CIBC CAPITAL MARKETS

THE CDR NOTIONAL CURRENCY HEDGE AND ITS IMPACT ON PERFORMANCE

Own the company, hedge the currency

Canadian Depositary Receipts (CDRs) provide clients with easier access to stocks of the world's largest companies in Canadian dollars, and include a built-in notional currency hedge. This means that investment returns depend on the performance of the underlying shares, providing geographic diversification while mitigating the additional risks associated with global investing.

How does the Notional Currency Hedge work?

The notional currency hedge is a notional hedge of substantially all of the CDRs exposure to the Underlying Share's foreign currency and is managed by CIBC on a daily basis. Any gains or losses on the notional currency hedge are reflected in daily adjustments to the "CDR Ratio" – the specific number of shares that each CDR represents. The table below illustrates how the CDR Ratio may change based on exchange rate fluctuations:

Daily USD/CAD Movement	Notional Currency Hedge	CDR Ratio Adjustment
Canadian Dollar Appreciates versus U.S. Dollar	Positive closing value	**CDR Ratio up** Therefore, each CDR represents a larger number of underlying shares.
Canadian Dollar Depreciates versus U.S. Dollar	Negative closing value	**CDR Ratio down** Therefore, each CDR represents a smaller number of underlying shares.

A comparison of the CDR to a direct holding

The graph below compares the 2023 calendar year performance of a Canadian investor's investment in shares of Amazon.com, Inc. "AMZN-US" in U.S. dollars directly versus an investment in Amazon.com CDRs (CAD hedged) in Canadian dollars "AMZN-CDR".

In the graph below, you can see that the performance of a direct investment in one AMZN-US share is similar, but not identical, to an investment in the AMZN-CDR – since the latter also provides a notional currency hedge. As a practical consequence of how currency hedging programs work, there will be some tracking difference between the two securities over time.

Impact of FX conversion fees:

For Canadians to buy global shares directly they must first convert their Canadian dollars to the foreign currency the global shares trade in. If a Canadian investor later sells the global shares, the investor will receive the sale price in the foreign currency, and would then have to pay a similar FX conversion fee again if they wished to convert that currency back to Canadian dollars. The fees for these FX conversions offered by the investor's broker will depend on the amount being converted and currency being converted to, but are typically 1.00% or more. This means that Canadian investors have 1.00% less purchasing power and receive 1.00% less when they buy or sell global shares.

It is important to consider the impact of these FX conversion fees on a Canadian investor's return when investing in global shares. By comparison, an investment in CDRs is made in Canadian dollars and does not require investors to pay any FX conversion fees to buy or sell them.

Accordingly, a more appropriate comparison for Canadian investors would be to compare the return of AMZN-CDR to the AMZN-US share return as adjusted for FX conversion fees.

The example in the table below shows:

- The actual price a Canadian investor would get when buying shares of AMZN-US and selling them one year later, taking into account a 1.00% FX conversion fee on each trade.
- That the requirement to pay a 1.00% FX conversion fee when buying and selling AMZN-US shares resulted in a -3.58% impact to a Canadian investor's return (assuming no movement in the USD/CAD exchange rate). This highlights that FX conversion fees could have a compounding effect on returns.
- That during the same time period, the AMZN-CDR performance lagged the AZMN-US return by 2.17%.
- That the AMZN-CDR performance tracking was better (2.17%) than the performance tracking that a Canadian investor in AMZN-US would have experienced if they paid a 1.00% FX Conversion to buy and sell the AMZN-US shares (3.58%).

Time Period	AMZN-US Closing Price (US$)	AMZN-US Price (adjusted by 1.00% FX conversion fee)	AMZN-CDR Closing Price (C$)
12/31/2022	US$84.00	US$84.84 (Buy)	C$10.29
12/31/2023	US$151.94	US$150.42 (Sell)	C$18.39
Net Return	80.88 %	77.30%	78.71%
Return Comparison to Direct Investment	**N/A**	**-3.58%**	**-2.17%**

Scenario analysis showing the impact of FX movement:

Let's now look at two historical examples comparing the performance of a Canadian investor's investment in AMZN-US shares directly (valuing the investment in Canadian Dollars based on the prevailing U.S. Dollar / Canadian Dollar exchange rates, with no notional currency hedge and a 1.00% FX conversion fee applied to buy and sell the AMZN-US shares) versus an investment in AMZN-CDR in Canadian dollars. In the first scenario the Canadian dollar appreciates against the U.S. dollar, and in the second scenario the Canadian dollar depreciates against the U.S. dollar.

These examples demonstrate that:

- A CDR investment mitigates the exposure that Canadian investors have to foreign currencies.
- When the Canadian dollar appreciates a CDR investment will outperform an unhedged investment; and when the Canadian dollar depreciates a CDR investment will underperform an unhedged investment.

Scenario 1: Canadian dollar appreciates

Time Period	AMZN-US Closing Price (US$)[1]	AMZN-US adjusted by 1.00% FX conversion fee (US$)	USD / CAD Exchange Rate[1]	AMZN-US Closing Price (C$) Unhedged	AMZN-CDR Closing Price[1] (C$) Hedged
12/31/2022	US$84.00	US$84.84	1.3554	C$114.99	C$10.29
12/31/2023	US$151.94	US$150.42	1.3243	C$199.20	C$18.39
Net Return	**80.88%**	**77.30%**		**73.23%**	**78.72%**
Comparison to US share		**-3.58%**		**-7.65%**	**-2.17%**

Scenario 2: Canadian dollar depreciates

Time Period	AMZN-US Closing Price[1] (US$)	AMZN-US adjusted by 1.00% FX conversion fee (US$)	USD / CAD Exchange rate[1]	AMZN-US Closing Price (C$) Unhedged	AMZN-CDR Closing Price[1] (C$) Hedged
6/30/2023	US$130.36	US$131.66	1.3242	C$174.34	C$15.85
3/31/2024	US$180.38	US$178.58	1.354	C$241.80	C$21.69
Net Return	**38.37%**	**35.64%**	**2.25%**	**38.69%**	**36.85%**
Comparison to US share		**-2.73%**	**N/A**	**0.32%**	**-1.53%**

1 Bloomberg is the source for closing prices of Amazon.com shares and Amazon.com CDRs and for the U.S. Dollar / Canadian Dollar exchange rate indicated. The remainder of the figures in the chart were calculated by CIBC Capital Markets using such information.

A deeper look into the factors impacting CDR performance

As demonstrated above, CDRs provide investors with a currency hedge in addition to the underlying return. Although the goal is to retain as much of the return of the underlying as possible, CDR investors should expect some difference in performance between the CDR and the underlying share. Such performance difference between the CDR and the underlying share compounds over time.

The drivers for the performance difference are outlined below.

- **Fees:**
  - For managing the CDR program, CIBC applies a spread in the pricing of the notional currency hedge. The spread applied to the forward rate used for each notional currency hedge will on average not exceed 0.60% on an annualized basis.
- **FX Forward Rates:**
  - Currency hedges are quoted using FX forward rates. FX forward rates are impacted (positively or negatively) by, among other things, the difference in the prevailing short-term interest rates in the two countries that issue the relevant currencies. For example, when US interest rates are higher than Canadian interest rates, the resulting impact on the CDR performance is negative. Conversely, when US interest rates are lower than Canadian interest rates, the resulting impact on the CDR performance is positive.
- **Over or under hedging:**
  - The notional FX hedge for CDRs is rebalanced daily, which frequency allows for mitigating substantially all of the CDRs' currency exposure. While this is an enhancement over typical currency-hedged ETFs that rebalance monthly, it is not perfect. At any point during the trading day, as the underlying stock increases or decreases, the CDR becomes either over or under hedged. This effect has a larger impact on underlying shares with high volatility.

As a result of the variables above, the annual tracking difference may be larger than the annualized spread that CIBC earns for managing the notional currency hedge. Any differences in performance between the CDR and the underlying share compounds over time, as such, Investors should compare annualized returns rather than total returns when looking at relative performance.

About CIBC Capital Markets

CIBC Capital Markets works with domestic and international organizations looking for a banking relationship that combines in-depth industry knowledge with comprehensive capital markets, corporate banking and investment banking capabilities to address their most pressing needs. We strive to forge strong and deep relationships with our clients to understand the demands of their business and bring distinctive and appropriate solutions to the table.

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