MONTRÉAL EXCHANGE



Q4 2022 Derivatives Highlights



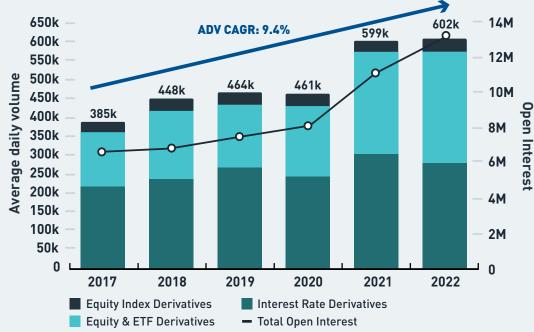
Another record year for the Bourse's total volume and open interest

TOTAL ADV of 602k contracts

In 2022, up 1% vs 2021 Total open interest reaching 13.3M contracts at year end, up
18% vs 2021

New daily, monthly and quarterly volume record for CORRA Futures and open interest of around 40k **Strong volume across IRD and EQD asset classes** 2Y GoC Bond Futures (CGZ[™]): **24k** contracts ADV 5Y GoC Bond Futures (CGF[™]): **41k** contracts ADV S&P/TSX 60 Index* Futures (SXF[™]): **33k** contracts ADV Equity and ETF Options: **252k** contracts ADV

Average Daily Volume and Open Interest (all products)



Segment	Product	2022 ADV	YoY CHG (%)
	3M BAX	69k	-38%
	3M CORRA (CRA)	2k1	+1692%
IRD	2Y CGZ	24k	126%
שאו	5Y CGF	41k	28%
	10Y CGB	144k	-1.5%
	All IRD Products	280k	-7%
EQD	Index Futures	33k	6%
	Share Futures	44k	-55%
	ETF Options	76k	80%
	Equity Options	176k	15%
	All EQD Products	329k	1%

1 Since the start of the new market-making program in May 2022 $\,$

Market Observations

- Interest rates: Motivated by the threat of above-target inflation, Central Banks have pursued their tightening policy as evidenced by the BoC's consecutive hikes in Q4 (50bps in October and December respectively). The inverted yield curve has reached levels not witnessed in over a decade and volatility across the curve continued to drive bond futures' activity. Looking ahead, the strong shift from BAXTM trading to CORRA futures is expected pick up steam in light of the major benchmark transition.
- Equity: The S&P/TSX 60 Index bounced back in Q4 by 4.6% thanks to a solid performance of the energy and material sectors. The 10d realized volatility spent most of the quarter in its recent natural range of 10% to 15% after peaking early in the quarter at about 30%. A reduction in equity option volume from retail investors in Q4 suggests that the long-lasting headwinds impacting the market have taken a toll on that segment.

Volume and Open Interest displayed in number of contracts.

Product Highlights

CORRA Futures liquidity is building up

Monthly volume record of 70k contracts traded in December CRA™ open interest at quarter end: ~40k contracts ADV up 1690% vs 2021, reflecting a growing demand More than 20 exchange participants transacting CORRA Futures Pick up in BAX-CRA™ spread strategies volume Activity developing in all 12 quarterly expiries

Another robust quarter for 2Y (CGZ), 5Y (CGF) and 10Y (CGB™) GoC Bond Futures

Combined ADV of 202k contracts in Q4, up 3% vs Q4 2021 CGF ADV at guarter end: 41k contracts, up 12% vs Q4 2021

Active basis trading:

- CGZ EFP volume in Q4: 4k contracts ADV (13% of CGZ volume)
- CGF EFP volume in Q4: 5k contracts ADV (13% of CGF volume)

5Y/10Y curve spread actively traded in Q3: 10k contracts ADV, up 93% YTD

S&P/TSX 60 Index Futures (SXF™)

Volumes in line with Q3 SXF ADV in Q4: 33k contracts (up 6% vs Q4 2021)

Strong momentum in Canadian equity and ETF Options

Equity Options open interest: 6.45M contracts (up 6% YoY) ETF Options open interest: 4.7M contracts (up 96% YoY)

Slow quarter for share futures with ADV of 44k contracts (-55% YoY)

Volume transferred to equity options through delta one strategies

Institutional Content

TMX's government bond futures market shines Maintaining momentum in equity options trading Canada FX will underperform the US The rise of retail investing in Canadian Derivatives Understanding the future of short-term interest rates in Canada 2-10 yield-curve inversion: how low will it go? Canadian yields could underperform US yields Understanding the impact of inflation on fixed income investing in Canada Why Australian pension funds should trade Canada CORRA Futures (CRA): Learn more

Key Milestones and Facts

Overnight trading in flagship products

- Global participants took advantage of the **overnight trading hours** (8 p.m. to 6 a.m. (ET)) to manage their Canadian exposure during non-local business hours. As of Q4 2021, MX is now open 20.5 hours a day. Visit <u>m-x.ca/yourtime</u> for more information.
- Overnight trading hours statistics

Products	Q4 2022 ADV		
All products	16k		
BAX ²	2k		
CGB	9k		
CGF	1k		
SXF	2k		

2 BAX opening time was moved to 2:00 am. ET at the beginning of October 2022.

The activity taking place during the overnight trading hours represents about 5% of MX daily volume on average for eligible products.

New!

- Trading in 3M CORRA Futures has been observed overnight in recent months!
- MX implemented new market making programs on key flagship products (2Y/5Y/10Y Bond Futures and SXF) at the start of Q4.

Benchmark transition roadmap for MX products (CDOR to CORRA)

MX is committed to facilitating the access and transition to CORRA, by developing a robust and efficient market for CORRA Futures. MX provided a roadmap covering the future of BAX and CORRA Futures ecosystems along with upcoming market structure changes, including:

- Modification to BAX and CRA opening time (2 a.m ET as of October 2022)
- New BAX market-making program
- New minimum price fluctuation for BAX Reds and Greens (Circular)
- New block thresholds for BAX and BAX/CRA strategies (Circular)

Launch of One-Month CORRA Futures (COA)

MX is pleased to announce the listing of its new <u>One-Month CORRA Futures Contract</u> (COA[™]) on Monday, January 23, 2023. The launch of the COA contract further supports the benchmark transition efforts in Canada and is concurrent with the CORRA-first initiative for interbank linear derivatives announced by the Canadian Alternative Reference Rate ("CARR") Working Group and effective starting January 9, 2023. The product is also expected to serve as key input for the development of a Term CORRA benchmark anticipated for Q3 2023.

New delivery period on the 30-Year GoC Bond Futures (LGB™)

A redesigned LGB contract is now available for trading, as the delivery period of the contract is changed from a full month to a single day. Benefits from the liquidity provided by National Bank Financial and Desjardins Securities include:

- Robust quotes in the front contract and quarterly calendar roll
- Strong basis market offering
- More trading opportunities

Visit the <u>LGB landing page</u> for additional resources on the LGB product and refer to <u>Circular 163-22</u> for the latest updates on specification changes.

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Covered with stocks (delta neutral order type)

On top of the Guaranteed cross / price improvement auction for equity and ETF Options expected to be launched in Q4 2023, MX is looking to fully automate the execution of delta neutral orders thanks to the development of the covered trade functionality. It will be part of the same protocol update as the guaranteed cross. MX is fully committed to modernize its equity and ETF option offering.

News from the Regulatory Division

• Participant portal update

Two new modules were launched on November 7, 2022: A module enabling the reporting of OTC options transactions (pursuant to article 6.501 of the Rules) and one for the reporting order marker corrections (pursuant to paragraph 3.105(c) of the Rules). More details are available in <u>Circular 131-22</u>.

• Introduction of a market at order entry for prearranged transactions

As of 2023, the prearranged transaction marker is required and must have a value of true/yes on all crosstrades pursuant to Article 6.202 and on prearranged transactions pursuant to Article 6.205 of the Rules, with limited exceptions. More details are available in <u>Circular 152-22</u> and related appendix.

Last MX Technical User Roadmap Group Webinar

The Technology Quarterly Roadmap for Q4 2022 was conducted on October 5, 2022 with over 60 people signed up and 35 live attendees. The turnout was smaller but many requests for slides and records were received. All major vendors attended with the main topics focused heavily on new Covered Trade and Web TMS delivery.

Launch of Covered Trade functionality

In response to client demand, MX launched in Q4 the Covered Trade feature used to trade delta neutral strategies between futures options and their underlying (ex. OBX[™] and BAX) or futures vs futures (ex. CGZ vs a Strip of BAX or CRA). Please reach out to your MX representatives for more information.

Upcoming Option Education Events!

MX offers multiple options education events designed to provide retail investors with the knowledge needed to successfully navigate the options market. Check out the periodic updates on upcoming events on the <u>Option Matters</u> blog!

Key Exchange Notices

- Advisory Notice 22-018: <u>Listing of One-Month CORRA Futures (COA)</u>
- Advisory Notice 22-017:
 <u>Modification to the last trading day of the Three-Month</u>
 <u>Canadian Bankers' Acceptance Futures (BAX)</u>
- Advisory Notice 22-016:
 <u>Activation of Implied Dissemination of BAX and IGS</u>
 <u>Bond Butterflies on HSVF and OBF data Feeds</u>
- Advisory Notice 22-015: Billing modernization and simplification in 2023
- Advisory Notice 22-014: <u>New Inter-Group Strategies for GoC Bond Futures</u>
- Technical Notice 22-013: Introducing the Trade Management Web Application
- Technical Notice 22-012: 2022 Protocol Upgrade Reminder

Did you know?

- MX is launching new 1M CORRA Futures contracts in January. Investors can access the latest CORRA-related benchmark developments, including transition provisions and initiatives on MX's <u>CORRA Microsite</u>. A new <u>FAQ</u> is also at disposal to assist investors with their transition.
- MX updated its list of <u>inter-group strategies for GoC Bond Futures</u> with new ratios to better reflect market conditions, effective November 13th, 2022.
- MX offers <u>listed options</u> on four Bitcoin ETFs and four Ether ETFs from different ETF providers, enabling investors to access diversification and growth potential of cryptocurrencies.
- Put/Call ratios are available on a daily basis on the trading activity section of the <u>MX website</u>.
- Real-Time bid/ask quotes are available on the MX website for Canadian options and futures contracts. <u>Sign up</u> for a free account and create a "My Quotes" portfolio to easily keep track of your options and future positions.



For more information

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