CGZ	Two-Year Government of Canada Bond Futures
CGF	Five-Year Government of Canada Bond Futures
CGB	Ten-Year Government of Canada Bond Futures
LGB	Thirty-Year Government of Canada Bond Futures

MONTRÉAL EXCHANGE

M23-U23 Roll Update

May 2023

THE FUTURE IS YOURS TO SEE.®

QUARTERLY ROLL Summary

First Notice day is May 30th for the June 2023 CGZ™ (2-year), CGF™ (5-year), and CGB™ (10-year) contracts while delivery for the LGB™ (30-year) will occur on June 21st, the last trading day for all of the aforementioned contracts. Normally the roll would begin on May 25th and finish with a bit of position cleanup three days later but, due to the weekend and Memorial day holiday in the United States, it will likely start a day early on the 24th with roll liquidity largely ending by the 26th. Both the Bank of Canada and the Federal Reserve will make rate announcements during the June delivery period.

Barring an unexpected loosening of monetary policy, all the Canadian fixed income physical delivery contracts will be negative carry during delivery in June, so short positions will be eager to avoid the negative carry by delivering early, except in cases where the wildcard option has value. In these respects, this delivery period will be just like the previous few periods which were characterised by negative carry for short futures positions, early deliveries, and contract fair value pricing to the start, rather than the end, of the delivery period.

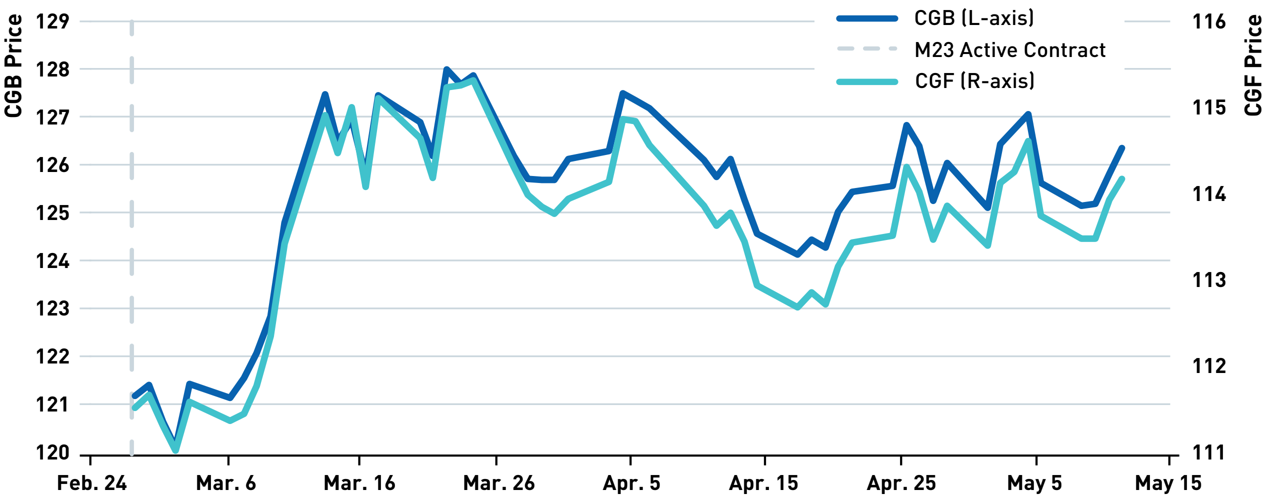
Speculative, model-driven portfolios are probably long CGF and CGB contracts this quarter. We propose that long CGB positions should roll as early as possible for several reasons. Managers interested in Canada bond auctions may investigate how LGBU23 and successor LGB (30-year) contracts can be used given that their cheapest-to-deliver (CTD) will be the auction bond. Wildcard options in CGB will continue to be an opportunity even after the roll brings a new CTD bond for that contract and, strangely, there is a good possibility that very nimble and sophisticated investors acquired the CGBM23 wildcard option for no cost in early May trading. Even with the CTD change for the LGB contract and a 4-year maturity extension, the LGB roll price may end up being more stable than many market participants think due to an almost zero DV01 extension.

Speculative Positioning

Trend models may not have been active at full risk allocation in the June contracts given the range-bound markets after the first half of March. Figure 1 shows the very large 85 basis point rally at the CGF (5-year) and CGB (10-year) points on the yield curve in the first weeks of March, but largely choppy markets since then without a sustained trend. The exception, for some nimble models, may have been the selloff in early April, but that was followed quickly by another inflection point for prices where models probably reduced risk. We believe speculative positioning is probably light going into the June roll.

FIGURE 1

CGF & CGB Price, M23s



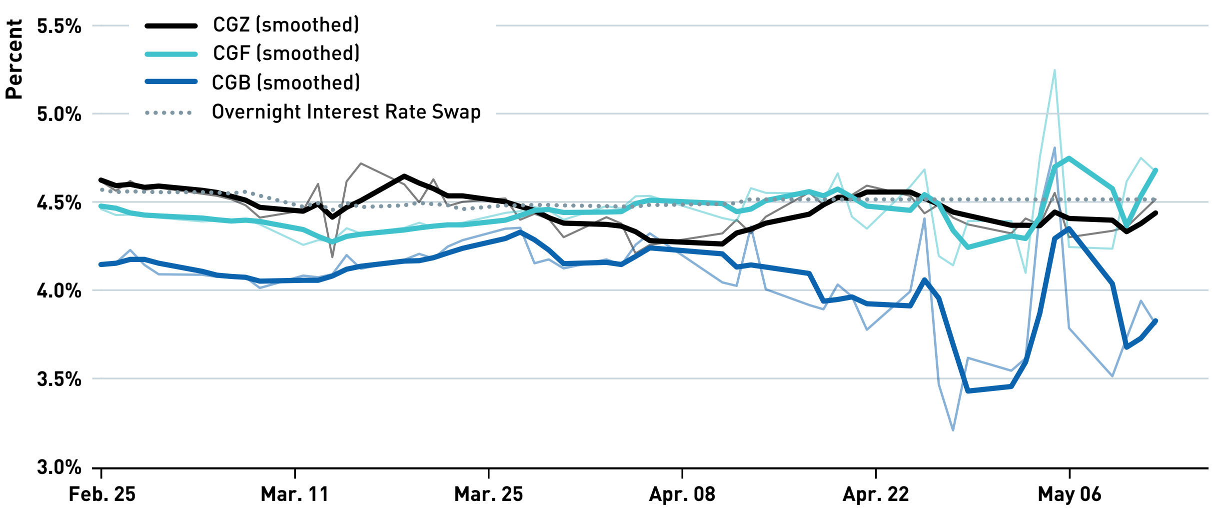
Source: Montréal Exchange

Our usual correlation analysis between prices and contract open interest is omitted from the discussion this quarter as there was almost no correlation between contracts and open interest except at the start of the quarter and those positions are almost certainly gone by now given the more recent price action.

However, we have concluded that some speculative positions probably exist in CGF and CGB contracts given the very recent relative value volatility in those contracts. Figure 2 charts the implied repo level, a measure of relative value between the cheapest-to-deliver (CTD) bond and the futures contract, for CGZ (2-year), CGF (5-year), and CGB (10-year) contracts. A sharp spike upwards in the chart of both CGF and CGB indicates that the contract was driven to expensive levels[1] relative to the CTD in early May but has meandered back towards more normal levels since, at least in the case of the CGB.

FIGURE 2

Implied Repo: CGZ, CGF, CGB



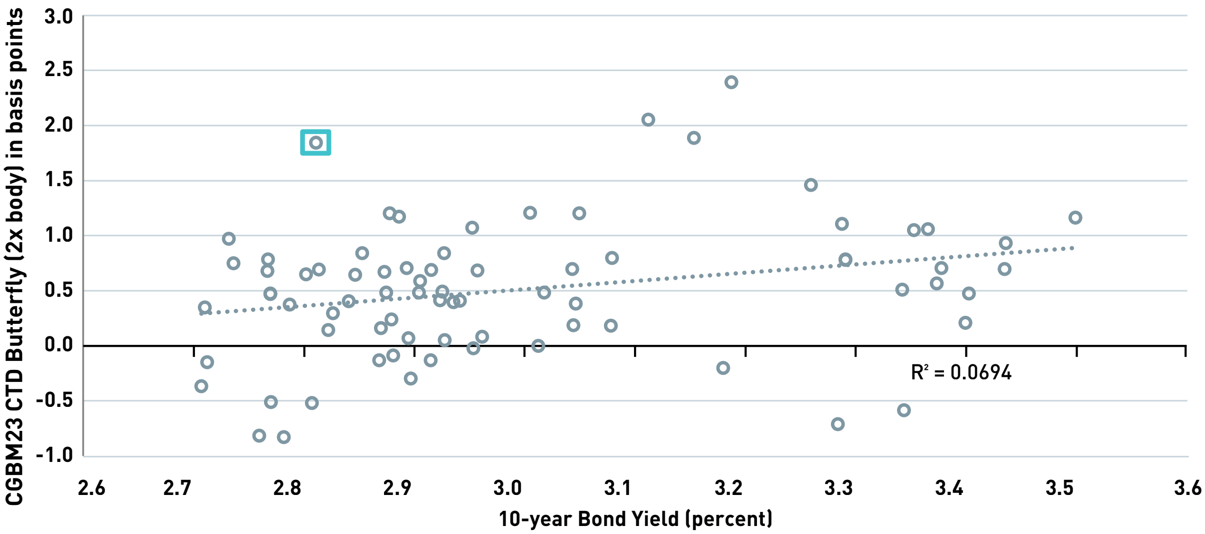
Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

1 Implied repo high means gross basis low and the bond is cheap relative to the contract.

At the same time, the CTD for the CGBM23 contract has become very cheap relative to the level of interest rates, as shown in Figure 3. Generally, there are two efficient ways to purchase 10-year bonds in Canada: buy the active CGB contract or buy the benchmark 10-year cash bond. Buying the CGB contract in large size[2] often drives it to richer levels versus cash bonds, much as we saw in the chart of implied repo in Figure 2. Buying the benchmark 10-year, a bond about a year longer in maturity than the CGBM23 cheapest-to-deliver bond, would drive the CTD butterfly, shown in Figure 3 to cheaper levels because the second wing of the butterfly is driven richer by benchmark bond buying. Indeed, that figure shows that the CTD butterfly is near record cheap levels against the 10-year yield for this quarter. We conclude that speculative investors, and probably more patient long-term investors as well, have positioned themselves long in contracts (and/or bonds) currently but probably only in CGF (5-year) and CGB (10-year) contracts.

FIGURE 3

10-year Bond Yield versus CTD Butterfly



Source: BMO Capital Markets[i] Fixed Income Sapphire database

Cheapest-to-Deliver Switch

Although rates have risen from pandemic lows, they are lower than they were last quarter so it will come as no surprise that very little switch risk exists for contracts this quarter.

Figure 4 shows the yield/steepness combinations needed for a switch from the December 2031 to the June 2032 as cheapest-to-deliver for the CGBU23 contract. A selloff of the magnitude needed is so unlikely that it isn't worthy of mention given that it would probably be accompanied by a flattening/inversion of the curve. An emergency rally spurred by an economic crisis could move the curve steeper, but almost certainly not to the 12 basis points of yield difference between the two bonds that would be required to cause a switch… and rates would be lower requiring even more steepness for a switch anyway.

2 To be clear, we aren't discussing a single client or transaction, but a tendency for investors to buy bonds during a certain period.

FIGURE 4

SLOPE	Dec31 Yield															
SLOPE	2.21%	2.36%	2.51%	2.66%	**2.81%**	3.01%	3.21%	3.41%	3.61%	3.81%	4.01%	4.21%	4.41%	4.61%	4.81%	5.01%
-5.0	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
-3.8	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
-2.6	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
-1.3	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
-0.1	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
1.1	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**	**Dec31**
3.9	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31
6.7	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Dec31	Jun32	Jun32	Jun32	Jun32
9.4	Dec31	Dec31	Dec31	Dec31	**Dec31**	Dec31	Dec31	Dec31	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32
12.2	Dec31	Dec31	Dec31	Jun32	**Jun32**	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32
15.0	Jun32	Jun32	Jun32	Jun32	**Jun32**	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32	Jun32

One point worthy of discussion is that the cheapest-to-deliver bond for the LGBU23 (September 30-year) contract will not be the bond with the shortest term to maturity, which is unusual, but there still won't be any real chance of a mid-contract CTD switch. Instead, the December 2055 will be the new CTD for the foreseeable future in LGB contracts, winning that status due to its higher coupon and conversion factor. Switch potential from the 2055 to 2053 is negligible, as shown in Figure 5.

FIGURE 5

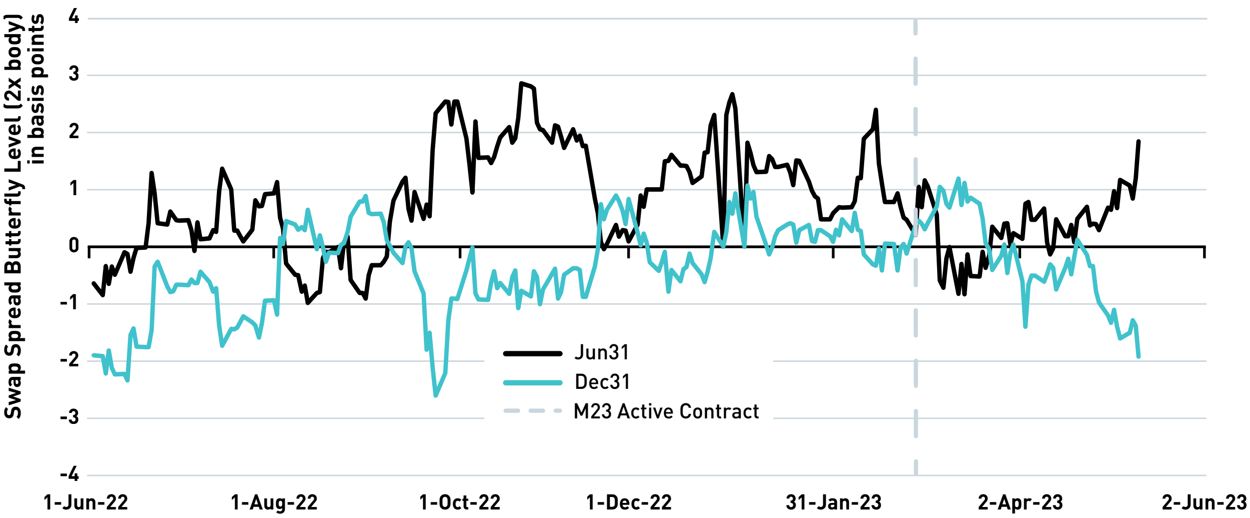
SLOPE	Dec55 Yield															
SLOPE	2.62%	2.72%	2.82%	2.92%	**3.02%**	3.17%	3.32%	3.47%	3.62%	3.77%	3.92%	4.07%	4.22%	4.37%	4.52%	4.67%
-8.0	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
-7.1	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
-6.3	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
-5.4	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
-4.6	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
-3.7	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**	**Dec55**
-1.0	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
1.8	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
4.5	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
7.3	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55
10.0	Dec55	Dec55	Dec55	Dec55	**Dec55**	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	Dec55	**Dec53**

Relative Value of the CTD Bonds

As is often the case, a new CTD for the CGB (10-year) contract brings an interesting relative value story to that contract. Figure 6 shows the swap spread butterfly, a measure of the relative value of specific bond issues, for the cheapest-to-deliver bond of both the CGBM23 and the CGBU23. Recently, the June contract CTD, the June 2031 bond, has cheapened dramatically (moved upwards in the figure) versus neighbouring bonds while the December 2031, CTD for the September contract, has moved in the opposite direction. This may be due to some anticipation of the June 2031 exiting the delivery basket and heading for several years of obscurity as an off-the-run bond.

FIGURE 6

Jun31 v. Dec31 Swap Spread Butterfly

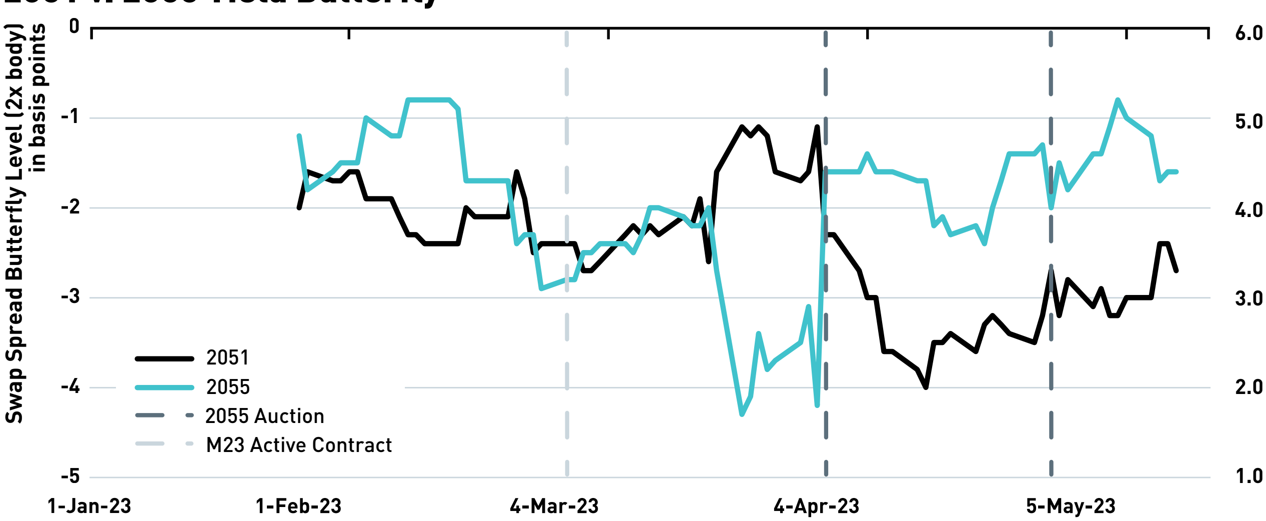


Source: BMO Capital Markets[i] Fixed Income Sapphire database

Another compelling relative value story exists in the LGB contract, although this one is developing and could become a good opportunity for active investors. Figure 7 shows a similar relative value chart for the LGB (30-year) contract, although this figure depicts yield to maturity butterflies in lieu of swap spread butterflies due to less-reliable long-term swap spread data in Canada. The interesting story here is that the CTD for the September contract is the *auction bond* rather than the benchmark bond, so we have marked two recent auction dates in the figure, both of which point to a couple days of modest cheapening prior to the auction. Often, an auction bond will tend to cheapen just before an auction as banks prepare to digest the supply of bonds so, to preserve the arbitrage between the CTD and the futures contract, the contract will have to cheapen also. This may present an opportunity for managers that are unable to get long-bond allocations or who have other reasons for not having taken advantage of this type of price action in the past. Short term active trades may be possible in the long end of the yield curve in a way that was difficult in the past – getting short LGB in the days prior to the auction, for example, and timing the reversal of the short to the new bond issuance.

FIGURE 7

2051 v. 2055 Yield Butterfly



Source: BMO Capital Markets[i] Fixed Income Sapphire database

We showed a chart of the implied repo for the contracts in Figure 2, above. The figure shows that, as expected due to some wildcard option value, both CGF and CGB June contracts have traded at lower implied repo levels (i.e. the futures contract appears a bit cheap relative to bonds) than they would if they were a "pure play" on short-term interest rates. In contrast, CGZ (2-year) contracts, where the option value is almost zero, have tracked the overnight interest rate swap market much more closely. At the time of writing, CGB is about 4 cents cheaper than the equivalent bond trade if we ignore the embedded wildcard option but about 3 cents rich to bonds if the option value is included. CGF (5-year) contracts are about 2 cents rich relative to bonds if we include the wildcard value.

Key Metrics & Expectations

We show some Key Metrics of importance to managers with June 2023 positions in Figure 8, Figure 9, Figure 10, and Figure 13. We used closing prices on May 11th and have reduced the number of CTD bonds outstanding by the holdings of the Bank of Canada, where applicable[3]. September contracts had not traded on our price capture date so the indicated prices for the U23 contracts, and any analysis driven by the price of those contracts, are not based on a tradeable market level at this time.

CGBM23 to CGBU23

Most eyes will be on the CGB contract during the roll this quarter as there is a change of CTD and the relative value of the contract has fluctuated quite widely recently. We believe algorithmic models, and other speculative managers, are long contracts this quarter, as discussed above.

When the 7 cents of value from the Wildcard option is included, the CGBM23 trades about 3 cents richer than fair value, but was even richer than that until very recently. In addition, thousands of contracts are almost certain to be taken into delivery as short positions seek to profit from a Wildcard option payoff.

We expect there to be excess liquidity demands on CGBM23 from the selling side as the roll period approaches since long CGB positions should try to exit early to 1) avoid the delivery period, 2) sidestep a wildcard delivery, and 3) sell their position at greater than fair value. Unless the contract cheapens before the roll begins, the only reason to wait to roll might be the fact that the CGBM23 CTD is very cheap to neighbour bonds while the U23 cheapest-to-deliver has richened. In other words, the underlying bond position being entered by buying CGBU23 and selling CGBM23 is not attractive. Short positions will probably try to wait for better pricing, a sensible strategy. Both long and short positions should be wary of leaving unmonitored standing orders this quarter as the DV01 extension means the fair value of the roll price will be unstable as interest rates rise and fall intraday.

FIGURE 8
CGB Key Metrics

11-MAY-2023	FRONT (JUN23)	BACK (SEP23)	DIFFERENCE
Closing Price	126.390	127.740	-1.350
Cheapest-to-Deliver (CTD)	CAN 1.500% Jun 2031	CAN 1.500% Dec 2031	Change!
Delivery Years (Last delivery)	7.9	8.2	0.3
CTD Conversion Factor	0.7174	0.7105	
CTD Clean Price	90.5824	90.0927	
CTD Yield	2.816%	2.812%	-0.004%
Gross Basis (cents)	-9.0	-66.7	
Probable Delivery Date	01-Jun-23	01-Sep-23	
Net Basis (cents)	3.2	10.5	7.4
Implied Repo (to Prob. Delivery)	3.81%	4.15%	0.34%
DV01/100 of CTD	6.8	7.1	0.4
Open Interest	465,022	0	
CTD Outstanding (millions)	31,144	32,000	856
CTD Notional of Front OI	46,502	46,502	
Front OI Multiple of CTD	1.5x	1.5x	0.0x

Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

3 The Bank lends their holdings, so the bonds are still available to deliver. After this quarter and the change of CTD for CGB and LGB contracts to more recently issued bonds, the Bank will no longer hold any of the CTD bonds.

CGZM23 to CGZU23

CGZM23 trades exactly at fair value with a 4.51% implied repo to First Delivery; overnight interest rate swaps are at 4.51% to that date. As usual, the wildcard option is not a factor here.

Just like last quarter, any remaining open interest in CGZM23 contracts will be delivered early as overnight interest rates exceed the CTD coupon by 75 basis points and no one should expect to make anything on any of the embedded options. The CTD will change this quarter, as is usual with the CGZ (2-year) contract, from the February 2025 bond to the May 2025. The DV01 extension of almost 14% is slightly higher than normal for the contract which will cause the fair value of the roll to vary with the level of interest rates. Although 2-year yields have been range-bound lately with the Bank of Canada not "in play", managers should be wary of leaving standing orders as the price difference on the roll could approach five cents on a volatile day.

We suspect any algorithm models are only lightly using CGZ contracts and, even if they are, have garnered no insight into their positioning this quarter. Since the M23 contract trades at fair value, the relative pricing of the U23 contract, when the roll starts, will be the most important driver of the price trend.

FIGURE 9

CGZ Key Metrics

11-MAY-2023	FRONT (JUN23)	BACK (SEP23)	DIFFERENCE
Closing Price	103.640	104.110	-0.470
Cheapest-to-Deliver (CTD)	CAN 3.750% Feb 2025	CAN 3.750% May 2025	Change!
Delivery Years (Last delivery)	1.6	1.6	0.0
CTD Conversion Factor	0.9648	0.9648	
CTD Clean Price	99.9478	100.1600	
CTD Yield	3.779%	3.665%	-0.114%
Gross Basis (cents)	-4.4	-28.5	
Probable Delivery Date	01-Jun-23	01-Sep-23	
Net Basis (cents)	-0.1	-5.1	-5.1
Implied Repo (to Prob. Delivery)	4.51%	4.67%	0.16%
DV01/100 of CTD	1.7	1.9	0.2
Open Interest	78,299	0	
CTD Outstanding (millions)	15,000	15,250	250
CTD Notional of Front OI	7,830	7,830	
Front OI Multiple of CTD	0.5x	0.5x	0.0x

Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

CGFM22 to CGFU23

There is no change to the CTD for the CGF (5-year) contract on the roll to CGFU23. Barring several unexpected rate cuts to the Bank of Canada target rate, both contracts will price to early delivery with a negative basis to the CTD bond.

CGFM23 is trading about 2 cents rich to bonds after adjustment for the small value of the wildcard option. Further, as discussed above, we believe that algorithmic speculative models and other speculators have recently gone long on this contract. Since the contract trades rich to bonds, they would need to sell early and may be concerned that the Memorial Day weekend shortens their trading window – we think they'll try to roll early putting downward price pressure on June contracts relative to September contracts. Long positions may want to try to roll even earlier to get in front of this while tactical shorts, if they are able, may benefit from waiting until price-insensitive portfolios have pushed June prices lower before buying to close or roll.

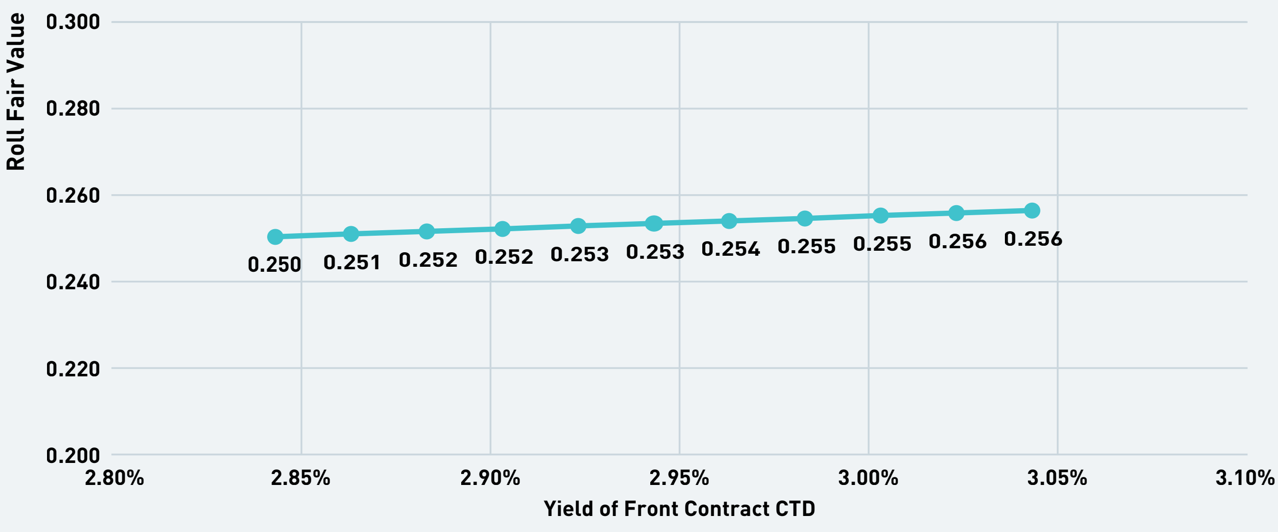
FIGURE 10
CGF Key Metrics

11-MAY-2023	FRONT (JUN23)	BACK (SEP23)	DIFFERENCE
Closing Price	114.190	113.910	0.280
Cheapest-to-Deliver (CTD)	CAN 3.500% Mar 2028	CAN 3.500% Mar 2028	No change
Delivery Years (Last delivery)	4.7	4.4	-0.2
CTD Conversion Factor	0.8979	0.9027	
CTD Clean Price	102.4700	102.4700	
CTD Yield	2.943%	2.943%	0.000%
Gross Basis (cents)	-6.1	-35.7	
Probable Delivery Date	01-Jun-23	01-Sep-23	
Net Basis (cents)	-0.8	-1.5	-0.7
Implied Repo (to Prob. Delivery)	4.67%	4.50%	-0.16%
DV01/100 of CTD	4.5	4.5	0.0
Open Interest	103,673	0	
CTD Outstanding (millions)	15,000	15,000	0
CTD Notional of Front OI	10,367	10,367	
Front OI Multiple of CTD	0.7x	0.7x	0.0x

Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

Aside from potential liquidity pressures pushing the roll away from fair value, the lack of any DV01 extension makes fair value extremely stable this quarter. As we show in Figure 11, even a 10 basis points wide intraday move in the 5-year yield results in almost no change to the fair value of the CGF roll this quarter. Managers can probably pick their order level and leave patient standing orders without worry.

FIGURE 11
CGFM23/CGFU23 Roll Fair Value v. Rate Level, May 25/23



LGBM23 to LGBU23

Since there is no "delivery period" or first/last notice dates on the LGB (30-year) contract, there is no threat of early delivery to compel investors to roll to the new contract before the end of May. However, in practice, investors seem to have agreed to close LGB contracts on roughly the same schedule as CGB; all March contracts except a handful were closed before the end of February.

Despite the changing CTD, we believe the LGB contract will not experience a more volatile roll price this quarter, versus more normal quarters where the CTD does not change, because there is almost no difference in DV01; the September contract DV01 is just 0.8% higher than June due to the much higher conversion factor for the 2055 bond. Although the fair value roll pricing in Figure 12 may look volatile, a potential 7 cent roll price difference for a 10 basis point change in yields isn't much for this contract that has such a high DV01. In fact, the LGBM23 DV01 is 3.5x the CGBM23 DV01 but the potential price variance in the roll is about the same. There could be some implications for the long bond market since 15% fewer long bonds are needed in a CTD basis trade structure for LGBU23 versus LGBM23.

FIGURE 12

LGBM23/LGBU23 Roll Fair Value v. Rate Level, May 25/23

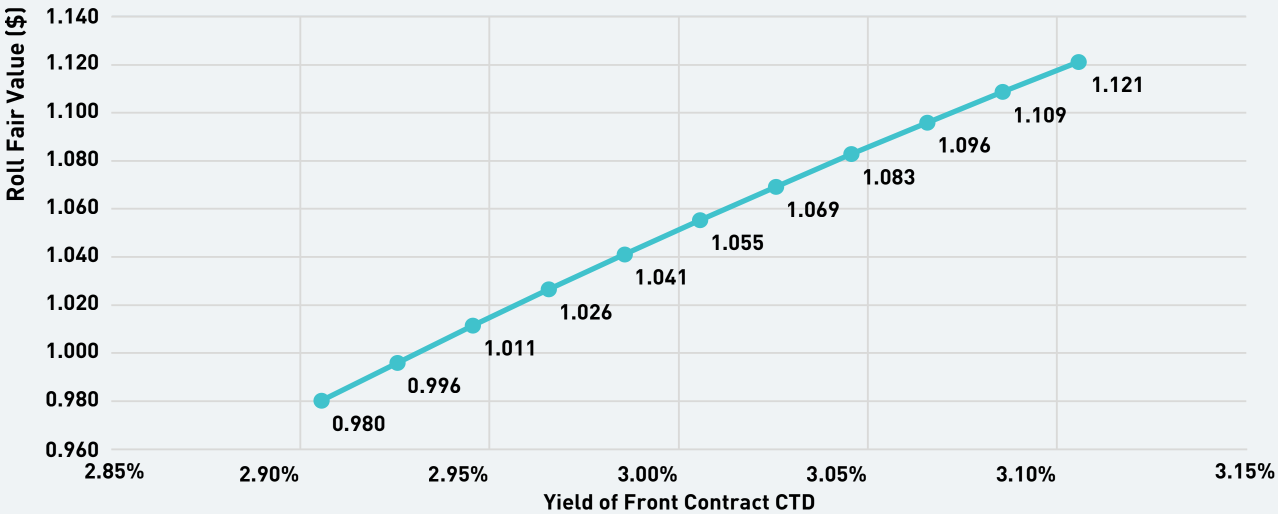


FIGURE 13

LGB Key Metrics

11-MAY-2023	FRONT (JUN23)	BACK (SEP23)	DIFFERENCE
Closing Price	177.350	176.150	1.200
Cheapest-to-Deliver (CTD)	CAN 2.000% Dec 2051	CAN 2.750% Dec 2055	Change!
Delivery Years (Last Trading Day)	28.4	32.2	3.8
CTD Conversion Factor	0.4570	0.5388	
CTD Clean Price	80.8171	94.3759	
CTD Yield	3.006%	3.023%	0.017%
Gross Basis (cents)	-23.2	-53.4	
Delivery Date	21-Jun-23	20-Sep-23	
Net Basis (cents)	-6.2	1.1	7.3
Implied Repo (to Prob. Delivery)	5.31%	4.54%	-0.78%
DV01/100 of CTD	16.7	19.9	3.1
Open Interest	731	0	
CTD Outstanding (millions)	33,810	4,250	-29,560
CTD Notional of Front OI	73	0	
Front OI Multiple of CTD	0.0x	0.0x	0.0x

Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

Wildcard Option Value

The LGB contract has no embedded wildcard option. The wildcard option embedded in the CGZ (2-year) contract, where conversion factors are always very high at around 0.95-0.97, has a negligible value of less than 0.2 cents per CGZ contract this quarter.

The CGFM23 (5-year) wildcard option value doesn't attract many managers interested in exploiting its value as the value is low due to relatively high conversion factors; we calculate its value at approximately 1.5 cents per CGF contract this quarter, even lower than that of the 5-year March contract. This option value explains any relative cheapness observed in the contract during the quarter, although we suspect few managers utilize this particular contract for wildcard trades.

Wildcard exercise is possible and likely in CGBM23 (10-year) contracts since the conversion factor of 0.7174, caused by the low 1.5% coupon on the CTD bond, makes the option reasonably valuable, although the value has declined relative to the December 2022 and March 2023 contracts and a somewhat higher conversion factor on the CTD. We value the option at just 7 cents per contract this quarter, down from about 7.5 cents last quarter.

Long positions going into delivery could easily experience a wildcard exercise against their position as there seems to be an (yet unexplained) trend for late afternoon price spikes early in the delivery month. In each of September 2022, December 2022, and March 2023, late afternoon price action has allowed CGB (and sometimes CGF) short positions to profitably exercise the embedded option conveniently early in the delivery cycle, thus avoiding almost all the negative carry but profitably harvesting the option value. For instance, delivery records for March CGB contracts indicate that about 6,400 of 6,600 open contracts gave notice to delivery on February 28th, probably after the CTD price spiked in later-afternoon trade[4], giving the short positions a tidy profit[5]. This is perplexing as the mere existence of wildcard options should drive late-afternoon volatility lower during delivery, not higher. However, we see no catalyst for change in the market during this delivery cycle.

4 We reiterate here, as is our custom, that we have access to and utilize only public records for any analysis. We can only speculate that delivery notice was given in the afternoon and, of course, what motivated the manager to give notice that day.

5 Although not nearly as large as they could have had if they had waited until later in the delivery cycle.

LOOKING FORWARD & Opportunities

- There is a Bank of Canada rate decision on June 7th and a Federal Reserve announcement on the 14th, both during the delivery period. Ironically, the Bank of Canada announcement has no real potential to affect the wildcard option in Canadian bond futures since it is made long before the daily settlement price is established, while the Federal Reserve announcement, made in the afternoon, can trigger wildcard exercise/delivery. For the most part, these policy rate announcements won't affect the value of the June futures themselves since the time remaining to delivery is so short and most contracts will already have been delivered.
- The new CGB CTD has a coupon equally as low as the CTD for H23 and M23 contracts so the CGB wildcard option will continue to be an opportunity for sophisticated basis traders for at least the next six months.
- On May 3rd and 4th, the CGB contract traded at an implied repo value of roughly 4.5%, or even slightly higher, which meant smart investors may have been able to "buy" the wildcard option for $0 by buying the basis. These opportunities to obtain embedded options for no cost, or even a negative price, have presented themselves in the past and sophisticated investors may want to monitor them more closely.
- Investors may look to sell the CGBU23 versus buying the June 2031 and, perhaps, the auction 10-year bond, in a butterfly structure to capture some of the recent cheapness in the CGBM23 cheapest-to-deliver.
- Again, with respect to auctions, nimble managers may investigate using the LGB contract, with its December 2055 CTD, which is also the auction bond, as a way to play Canada long bond auctions. The next one is scheduled for June 29th.

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