs** information; up to 40 legs.

Table 1 describes the file layout; the fields, their format and possible values.

For each **Field Name**, the column **Field Format** can be one of the following:

- Numeric field: numbers (0 to 9);
- Alphanumeric field: all characters possible (numbers, letters, others);
- "": Fields will be blank in specified situations;
- Other specified format: date, specified set of values.

Table 1 Trading Summary Layout

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
Date	Trading Date	YYYYMMDD	Ex: 20140820
ExternalSymbol	External symbol of the instrument	Alphanumeric	Ex.: BAXU13, AAV 130921C2.50
ClassSymbol	Instrument root symbol	“”/Alphanumeric	Ex: BAX, AAV “”=if strategy
UnderlyingSymbol	Underlying symbol of the instrument	“”/Alphanumeric	Ex: BAX, AAV “”=if strategy
StrikePrice	Strike price	“”/Numeric	Ex.: 2.500 “”=if not an Option
SymbolDate	Expiry date of the underlying future contract	“”/YYYYMMDD	Ex: 20140820 “”=if not Options on Futures
ExpirationDate	Expiry date of the instrument	YYYYMMDD	Ex.: 20140921
CallPutCode	Call put code	“”/C/P	C=Call P=Put “”=if not an Option
InstrumentType	Type of the instrument	S/O/F/Y	Type of the instrument S=Strategy O=EquityOption F=Future Y=Option on Future
MarketSegment	Market segment of the instrument	A/B/C/E/F/G/I/J/L/N/O/R/S/T/V	Market segment of the instrument A=SWAP B=Bond C=Currency E=Equity F=Future G=Agriculture

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
			I=Index J=Credit L=Metal N=Energy O=Option R=Short Term Interest Rate S=Strategy T=Exchange Traded Fund V=Real Estate
BidSizeAtClose	Bid size at close	Numeric	Ex.: 8330
BidPriceAtClose	Bid price at close	“”/Numeric	Ex.: 98.720 “”=if no Quotes
AskPriceAtClose	Ask price at close	“”/Numeric	98.725, 1.440 “”=if no Quotes
AskSizeAtClose	Ask size at close	Numeric	Ex.: 15781, 10
Volume	Volume of trades	Numeric	Ex.: 8255, 0
NbTrades	Number of trades	Numeric	Ex.: 191, 0
NbTradeKill	Number of canceled trades	Numeric	Ex.: 0
LastTrade	Time of the last trade	“”/hhmmss	Ex. : 155931 “”=if no Trades
LastPrice	Price of the last trade	“”/Numeric	Ex. : 98.725, 1.440 “”=if no Trades
ClosePrice	Closing price of the day	“”/Numeric	Ex. : 98.725, 1.470 “”=for Futures
NetChange	For Options Difference between LastPrice and previous day’s ClosingPrice	“”/Numeric	For Options “”=if no previous day’s ClosingPrice or if no Trades

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
	For Futures Difference between LastPrice and previous day's SettlementPrice		For Futures ""=if no previous day's SettlementPrice or if no Trades
OpenPrice	Opening price	""/Numeric	Ex. : 98.720 ""=if no Trades
HighPrice	High price	""/Numeric	Ex. : 98.725 ""=if no Trades
LowPrice	Low price	""/Numeric	Ex. : 98.720 ""=if no Trades
SettlementPrice	Settlement price	""/Numeric	Ex. : 98.725, 1.440 ""=for Options or ""=if manual pricing (Manual pricing is configurable)
OpenInterest	Open interest of the previous day	Numeric	Represents the previous day open interest Ex. : 83447, 0
LastTradingDateTime	Last Date and Time where the instrument trade	YYYYMMDDHHMMSS	Ex.: 20140921163000
StrategyType	Type of Strategy	""/C/R/S/V	Strategy Type C=Classic R=CoveredReferenceFixed S=Strip V=CoveredRegularFixed ""= if not a strategy
TickPrice	Minimal tick increment	Numeric	0.005
StrategyCode	Strategy Code of the strategy	Alphanumeric	*List is subject to change 20=option 2 call combination 21=option call put combination 22=option 2 put combination

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
			30=option 3 call combination 33=option 3 put combination 3X=option 3 leg call put combination 40=option 4 call combination 44=option 4 put combination 4X=option 4 leg call put combination B1=1yr bundle (can be white, red, or green pack) B2=2yr bundle B3=3yr bundle BB=curve butterfly BC=call butterfly BP=put butterfly BS=box spread CC=call condor CF=covered future CP=put condor CR=credit risk trade CV=covered options DC=diagonal call spread DP=diagonal put spread FB=future butterfly FC=future condor FR=curve trade FS=roll spread FT=curve roll GT=guts HC=ratio call spread 1x3 HP=ratio put spread 1x3 IB=iron butterfly

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
			IC=iron condor LC=call ladder LP=put ladder MC=call spread vs higher strike put MP=put spread vs lower strike call NC=call spread vs lower strike put NE=custom strategy NP=put spread vs higher strike call SC=call spread SG=strangle SP=put spread ST=straddle TC=ratio call spread 1x2 TP=ratio put spread 1x2 TS=diagonal straddle spread YL=synthetic
ContractSize	Size of the instrument's contract	Numeric	Ex. 2500
MarketFlow	Market Flow Indicator	Alphanumeric	Composed of 2 characters 1st character F="Futures P=Options on Futures O="Options U=Strategies on Options on Futures S=Basis on Close (BTIC) V=Strategies on Futures W=Strategies on Options Y=Strategies on Inter 2nd Character: "U'= Short term Interest rate

Field Name	Definition	Field Format	Values and/or Trade Future or Quote Option Examples
			"X"=Index "E"=Equities "C"=Currency "B"=Bonds "A"=ETF "Z"=Other "I"=InterSector
NumberOfLegs	Number of legs for a strategy instrument	""/Numeric	Ex. : 0 ""=if not a strategy
There are always 40 legs. The serial **LegExternalSymbol_n**;**LegVerb_n**;**LegRatio_n** will be repeated for each leg. These three fields are empty ("") if the instrument is not a strategy or if it is a strategy with less than 40 legs.			
LegExternalSymbol_n	Instrument leg n external symbol	""/Alphanumeric	""= if not a strategy or strategy less than 40 legs
LegVerb_n	Instrument leg n verb	""/B/S	B=Buy S=Sell ""= if not a strategy or strategy less than 40 legs
LegRatio_n	Instrument leg n ratio or delta (% of an instrument tied to a fixed leg)	""/Numeric	""= if not a strategy or strategy less than 40 legs
LegPrice_n	Fixed price for this leg	""/Numeric	""= if not a strategy or not a fixed price leg or strategy less than 40 legs
LegPriceType_n	Indicates if the leg has a fixed price or a variable price	""/F/V	F=Fixed Price V= Variable Price ""= if not a strategy or strategy less than 40 legs

Section 3 Trade And Quotes Report

This section describes the structure of the generated **Trade And Quotes** reports. The file names will be assigned according to the following pattern:

- For Options: **YYYYMMDDMXOptionsTradesAndQuotes.csv.gz**
- For Futures: **YYYYMMDDMXFuturesTradesAndQuotes.csv.gz**

3.1 Basic Conventions

The **Trades And Quotes** report is generated according to the following rules:

- Trades and quotes appear in the same order as they happened.
- Trades and quotes lines will be mixed; the fields which are not shared are blank.
- The strategy's **Class Symbol** and **Underlying Symbol** are blank.
- The **MessageType** field indicates whether it is a trade or a quote.
- The **StrategyFlag** field indicates if the record concerns a strategy instrument.
- The **MatchNumber** field enables users to match all the records related to a strategy trade
- The report includes the Quotes first limit only.

Table 2 describes the file layout: the fields, their format and possible values.

For each **Field Name**, the column **Field Format** can be one of the following:

- Numeric fields: Numbers (0 to 9);
- Alphanumeric fields: All characters possible (numbers, letters, others);
- "": Field will be blank in specified situations;
- Other specified format: date, specified set of values.

Table 2 Trade and Quotes Layout

Field Name	Definition	Field Format	Quote/Trade	Value and Trade Future or Quote Option Example
Date	Date when trade was generated	YYYYMMDD	Q/T	Ex.: 20140820
Time	Time when trade was generated	HHMMSS	Q/T	Ex.: 161301
MicroSeconds	Time when trade was generated in microseconds	uuuuuu	Q/T	Ex.: 768233,453123
ExternalSymbol	Instrument external symbol	Alphanumeric	Q/T	Ex.: BAXU13, AAV, 130921C2.50
UnderlyingSymbol	Underlying symbol of the instrument	“”/Alphanumeric	Q/T	Ex.: BAX, AAV “”=if strategy
MsgSequencenumber	Number identifying trades and quotes records sequence	Numeric	Q/T	Ex.: 56
StrategyFlag	Specifies if the line is for a strategy instrument	Y/N	Q/T	Y=Concerns a strategy instrument N=Does not concern a strategy instrument
MessageType	Specifies the type of the line	Q/T/K	Q/T	Q=Quote T=Trade K=Killed Trade
BidNbOrder	Bid number of order	“”/Numeric	Q	Ex.: 5 “”=if Trade
BidSize	Bid size	“”/Numeric	Q	Ex.: 10 “”=if Trade
BidPrice	Bid price	“”/Numeric	Q	Ex.:1.330 “”=if Trade
AskPrice	Ask price	“”/Numeric	Q	Ex.: 1.440 “”=if Trade
AskSize	Ask size	“”/Numeric	Q	Ex.: 10 “”=if Trade

Field Name	Definition	Field Format	Quote/Trade	Value and Trade Future or Quote Option Example
AskNbOrder	Ask number of order	“”/Numeric	Q	Ex.: 2 “”=if Trade
TradeVolume	Trade volume	“”/Numeric	T	Ex.: 8255 “”=if Quote
Price	Trade price	“”/Numeric	T	Ex.: 98.725 “”=if Quote
TradeMarker	Price indicator marker which is disseminated in HSVF	“”/A/B/C/D/E/F/I/J/K/L/R/S/T/U/V/X/Z/1/2/M/N/O/P/Q	T	“”=if Quote, Regular Trade A=As-of-Trade B=Block Trade C=ContingentTrade D=Crossed E=Exchange For Physical F=Riskless Basis Cross I=Implied Trade J=DeltaTrade K=Committed Block L=Late Trade R=Exchange For Risk S=Basis Swap T=Committed U=Strategy V=Trade Correction X=Substitutions Z=Size Adjustment Trade Some of these values (as well as additional ones —?/1/2/M/N/O/P/Q— are slated for future usage)
MatchNumber	Identifier shared by all records related to a given strategy instrument	“”/Alphanumeric	T	“”=if Quote or if not a strategy

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