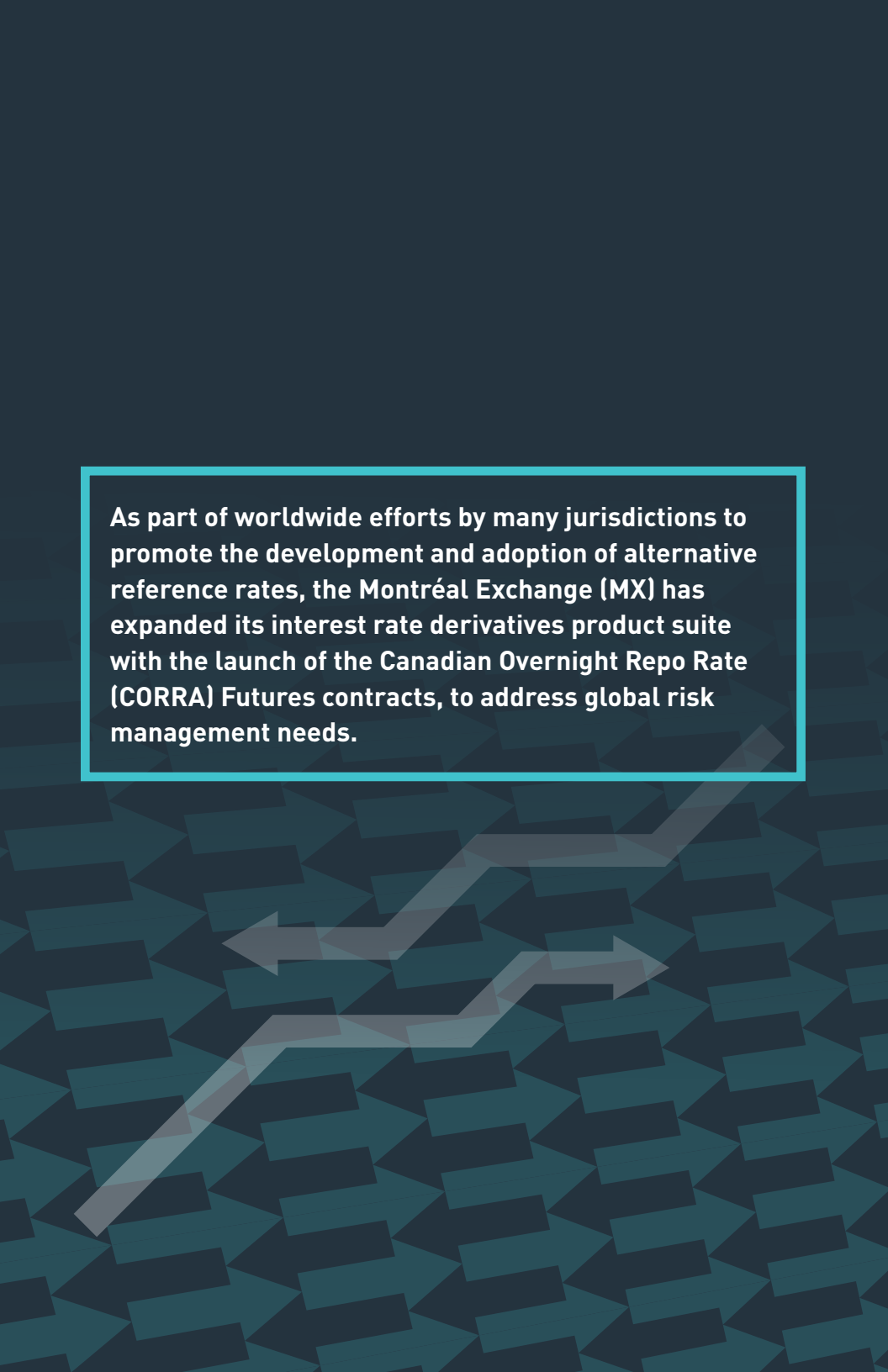# 1-Month and 3-Month CORRA Futures Overview

As part of worldwide efforts by many jurisdictions to promote the development and adoption of alternative reference rates, the Montréal Exchange (MX) has expanded its interest rate derivatives product suite with the launch of the Canadian Overnight Repo Rate (CORRA) Futures contracts, to address global risk management needs.

Canadian Interest Rate Benchmark Transition

The Bank of Canada (through the Canadian Alternative Reference Rate [CARR] working group) is promoting the use of risk-free rate (RFR) benchmarks that are robust, reliable and resilient to market stress.

CORRA has been identified as the primary alternative reference rate for the Canadian marketplace and the Bank of Canada expects it to become increasingly adopted and to eventually become the dominant Canadian interest rate benchmark. The MX has developed a three-month CORRA Futures offering in light of these developments and in order to support the Canadian interest rate benchmark transition.

What is CORRA?

CORRA measures the cost of overnight general collateral funding in Canadian dollars using Government of Canada (GoC) treasury bills and bonds as collateral for repurchase transactions (repos). CORRA is computed as the daily trimmed volume-weighted median (trimmed median) of eligible repo transactions.

CORRA is a representative measure of overnight funding rates. As part of the efforts to increase the robustness and representativeness of the benchmark rate, the Bank of Canada has implemented enhancements to the CORRA calculation methodology. The enhancements to CORRA result in a rate that is less volatile and closer to the Bank of Canada's target for the overnight rate, on average.

- Administered by the Bank of Canada
- Rate based on transaction-level repo data that government securities distributors (GSDs), including primary dealers, and the six largest federally regulated financial institutions in Canada (together, the submitters) submit to the Investment Industry Regulatory Organization of Canada (IIROC) through the Market Trade Reporting System (MTRS).
- Calculated as the trimmed median, after removing the lower volume-weighted 25th percentile of transactions (deemed as "Special" transactions)
- Published according to underlying repo trading convention (currently 2 decimals)

Montréal Exchange CORRA Futures

Product Benefits

Regulatory Friendly
- Centrally cleared at the Canadian Derivatives Clearing Corporation (CDCC)
- Trades within the MX regulatory environment

Capital & Margin Efficiencies
- Low initial margin
- Preferential cost and capital treatment vs OTC transactions

Operational Efficiencies
- Easy implementation and position management via the listed futures market
- Leverages the trading and clearing infrastructure of the Montréal Exchange

Trading Opportunities and Hedging Strategies
- Trades alongside MX's 3-Month Canadian Bankers' Acceptance Futures (BAX)
  - CORRA Futures vs BAX spread strategies
- More precise exposure to Bank of Canada monetary policy, as CORRA better tracks the Canadian key overnight target rate
- Trading relative cross-market views by spreading CORRA futures against other RFR futures
- Hedging repo risk
- Offsetting funding risk in cash versus futures basis trades
- Hedging existing bond portfolios
- Changing duration profiles

Facilitate Access to Canadian Overnight Index Swap (OIS) Market
- Accessible for participants that can't trade the Canadian OTC OIS market

Flexibility of Trading
- Price transparency provided via an on-screen electronic market
  - Central Limit Order Book (CLOB)
- Block, Exchange for Physical and Exchange for Risk transactions available
- Client anonymity

Key Contract Specifications of 1-Month and 3-Month CORRA Futures

(full specs available on MX website)

1-Month CORRA Futures

Trading Unit	Compounded daily CORRA during the Contract Month, such that each basis point per annum of interest = $25 per contract. Contract size is C$2500 x Index
Contract Month	For each contract, the Contract Month corresponds to the settlement month
Expiry Cycle	Up to the nearest 7 calendar months
Price Quotation	Index: 100 – R R = the compounded daily CORRA for the contract month
Minimum Price Fluctuation	0.0025 = C$6.25 for the nearest listed contract month 0.005 = C$12.50 for all other contracts months
Contract Type	Cash-settled
Last Trading Day	Last business day of the Contract Month
Final Settlement Price	Index evaluated on the basis of realized CORRA values during the Contract Month. The final settlement price shall be 100 minus the compounded daily CORRA over the Contract Month. It is calculated in accordance with the following formula: $$R = \left[\prod_{i=1}^{d} \left(1 + \frac{CORRA_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{D} \times 100$$ Where: "d", the number of Business Days in the Contract Month; "i" is a series of whole numbers from one to d, each representing the relevant Business Day in chronological order from, and including, the first Business Day in the relevant Contract Month; $CORRA_i$ = Canadian Overnight Repo Rate Average ("CORRA") value calculated and representative of the ith day of the Contract Month; "n_i" is the number of days in the relevant Contract Month on which the rate is $CORRA_i$; "D" is the number of days from, and including, the first Business Day in the relevant Contract Month up to, and excluding, the first Business Day in the next calendar month

Block Thresholds	2:00 a.m. - 6:00 a.m. ET 100 contracts - 1h reporting time
	6:00 a.m. - 4:30 p.m. ET 500 contracts - 15 minutes reporting time
Product Symbol	**MX:** COA **Bloomberg:** OORA Comdty **Refinitiv (Reuters):** OAC

3-Month CORRA Futures

Trading Unit	Compounded daily CORRA during the Reference Quarter, such that each basis point per annum of interest = $25 per contract. Contract size is C$2500 x Index (see price quotation).
Reference Quarter	Based on International Monetary Market ("IMM") dates. For a given contract, it is the interval from (and including) the 3rd Wednesday of the Contract Reference Month, to (and excluding) the 3rd Wednesday of the Delivery Month. The Contract Reference Month is different from the Delivery Month. Contract Reference Month: For each contract, the Contract Reference Month is the month in which the Reference Quarter begins. Delivery Month: For each contract, the Delivery Month is the month in which the Reference Quarter ends. Example for a June contract: The Reference Quarter starts on IMM Wednesday of June, the Contract Reference Month, and ends with Termination of Trading on the business day before IMM Wednesday of September, the contract Delivery Month.
Expiry Cycle	Nearest 12 quarterly Delivery Months
Price Quotation	Index: 100 − R R = the compounded daily CORRA for the Reference Quarter
Minimum Price Fluctuation	0.0025 = C$6.25 for the nearest listed contract month
	0.005 = C$12.50 for all other contracts months

Contract Type	Cash-settlement
Last Trading Day	First business day preceding the 3rd Wednesday of the Delivery Month
Final Settlement Price	Index evaluated on the basis of realized CORRA values during the contract Reference Quarter. The final settlement price shall be 100 minus the compounded daily CORRA over the Reference Quarter. It is calculated in accordance with the following formula:

$$R = \left[\prod_{i=1}^{d} \left(1 + \frac{CORRA_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{D} \times 100$$

Where:
"d", the number of Business Days in the Reference Quarter;
"i" is a series of whole numbers from one to d, each representing the relevant Business Day in chronological order from, and including, the first Business Day in the relevant Reference Quarter;
$CORRA_i$ = Canadian Overnight Repo Rate ("CORRA") value calculated and representative of the ith day of the Reference Quarter;
"n_i" is the number of calendar days in the relevant Reference Quarter on which the rate is $CORRA_i$;
"D" is the number of calendar days in the relevant Reference Quarter.

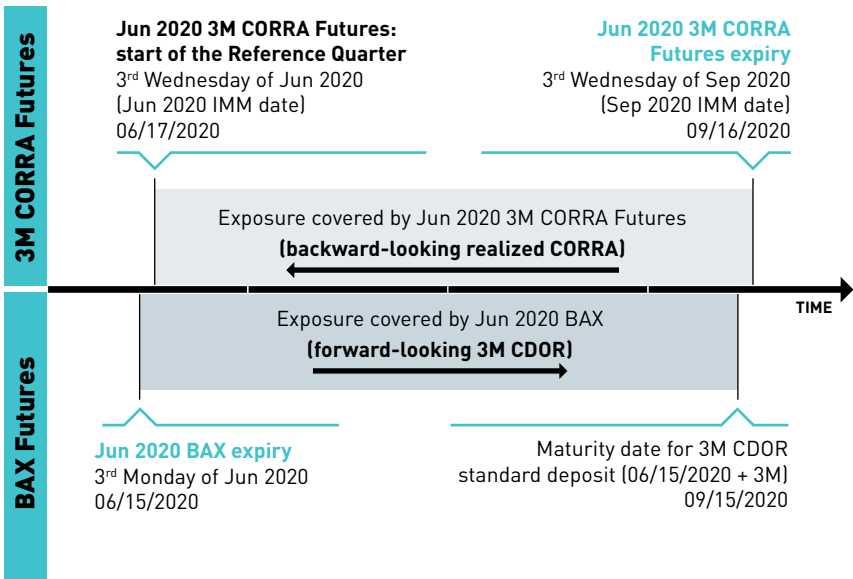|	
Block Thresholds	**2:00 a.m. - 6:00 a.m. ET** 100 contracts - 1h reporting time
	6:00 a.m. - 4:30 p.m. ET 500 contracts - 15 minutes reporting time
Product Symbol	**MX:** CRA
	Bloomberg: CORA Comdty
	Refinitiv (Reuters): CRA

3-Month CORRA Futures and 3-Month Canadian Bankers' Acceptance Futures (BAX): Contract Months and Reference Periods

Trading the same Contract Month* in both contracts will cover the same exposure period. By construction, because 3-Month CORRA Futures final settlement price is backward-looking while BAX Futures final settlement price is forward-looking, the Delivery Month will be different.

Final settlement price (100 - R):

- 3-Month CORRA Futures: R is evaluated based on realized CORRA values during the contract Reference Quarter.
- BAX: R is based on the 3-Month CDOR value, which is a 3-month forward looking rate, on the expiry date.

Example for June 2020 3-Month CORRA Futures and June 2020 BAX Futures:

3M CORRA Futures

Jun 2020 3M CORRA Futures: start of the Reference Quarter
3rd Wednesday of Jun 2020
(Jun 2020 IMM date)
06/17/2020

Jun 2020 3M CORRA Futures expiry
3rd Wednesday of Sep 2020
(Sep 2020 IMM date)
09/16/2020

Exposure covered by Jun 2020 3M CORRA Futures
(backward-looking realized CORRA)

TIME

Exposure covered by Jun 2020 BAX
(forward-looking 3M CDOR)

BAX Futures

Jun 2020 BAX expiry
3rd Monday of Jun 2020
06/15/2020

Maturity date for 3M CDOR standard deposit (06/15/2020 + 3M)
09/15/2020

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* Representing the Contract Reference Month for the 3-Month CORRA Futures, which is different from the Delivery Month.

3-Month CORRA Futures - June Contract

- Contract Reference Month: June

- Delivery Month: September

- Reference quarter: Based on IMM dates
  - Gives exposure to CORRA for the 3-month period from (and including) the 3rd Wednesday of the Contract Reference Month (in this case June), to (and excluding) the 3rd Wednesday of the Delivery Month (in this case September).

BAX Futures - June Contract**

- Contract Month: June

- Delivery Month: June

- Gives exposure to 3-Month CDOR applicable from the second business day prior to the 3rd Wednesday of the contract month (in this case September) for a 3-month period.

** The last trading day for BAX with September 2024 (U24) expiries and onwards was modified to align the exposure period with that of CRA (Circular 154-22).

For more information

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