

Session Summaries

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MONTREAL EXCHANGE



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CDOR meet CORRA

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With the disappearance of the London Interbank Offered Rate (LIBOR) and as markets globally move to risk-free interest rates (RFRs) from credit-based benchmarks, the Canadian Alternative Reference Rate Committee (CARR), formed in 2018, is leading Canada's benchmark reform efforts to promote the use of the Canadian Overnight Repo Rate Average (CORRA) as a key risk-free interest RFR benchmark in Canada. The Canadian Dollar Offered Rate (CDOR) will ultimately be discontinued as Refinitiv Benchmark Services Limited (RFSL) ceases publication after June 28, 2024.

Under a two-stage transition plan, all new derivative transactions, including exchange-traded and securities contracts, will transition by the end of June 2023 from CDOR to CORRA, except for derivative transactions that

hedge loan products and derivatives that reduce existing legacy risk, which will transition in the second year of the plan. The plan is described in detail on [CARR's website](#).

Derivatives account for approximately 97 percent of exposure to CDOR, most of it cleared bilaterally over the counter. Only a small component is exchange-traded.

CARR has extended the consultation period for term CORRA to June 30, 2023. Corporates should respond to that consultation. Discussions will assess the successful transition to the Sterling Overnight Financing Rate (SONIA) in the UK and the Secured Overnight Financing Rate (SOFR) in the U.S. Canada will replicate this transition, starting in January 2023. In the U.S., concerted adoption began about eight months after the cessation event, but CARR expects this to occur more quickly in Canada.

As in the U.S., where LIBOR swaps now trade at a spread over SOFR, CDOR swaps will start trading at a spread over CORRA. While both markets will continue in tandem to the end of the transition period, if you're trading CDOR swaps, you are trading CORRA swaps.

Acknowledging the difficulty of creating a benchmark for a forward-looking term rate, CARR is now looking at a methodology for creating a futures-based rate, but only for 1-month and 3-month periods. The strongest need is for a 1-month rate, since 90 per cent of activity falls within that category.

At the moment, CDOR pegs one time a day, but books close at another time of day. With CORRA, using central limit order bank data plus volume when the book closes, users have an elegant way to express a representative 1-month and 3-month term CORRA set. The data is public, and anyone can participate.

It's important to understand that when CDOR disappears, so will Bankers Acceptances (BAs), which will be replaced with structured repo products, creating a demand for a 1-month hedge. Unlike Three-Month Canadian Bankers' Acceptance Futures (BAX™), which include a credit component and are not a pure play on interest rate risk, CORRA futures, which will replace them, will be a clear play on central bank expectations. Discussions are ongoing with the Montreal Exchange (MX) about launching CORRA futures either late in 2022 or in early 2023.

In the meantime, corporates are under pressure in the way they manage their hedging programs. For the larger participants in the market, including banks, CDOR comprises a core to their planning. Before they move their hedging programs to CORRA, they have to move all of their inward transfer pricing.

Canada Mortgage and Housing Corporation (CMHC) has played a major role in the floating-rate note market and taken the lead in working with industry to develop CORRA-related conventions. In May, CMHC launched a CORRA-referenced Canada Mortgage Bonds (CMB) issue, which attracted strong investor engagement. It is the largest CORRA issue to date with a book of \$1.7 billion. With the success of CMHC's CMB program, panellists agreed, more will follow.

CMHC also introduced language to address CORRA in May 2019. Acknowledging the difficulties in retroactively changing language to reflect the cessation of CDOR, panellists emphasized the importance of identifying securities that have done this appropriately. The key, they said, is collaboration between the buy and sell sides.

All conventions, fallbacks and a transition roadmap are available on CARR's webpage.

Secured financing in Canada: Industry Views on Repo Market Functioning

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The repo market in Canada underpins liquidity in financial markets through regular and unimpeded flows of cash and collateral. Disruptions in the repo market are often the first signs of disruptions in the broader financial marketplace.

Since 2012, the Canadian Derivatives Clearing Corporation (CDCC) has been operating as the central clearing counterparty (CCP) for exchange-traded derivative products in Canada and for a growing range of customized financial instruments.

Today, the repo market is functioning well. Following three rate hikes, the Canadian Overnight Repo Rate Average (CORRA) remains stable. Central bank coordination with the dealer community has supported the market for Bankers' Acceptances and repo by providing liquidity.

Now, as equities sell off at an unprecedented rate and with central banks unwinding their balance sheets, the metrics have changed. The velocity of collateral has slowed while the use of collateral has accelerated. A disparity has arisen between spreads in unsecured and secured funding markets.

In the U.S., the Fed repo program in March 2020 introduced record-setting liquidity. Now the cycle is tightening, but surplus liquidity and collateral shortfalls are out of sync. Nevertheless, everyone is getting funded. A lot of intermediation needs to back out to regain a free-market universe.

In Canada, the Bank of Canada's securities repo operations (SRO) program provides a temporary source of Government of Canada (GOC) nominal bonds and treasury bills to primary dealers to support liquidity in the securities financing market. It was created at the same time as the bank was making large-scale asset purchases after 2020. At the peak, the bank held 46 per cent of outstanding bonds, and it was crucial that it made these bonds available.

Since the height of the COVID-19 crisis, the bank has been reducing its balance sheet. Eventually the SRO program will have no available bonds.

With no modernized infrastructure in Canada and with gaps in duration, there is no robust breadth of collateral available to trade in the market as balance sheets shrink. With the Support of Bank of Canada (BoC), the market is gaining confidence in repos as a viable option. As balance sheets shrink, buyers are thinking of new ways to break frictions. The need remains for new outlets and more financial engineering to accommodate tri-party and bilateral models.

Out of the global financial crisis came prudent liquidity management tools to ensure that the financial sector continued to operate. Canadian banks are now positioned well in global markets, allowing for collateral fluidity. For example, a provincial bond could be used to trade in North America then used to collateralize a margin call when markets open in Hong Kong. But as market participants build this follow-the-sun model to serve clients,

regulatory impediments intercede. The next major step toward greater efficiency will involve mobilizing collateral to serve clients in different regions.

There is greater incentive now to drive platform growth, serving the client more effectively by sharing wallets, for example. Lending out the balance sheet may earn a five-basis-point return on assets, while a treasury repo generates 40 per cent to 50 percent return on equity.

Since 2008, there has been a push toward central clearing. More market participants within CCP increases critical mass, enhancing risk management tools and increasing confidence in central clearing and reducing the need for the BoC to step in.

Repo CCP allows for balance-sheet netting and risk mutualization. As scope expands in CCP for eligible instruments such as CMB bonds and floaters, international participants will find it easier to trade in this market.

But while risk mutualization offers an overall benefit for the market, it raises concerns about crises starting in Europe or the Far East before Canadian markets open. Where will the collateral be?

To drive critical mass and create opportunities for the buy side to come on board, sponsored access brings the client one step closer to the central bank and a safer environment in case of a crisis.

In the U.S., a sponsored mode has been in place since 2005 as a sweep product to reduce balance sheet through balance-sheet netting. Since 2017, more qualified

institutional buyers have participated, bringing additional value. In Canada, market participants could provide overnight liquidity with confidence that it resembled a term transaction and, with access to a trillion-plus market of cash and liquidities, could fund large amounts through clearing. These conditions have continued sustainably through 2019 through COVID-19 to today. Matched-book trading is core, but levers for dealers to move from bilateral tri-party settlement to a cleared tri-party settlement or to mix and match their settlement menus with treasuries and agencies allow for flexibility. Regulators have worked closely with dealers so that the flow of collateral and cash remains uninterrupted. There may be additional steps, but the critical steps remain in place.

TMX is developing a new product that combines sell-side need to manage collateral with buy-side need for alternative cash investments. In light of the diminishing use of BAs, TMX is leveraging its infrastructure with the creation of a money market instrument at CDS as well as using TSX Trust for issuance purposes. It's currently at the stage of individual validation.

CDOR cessation and the elimination of BAs have provided momentum to develop credit repos. Repos will become an investment as well as a financial vehicle. Electronification of the market underlies a move to standardize conventions for repo dealers, along with further disintermediation and more peer-to-peer transactions.





The Growth of Volatility as an Asset Class

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With the correlation of equity and fixed income markets, investors are seeking refuge in volatility. To date, exchanges have been the beneficiaries of volatility, as retail activity in options has increased dramatically. In 2020, for example, do-it-yourself investors opened more than two million accounts.

In increasingly difficult markets, investors are trying to offset risk by diversifying into long volatility products, which lose small amounts over time but make large gains in response to a singular event. With covered-call exchange-traded funds (ETFs), investors aim to generate income by monetizing the volatility premium. Within ETFs, options are used as hedging tools, as well.

In the current market environment, it's more difficult to generate income by owning an option than by selling it. Covered-call ETFs sell volatility but remain exposed to underlying stocks. Volatility ETFs take a direct view, tracking futures on the Volatility Index (VIX).

Of the ETFs available in Canada, covered-call ETFs predominate, addressing client needs for income. There are many tools available to construct an appropriate portfolio, including various strategies involving puts and calls, depending on how they fit client objectives.

Liquidity is a constraint, but the ecosystem is improving as bigger players like banks increase their participation in the market. From the perspective of market makers and institutional investors, partnerships enable the environment to grow.

High inflation is causing increased concern with duration risk in portfolios, although it benefits volatility premiums. For fixed-income investors, a transition to short-term covered-call positions eliminates the duration risk associated with bonds while taking advantage of volatility to generate income.

Structured credit products are becoming increasingly popular among investors. After a decade of low volatility, they're looking beyond traditional assets to achieve return objectives. Using derivatives to their advantage, volatility provides another tool in the investor tool chest. But we have yet to see the effect on volatility if markets go sideways.

With volatility likely to remain high for the next two to three years. Interest rates should start to fall in 2024, creating opportunities to defray risk and generate income.

Volatility is a mean-reverting asset class. Combined with a trending asset class like equities, it allows for diversification of portfolios. Using simple strategies such as covered calls, investors have an opportunity to sell high and buy low.

Some ETF clients will take greater advantage of volatility than others. Some clients are looking for income while minimizing risk. Others have a 30-year time horizon and few concerns about volatility. No one size fits all.



Latest Trends in the Cryptocurrency Space

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Crypto has had a noticeable influence on derivatives markets and has presented opportunities for investors. Purpose Investments, for example, launched its Bitcoin fund in February and attracted international attention, raising \$3 billion in assets under management (AUM).

Bringing crypto into the ETF world presented a number of nuances that had to be addressed, including trading in a 24/7 environment with instantaneous settlement. In the current volatile environment, crypto has remained a viable long-term risk-management asset.

While the U.S. continues to struggle with the regulation of the crypto environment, Canada's regulatory clarity has encouraged innovative development of more crypto products. Since early 2021, venture-capital investments in crypto-related projects have reached an all-time high of \$45 billion. We can expect to see a raft of new crypto products over the next 24 to 36 months.

Despite current volatility, liquidity remains buoyant for structured crypto investments, even though financial institutions (FIs) in Canada are not authorized to invest in the physical crypto market. Without FI participation, these products depend heavily on the regulated derivatives market. New clients and the entry of broker dealers have allowed for more diversified trading strategies.

The MX has kept pace with the evolution of the crypto market with listings for a variety of crypto-related options. Hedge funds have harvested volatility by writing calls out of the money. With high volatility, it doesn't take a lot of calls to generate a lot of income.

The biggest goal now in the crypto market is to develop the market further and attract more participants. This will happen as they realize that crypto investments can be used in the same way as traditional assets.

In 2021, for example, hedge funds began using crypto-based basis trades as an income-producing strategy, as well as a risk-mitigation tool offering downside protection and reducing volatility. Listed options and futures provide a valuable tool for building investment products. Using futures that accurately reflect spot prices, managers can maintain spreads and ensure that retail and institutional price execution for spot ETFs is tight.

In the U.S., CME Bitcoin futures are a major institutional product and are the only derivative Bitcoin product that institutions can access. On TSX, about 40 crypto ETFs hold spot, futures and mixed assets, five of which have listed options actively traded on MX.

The demand in Canada for crypto-related assets has become evident. Since the launch of the first crypto ETF in May 2021, for example, AUM by Canadian crypto ETFs has risen to \$4 billion, approximately one-third of AUM in XIU in only 18 months.

Restrictions against direct ownership of physical assets in the crypto market continue to limit participation, despite recent strong performance. In the U.S., Bitcoin futures were expected to lag spot by 20 to 25 basis points, but to date they lag spot by only 2.5 basis points. Since crypto-related derivatives and ETFs provide synthetic exposure, interest among institutional investors is rising globally in these products.

Institutional investors consider the commitment of crypto ETFs to environmental, social and governance (ESG) issues. Currently, one in three crypto ETFs has an ESG focus. Before they enter the market, however, institutions need regulatory clarity about such concerns as custodial risk and capital treatment on the broker side. Until then, retail investors will predominate in the crypto market.

Currently, the crypto ecosystem is not isolated from the global asset sell-off and has felt the effects along with other asset classes. In the future, listed derivatives will lead the growth of the crypto market as institutions accommodate physical holdings. Since the vast majority of crypto derivatives still trade on unregulated markets, the regulated crypto markets face an enormous opportunity to grow. The involvement of institutional capital will accelerate this growth.

Buy Canada, A New Regime

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Market observers are bullish on Canada in the 2020s. Canadian equities benefit from higher wages, rising commodity prices, inflation and peak globalization. The leaders in Canada in the 2010s will likely be the laggards in the 2020s and vice versa. In the current environment, commodities prevail over technology, necessities over discretionary purchase, S&P/TSX 60 Index* over S&P 500.

As a developed commodity player, Canada has outperformed many developed and developing countries this year. The commodity that will matter most is food. Demand for food is growing throughout the world, particularly in politically unstable nations. Canada's political stability enhances its unique position as a producer of food and energy.

Demand for energy will increase further as China reopens and global travel returns to pre-pandemic levels. With energy and materials accounting for 30 per cent of S&P/TSX 60 Index*, Canadian stocks will benefit from this demand, especially since U.S. oil producers have not responded to the current supply crisis.

Canadian stocks are currently trading at the steepest discount to the S&P 500 since the tech bubble. A zero-interest-rate policy over the last 10 years has benefitted the tech sector, leading to this steep discount of S&P/TSX 60 Index* against the tech-heavy S&P 500.

Valuations are closely tied to the exchange rate of U.S. and Canadian dollars. At the moment, the Canadian dollar is holding up better than other currencies, which can be interpreted as a vote of confidence to the Canadian economy from the foreign exchange (FX) market.

With rising interest rates affecting long duration growth stocks, the S&P 500 will feel a greater impact than S&P/TSX Composite Index. The inflationary cycle will be prolonged as the U.S. Federal Reserve System remains behind the curve.

Financials account for another 30 per cent of the S&P/TSX 60 Index*, and interest rates have a direct effect on their performance. As housing contributes to recessionary pressure, growth will slow in Canada. But the labour market in this country remains extremely tight. Many people who left their employment during the pandemic have yet to come back, and it remains to be seen if they ever will. If they do, recessionary pressures will ease, resulting in a soft landing. If they don't, central banks will be faced with a choice between crushing inflation to the detriment of the economy or allowing it to continue, to the short-term benefit of the equity market, but with undesirable long-term consequences.

Under ordinary circumstances, with China decelerating, Europe likely entering a period of recession and the Fed hiking rates, the resulting lack of demand would bring commodity prices down. But because of supply problems, especially in oil and food, commodity prices will remain high. Another key driver in this context is reshoring. As supply chains move out of China and Asia into North America, Canada benefits.

The resolution of the war in Ukraine may also bring commodity prices down, but not rapidly. Sanctions have a greater effect on prices than the conflict itself. Questions remain about when and if they will be lifted and whether western companies will return to Russia. If they don't, production will remain slow and energy prices will remain high for a prolonged period.

In the meantime, because of sanctions, businesses are reconsidering their locations. Looking at North America as a region, it offers a consumer market in the U.S., a manufacturing centre in Mexico and a reliable source of energy from Canada, all under the umbrella of the North American Free Trade Agreement.

To buy the trade on Canada, investors first resort to linear instruments. Through futures and swaps, they can go long on the S&P/TSX 60 Index and short on the S&P 500.

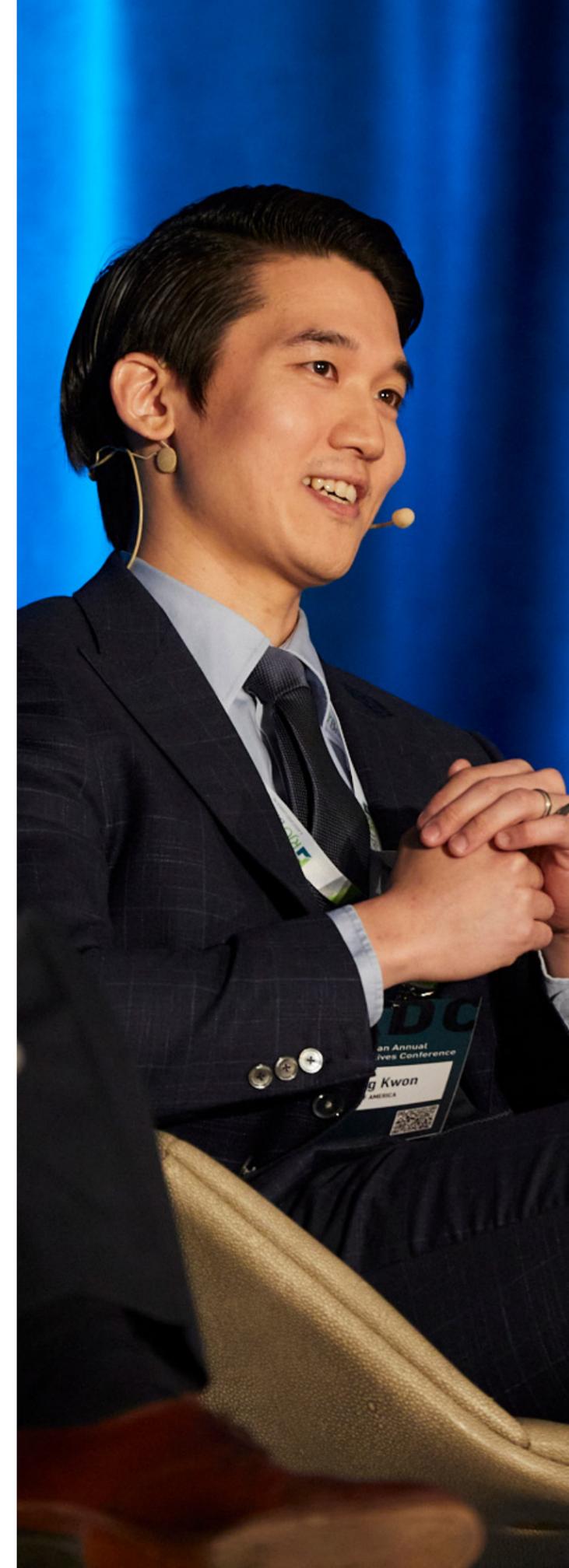
Inflation has also had an impact on volatility. Since 2009 through the COVID-19 pandemic, volatility risk has been minimized and distorted, particularly by Fed efforts to suppress volatility. With inflation eliminating this distortion and the Fed becoming a source of volatility as it struggles with raising interest rates, investors have to learn to manage volatility risk on their own.

Under current conditions, investors should assume a cross-asset focus, especially considering gaps in cross-asset volatility. With cross-asset volatility, investors have to pay attention to the market closest to the stress and understand why it reacts as it does. With rising interest rates, volatility is screaming higher, and gaps are appearing between volatility in equities, commodities and FX.

The equity market was already preparing for a repeat of COVID-19, with subsequent impacts on prices and volatility. Fast money has had ample time to de-leverage. As we experience a slow-moving train wreck in the market, these investors have already moved into cash. They have the hedges they want, and there's no panic demand to protect exposure with index-level options.

On the real money side, institutional investors are not hedging, because as rates have gone higher, liability has fallen. Their funding status remains stable, so they see no necessity to panic and buy hedges. This may change if a recession occurs, rates go lower, equities go lower and there's a lack of demand.

At the moment, there's not enough pressure on equities to get the volatility index up to 50 from current levels of about 25. The market anticipates that the Fed will eventually pivot to live with inflation for the near future, leading to a rally in equity markets.





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