



MONTRÉAL EXCHANGE

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One-Month CORRA Futures: Timely Trade Opportunities

With the cessation of the Three-month Canadian Bankers' Acceptance Futures (BAX®) product in June, most managers have now embraced the Three-Month CORRA Futures (CRA™) contract as a replacement and open interest in that product has now surged to over a million contracts¹. The One-Month CORRA Futures (COA™) product, also very useful for both risk management and speculation in the front-end of the yield curve, has been less incorporated into institutional strategies. That seems on the brink of change as new liquidity provisions came into effect in July² and certain qualified participants enjoy a fee waiver³ from the Montréal Exchange until the end of 2024. Additionally, COA spreads (two contract calendar spreads), strips (four contract packages), and spreads to CRA have also been listed for trading. We investigate some of the more interesting uses and potential trading strategies that utilize COA below.

Repo Surge at Canadian Bank Year End or Calendar Year End

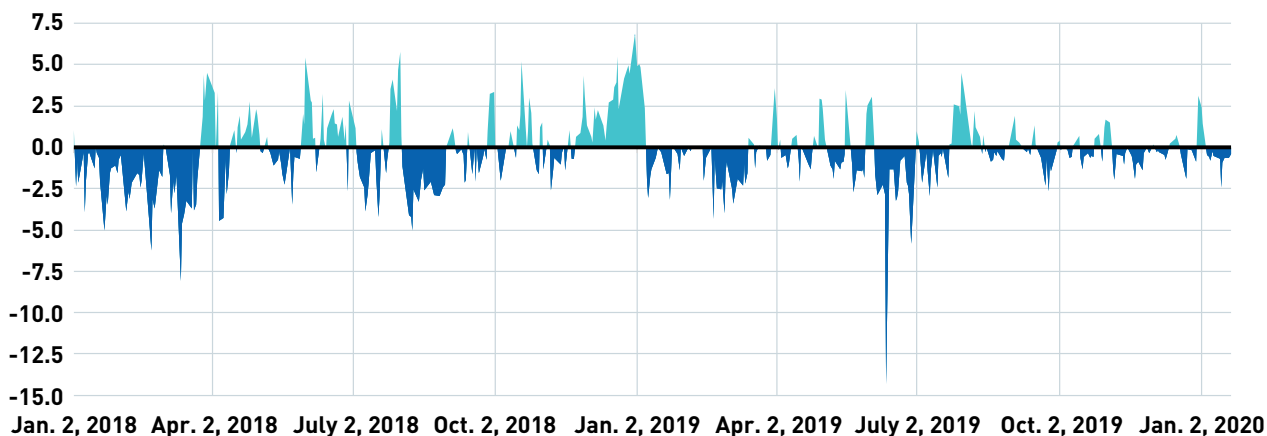
At times, including recently when market participants acted in concert to accumulate long bond positions, stress can develop in the funding (repo) market for fixed income. These stresses, which manifest as a surge in the overnight (or longer) rate to borrow securities and lend cash, are also associated with the phenomenon of quarter or year-end pressure that can be observed at times during the year, mainly for accounting purposes. Typically, these stresses tend to appear in Canada at the end of October, when the large Canadian banks have their accounting year ends, and at the end of the calendar year, when the large US banks have their accounting year ends. Figure 1 shows the pre-COVID era where CORRA surged to 5-6 basis points above the Bank of Canada target rate at the end of October 2018 as well as into year-end, plus the same phenomenon, to a much lesser extent, in late October and December 2019.

¹ The open interest was 1,214,335 at the end of August.

² The first three COA contracts have a 0.5 cent bid/ask spread as we write.

³ For details on the fee waiver for participants in the Proprietary Trader Program, see [circular 068-24](#) from June 10, 2024.

FIGURE 1
CORRA minus BoC Target (bps), 2018-2019



Source: Bank of Canada, series V39079

Since May, when Canadian bond trades changed from T+2 to T+1 settlement, a trend has developed where CORRA is often, for longer than expected periods, setting higher than the target rate. Although good arguments have been posed⁴ that the phenomenon is linked more closely with client bond positioning to the long side of the fixed income market, there are reasons to believe that CORRA may be elevated and potentially more volatile now that a shorter settlement period is the norm.

Speculative investors can potentially capitalize on this phenomenon using CORRA futures that are in the reference phase of the contract since each high print of the CORRA index will enter the settlement calculation, sometimes being applied to several days as we'll see in our example below. For a discussion of the difference between the two phases of a CORRA contract, please turn to the Appendix. While both the CRA (three-month) and COA (one-month) CORRA contracts in their reference phase would be affected by a surge in CORRA, the settlement price of the COA is more dependent on each daily print than the CRA, so it is the better instrument for this trade.

Imagine a hypothetical manager that has a view that, due to accumulated long positions in bonds, financing for these bonds (i.e. the rate to borrow cash to finance the bonds, secured by the government bonds themselves) will come at expensive rates at the calendar year end in 2024. Our hypothetical manager could sell One-Month December CORRA (COAZ24) futures contracts any time before the last week of December when they think the repo surge will appear. That could include the anticipation phase for the contracts before December⁵, or even into the reference phase, once December starts but before the CORRA surge appears.

We show the trade construction, which for CORRA futures are very easy to calculate since they trade as a cash-settled product with no convexity or unusual features like the physical delivery contracts that make up the rest of the futures yield curve traded on Montréal Exchange, in Figure 2. The CORRA contracts, both COA (One-Month) and CRA (Three-Month) versions, have a DV01 per contract of \$25 so a thousand contracts would create a \$25,000 total DV01 position⁶.

FIGURE 2
Sell COAZ24 (One-month CORRA, December)

SECURITY	CONTRACTS	DV01/CONTRACT	TRADE DV01
COAZ24	-1,000	25	-25,000

⁴ For more, refer to "[CORRA: Explaining the rise in volumes and resulting upward pressure](#)" by Boran Plong and Neil Maru, published by Bank of Canada.

⁵ The reference period for the COAZ24 contract starts on December 2nd (first business day of the month).

⁶ We feel obligated to warn readers here that, although we anticipate greater adoption of the COA contracts in the near future, especially as Canadian and international investors educate themselves on the product and embrace it as a hedging and speculative tool on the front end of the Canadian yield curve, the examples in this article currently exceed the open interest in all of the COA contracts we discuss.

During the reference phase, in this case the month of December, for the COA contract, each day's observation for CORRA⁷ is incorporated into the settlement price for that day, or for multiple days if the rate is for a Friday as the same rate is applied to Saturday and Sunday. Holidays are treated the same as weekends so the CORRA rate for December 24th will apply in 2024 to the 24th, 25th, and 26th as the latter two days are non-settlement days.

In Figure 3⁸, we calculate two scenarios, the first where CORRA does not surge at year end and the second where CORRA surges by just 5 basis points over the Bank of Canada target rate starting a week before year end and persisting until the turn of the year. There are only four business days between December 24th and December 31st, but there are nine days that the CORRA surge would be applied to when calculating the reference rate and settlement price of the contract. As we discussed above, the December 24th rate is applied to three days due to the Christmas holidays, but the December 27th rate is also applied to three days as the 28th and 29th are weekend days. Finally, the December 31st rate is applied to two days since the first business day of January isn't until January 2nd due to the January 1st holiday for New Year.

In the figure, the Non-Surge scenario results in a reference rate for the contract of 4.0064% and a settlement price of 95.9936 while the small surge associated with funding stress at the turn of the year results in a reference rate of 4.0209% and a settle price of 95.9791, a 1.45 cent gain for the COA contract short position. That equates to \$36.25 per contract so a 25,000 DV01 position of 1,000 contracts would gain by \$36,250.

FIGURE 3

COAZ24

DATE	BANK OF CANADA TARGET	DAYCOUNT	CORRA (NORMAL)	DAILY FACTOR	CUMULATIVE COMPOUNDING	CORRA (FUNDING PRESSURE)	DAILY FACTOR	CUMULATIVE COMPOUNDING
02-Dec-24	4.00%	1	4.00%	1.000109589	1.000109589	4.00%	1.000109589	1.000109589
03-Dec-24	4.00%	1	4.00%	1.000109589	1.00021919	4.00%	1.000109589	1.00021919
04-Dec-24	4.00%	1	4.00%	1.000109589	1.000328803	4.00%	1.000109589	1.000328803
05-Dec-24	4.00%	1	4.00%	1.000109589	1.000438428	4.00%	1.000109589	1.000438428
06-Dec-24	4.00%	3	4.00%	1.000328767	1.000767339	4.00%	1.000328767	1.000767339
09-Dec-24	4.00%	1	4.00%	1.000109589	1.000877013	4.00%	1.000109589	1.000877013
10-Dec-24	4.00%	1	4.00%	1.000109589	1.000986698	4.00%	1.000109589	1.000986698
11-Dec-24	4.00%	1	4.00%	1.000109589	1.001096395	4.00%	1.000109589	1.001096395
12-Dec-24	4.00%	1	4.00%	1.000109589	1.001206104	4.00%	1.000109589	1.001206104
13-Dec-24	4.00%	3	4.00%	1.000328767	1.001535268	4.00%	1.000328767	1.001535268
16-Dec-24	4.00%	1	4.00%	1.000109589	1.001645025	4.00%	1.000109589	1.001645025
17-Dec-24	4.00%	1	4.00%	1.000109589	1.001754794	4.00%	1.000109589	1.001754794
18-Dec-24	4.00%	1	4.00%	1.000109589	1.001864576	4.00%	1.000109589	1.001864576
19-Dec-24	4.00%	1	4.00%	1.000109589	1.001974369	4.00%	1.000109589	1.001974369
20-Dec-24	4.00%	3	4.00%	1.000328767	1.002303785	4.00%	1.000328767	1.002303785
23-Dec-24	4.00%	1	4.00%	1.000109589	1.002413627	4.00%	1.000109589	1.002413627
24-Dec-24	4.00%	3	4.00%	1.000328767	1.002743188	4.05%	1.000332877	1.002747307
27-Dec-24	4.00%	3	4.00%	1.000328767	1.003072857	4.05%	1.000332877	1.003081098
30-Dec-24	4.00%	1	4.00%	1.000109589	1.003182782	4.05%	1.000110959	1.003192399
31-Dec-24	4.00%	2	4.00%	1.000219178	1.003402658	4.05%	1.000221918	1.003415025
02-Jan-25	4.00%							

7 Readers can find about 10 years of history as well as the most recent published CORRA rates on the [Bank of Canada website](#), as well as in various other 3rd party data services.

8 Calculation examples (excel files) for the COA and CRA contracts can be found on the [CORRA landing page](#).

DAYCOUNT 31	REFERENCE RATE 4.0064	REFERENCE RATE 4.0209
	SETTLE PRICE 95.9936	SETTLE PRICE 95.9791

It is worth noting that, if market participants expect the funding stress to be short-lived and associated only with funding positions over the year-end and that general collateral rates will revert to normal levels in January, immediately after the New Year holiday, other COA contracts, for instance the January and February, will be completely unaffected by the increase in CORRA since the rate is expected to fall back to normal by the time those contracts enter their reference phase. Being short, some other short-term futures contracts won't profit as this position does.

Since the short COAZ24 position benefits from a surge in CORRA, one can easily structure this trade as a hedge to financing costs if a manager knows their existing portfolio positions will be hurt by a year-end surge in CORRA. Matching the size of a COA short to the manager's existing funding needs where high CORRA prints would cause losses should be a trivial calculation for our readers.

Of course, there are other ways to trade this same phenomenon, but none are as simple to execute and straightforward as using COA (One-Month) futures. CRA (Three-Month) CORRA contracts for December (CRAZ24) would also be in their reference phase but the four-business day surge would affect the reference rate and settlement price of those contracts far less since there are only 9 of 91 days affected by the surge versus the 9 of 31 days affected in the COA (One-month) contract. Further, transacting directly in the repo market, lending securities and borrowing cash for term well in advance of the development of any funding could benefit in similar ways but requires coordination with funding desks and, potentially, reversing transactions once the surge in CORRA manifests. This is far more effort than a trade in futures contracts.

Bank of Canada Pause and COA as pure play

The Bank of Canada (the "Bank") began its current easing cycle on June 5th, cutting the target rate from 5% to 4.75%, to 4.5% at the next meeting in July and then to 4.25% on September 4th. Having started easing from an overnight rate 50 basis points below that of the Federal Reserve (the "Fed") and more than 3 months ahead of its southern counterpart, the Bank may find itself in a position where it needs to pause the economic stimulus to give the Fed time to catch up, rather than ploughing onward with relentless stimulus independent American monetary policy.

One-month CORRA futures can be particularly effective at capturing a manager's view that the Bank will pause interest rate reductions at a given meeting since the reference period of the One-month contracts covers only one Bank of Canada fixed announcement date⁹ whereas a Three-month contract reference period can cover two announcements. For example, the December 2024 CRA (three-month) CORRA contract (CRAZ24) will settle at the compounded daily CORRA rate over the period December 18th to March 18th (with appropriate day adjustments for holidays/weekends). That covers the January 29th Bank of Canada interest rate announcement and release of the Monetary Policy Report as well as the March 12th announcement. While the CRA (three-month) CORRA contract will certainly move as these releases are made, it is not as pure of a play as, say, the January COA contract would be.

An example of this might be a manager that believes the Fed will begin cutting rates at their September meeting¹⁰ but signal that the pace will be slow – 25 basis points a meeting or even less – via qualitative comments afterwards or disagreements/dissents in the voting record as it becomes available. Our manager might begin to believe that the Bank, faced with a target rate 125 basis points below the Fed already, will contemplate skipping an October 23rd rate cut implied by the market. The manager could structure several different trades to benefit from such a development:

⁹ Or no Bank of Canada meeting dates, as with the November One-Month CORRA Futures contract.

¹⁰ The rate cut may have occurred at time of publication but the scenario remains a relevant, potential trading opportunity for an investor with such an assumption.

1. Sell COA November contracts at 96.01 (implies a compounded daily CORRA at 3.99% in November). The Bank cut to 4.25% in September but if it then paused the cutting cycle at the October 23rd meeting, the contract for November would converge quickly close to 95.75 (4.25% implied compounded daily CORRA for November) for a potential 26 basis point gain.

FIGURE 4

Sell COAX24 (One-month CORRA, November)

SECURITY	CONTRACTS	DV01/CONTRACT	TRADE DV01
COAX24	-1,000	25	-25,000

2. Buy November SOFR (One-month) Secured Overnight Financing Rate) futures on CME to sell November COA on Montréal Exchange. This trade would be constructed as DV01 neutral, including the currency conversion, for those that prefer or require it, but the Canadian contract would be affected by a change in the Bank policy expectations whereas the American contract should not be affected at all.

FIGURE 5

**Buy SR1X24 (One-month SOFR, November),
Sell COAX24 (One-month, November)**

SECURITY	CONTRACTS	DV01/CONTRACT LOCAL	TRADE DV01, LOCAL	CURRENCY ADJUSTMENT	TRADE DV01, CAD
SR1X24	443	41.67	18,460	1.3553	25,019
COAX24	-1,000	25	-25,000	1	-25,000
Total					19

3. Sell November COA (COAX24) to buy December CRA (Three-Month) CORRA (CRAZ24). Presumably, the market would see the Bank pause as somewhat temporary in nature and CRA (Three-Month) CORRA expectations would increase (prices fall) somewhat but not nearly as much as the One-month rate starting in November. Profits would be made here, although they are more difficult to estimate than in the previous two examples.

FIGURE 6

**Sell COAX24 (One-month CORRA, November),
Buy CRAZ24 (Three-month CORRA, December)**

SECURITY	CONTRACTS	DV01/CONTRACT	TRADE DV01
COAX24	-1,000	25	-25,000
CRAZ24	1,000	25	25,000
Total			0

Repo Exposure Risk Mitigation

Not every manager has strong views on the validity of current Bank expectations, but CORRA futures can also be a good risk management tool for more traditional bond portfolios. Any portfolio with unwanted short-term interest rate risk may consider hedging in either the COA (One-Month) or CRA (Three-Month) contracts, depending on their risk profile and horizon.

For example, imagine a portfolio with a variety of short-term bonds, either government bonds or short-term corporate bonds. Such a portfolio is often benchmarked to a very short-term risk-free rate like CORRA and the manager picks up a few basis points over the daily benchmark rate by security selection. However, an end of October or end of year (or anytime, really) surge in the CORRA rate of even a few basis points, as was observed and discussed¹¹ in early summer 2024, can harm the value-added goal of such portfolios. If CORRA systemically traded over the expected value for long periods of time in future, managers could easily structure trades to benefit from unexpectedly high daily prints, thus mitigating their risk of underperforming the benchmark for reasons not related to their performance in security selection.

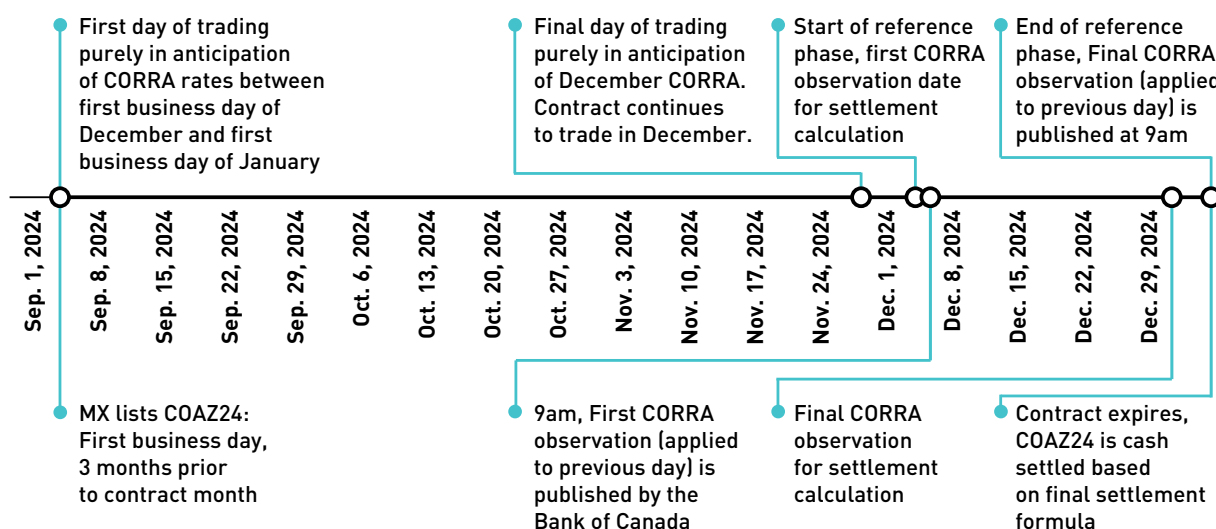
Summary

Although similar in nature to the very popular CRA (Three-Month) contract, the COA (One-Month) contract has properties that can make it superior to other instruments that trade over-the-counter or on the exchange for certain strategies. Given the new liquidity provisions, listing of inter-commodity spreads that make trade construction and execution even easier, and the general benefits of transacting in a futures market rather than over-the-counter markets, we believe investors will begin to embrace the potential of the COA contract in hedging risk and speculating, especially in the extreme front-end of the Canadian yield curve.

Appendix: COA (One-Month) & CRA (Three-Month) CORRA Futures Contract Reference Month

CORRA futures, the COA (One-Month) and CRA (Three-Month) versions, have two phases¹² as illustrated below in Figure 7. The first phase is the anticipation phase where the futures contract trades as the market's "best guess" at the level of CORRA over the reference period in the future. In this phase the current level of the CORRA index is important only as a gauge of future CORRA levels since the contract trades purely based on expectations for the future level, unlike in the second phase of the contract.

FIGURE 7
COAZ24: Life Cycle and Important Dates



¹¹ See footnote 2, above.

¹² Full contract details and specifications for [One-Month CORRA Futures](#) can be found here and [Three-Month CORRA Futures](#) here.

The second phase of a CORRA contract lifecycle is the reference phase. Starting on the first business day of the contract reference month, the contract still trades, is not yet settled, but its price is highly dependent on the CORRA rate calculated and released by the Bank each morning¹³. Each daily release adds an additional data point that is mathematically incorporated into the running calculation of the settlement price of the contract and cannot be “priced out” by future expectations – that data point will be in the calculation regardless of market expectations.

As more and more data points accumulate, the remaining anticipation of daily CORRA rates becomes less and less influential on the price of the contract since a larger and larger portion of the settlement price calculation is a known quantity. By the final day of the reference phase, all but one of the daily values are known and any surprise change to CORRA, either from market stress in the repo market or a surprise move to tighten or loosen monetary policy by the Bank of Canada, becomes relatively unimportant.

¹³ The CORRA calculation methodology and release details can be found [here](#).



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