MONTRÉAL EXCHANGE

3-Month CORRA Futures
The Montréal Exchange (MX) is expanding its interest rate derivatives product suite with the upcoming launch of CORRA Futures contracts, which are based on the Canadian Overnight Repo Rate. The MX is initially focusing on the development of 3-Month CORRA Futures. The infrastructure will also be in place to quickly support a 1-Month contract.
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 is developing a new 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 average cost of overnight general Government of Canada collateral repo transactions (collateral funding). It is the volume-weighted average rate of these general collateral repo transactions conducted on screen through designated inter-dealer brokers.

CORRA is a representative measure of overnight funding rates. However, it is currently only based on a limited portion of the general collateral repo transactions (the IDB market). As part of the efforts to increase the robustness and representativeness of the benchmark rate, the Bank of Canada is implementing enhancements to the CORRA calculation methodology. The proposed 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.

CORRA After Enhancements
(implementation scheduled for Q2 2020)

- Administered by the Bank of Canada
- Rate based on inter-dealer and client Government of Canada repo transactions
  - Approximately C$12B average daily volume of underlying repo transactions
- 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

New Trading Opportunities
- Trades alongside MX’s 3-Month Canadian Bankers’ Acceptance Futures (BAX)
  - CORRA Futures vs BAX strategies: spreading against established liquidity pool of BAX Futures creates opportunistic trades and facilitates the development of liquidity in CORRA Futures
  - More precise exposure to Bank of Canada monetary policy, as CORRA better tracks the Canadian key overnight target rate

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 3-Month CORRA Futures
(full specs available on MX website)

<table>
<thead>
<tr>
<th>Trading Unit</th>
<th>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).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Quarter</td>
<td>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. <strong>Contract Reference Month:</strong> For each contract, the Contract Reference Month is the month in which the Reference Quarter begins. <strong>Delivery Month:</strong> For each contract, the Delivery Month is the month in which the Reference Quarter ends. <strong>Example for a June contract:</strong> 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.</td>
</tr>
<tr>
<td>Expiry Cycle</td>
<td>Nearest 12 quarterly Delivery Months</td>
</tr>
<tr>
<td>Price Quotation</td>
<td>Index: 100 – R R = the compounded daily CORRA for the Reference Quarter.</td>
</tr>
<tr>
<td>Minimum Price Fluctuation</td>
<td>0.005 = C$12.50 for all quarterly contracts*. *Note that the minimum price fluctuation for the nearest quarterly contract will be 0.005 = C$12.50 until further notice. The Bourse expects to change this minimum price fluctuation to 0.0025 = C$6.25 in the coming months.</td>
</tr>
<tr>
<td>Contract Type</td>
<td>Cash-settlement</td>
</tr>
<tr>
<td>Last Trading Day</td>
<td>First business day preceding the 3rd Wednesday of the Delivery Month</td>
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**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:

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

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\textsuperscript{i} = Canadian Overnight Repo Rate (“CORRA”) value calculated and representative of the ith day of the Reference Quarter;
- “n\textsubscript{i}” is the number of calendar days in the relevant Reference Quarter on which the rate is CORRA\textsuperscript{i};
- “D” is the number of calendar days in the relevant Reference Quarter.

**Block Thresholds**

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Reporting Time</th>
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</thead>
<tbody>
<tr>
<td>2:00 a.m. - 6:00 a.m. ET</td>
<td>1h reporting time</td>
</tr>
<tr>
<td>6:00 a.m. - 4:30 p.m. ET</td>
<td>15 minutes reporting time</td>
</tr>
</tbody>
</table>

**MX Product Symbol**

<table>
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<td>CRA</td>
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**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.

* Representing the Contract Reference Month for the 3-Month CORRA Futures, which is different from the Delivery Month.
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)
  - Maturity date for 3M CDOR standard deposit (06/15/2020 + 3M): 09/15/2020
- **Exposure covered by Jun 2020 3M CORRA Futures:** (backward-looking realized CORRA)

**BAX Futures**
- **Jun 2020 BAX Futures:**
  - 3rd Monday of Jun 2020 06/15/2020
- **Maturity date for 3M CDOR standard deposit (06/15/2020 + 3M):** 09/15/2020
- **Exposure covered by Jun 2020 BAX Futures:** (forward-looking 3M CDOR)

**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.
Contact Information

North America

ROBERT TASCA
Vice-President, Derivatives Trading and Client Solutions Group
T +1 514 871-3501
robert.tasca@tmx.com

ROBERT CATANI
Head of Institutional Sales and Trading, Fixed Income and Derivatives
T +1 416 947-4319
robert.catani@tmx.com

ROBERT DOMANKO
Head of Institutional Client Sales
T +1 514 787-6453
robert.domanko@tmx.com

MARK GUNNIP
Senior Manager, Business Development
T +1 514 871-3502
mark.gunnip@tmx.com

MARK BOURCIER
Senior Account Manager, Market Access
T +1 514 871-3581
mark.bourcier@tmx.com

KRISTINA MANN-KRZISNIK
Manager, Business Development & Strategy, Interest Rate Derivatives and Client Solutions Group
T +1 514 787-6514
kristina.mann-krzisnik@tmx.com

RAPHAEL MOREAU
Analyst, Interest Rate Derivatives and Client Solutions Group
T +1 514 787-6574
raphael.moreau@tmx.com

Europe & Asia

DAVID HELPS
Head of International Business Development
C +44(0)7377 673 816
david.helps@tmx.com

SIMON HUGHES
Head of Institutional Sales, EMEA
C +44(0)20 7922 5139
simon.hughes@tmx.com
General information

MONITORING
+1 514 871-7871
+1 888 693-6366 (toll free)
monitoring@tmx.com

TECHNICAL HELP DESK
+1 514 871-7872
+1 877 588-8489 (toll free)
samsupport@tmx.com
For more information:

m-x.ca/corra