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

M22-U22

Roll Update

May 2022

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QUARTERLY ROLL Summary

First Notice day is May 30th for the June contracts, which is also Memorial Day in the USA and a week after Victoria Day in Canada; both national holidays. We do not believe either holiday will interfere with the normal roll dates for M22 contracts this quarter as Canada's holiday falls a day before the roll would ordinarily begin and the American holiday falls on a date after which the roll would normally be completed. The M22/U22 roll should begin on the 25th of May.

Due to an extended period of low interest rates during the pandemic combined with a tightening of monetary policy starting in 2022, the Bank of Canada target rate is expected to exceed the coupon on cheapest-to-deliver bonds for many futures contracts this quarter and for several quarters to come. Investors should be aware that early delivery and negative basis[1] will be the norm as short basis positions carry negatively during delivery and many contracts will price assuming (correctly) that delivery into the contract will be on or near the First Delivery date, not the Last Delivery date. Given current Bank of Canada messaging, the June 2-year (CGZ™), 5-year (CGF™), and 10-year (CGB™) contracts will eventually price to early delivery as well as all the September contracts, including the 30-year (LGB™) contract.

Speculative accounts are probably still short Canadian bond futures contracts and may introduce pricing pressure while looking for liquidity in the roll period. Astute, risk-taking managers looking to capitalize on the apparent mispricing of the Wildcard in LGB may be able to sell the option (buy the LGB contract) for a price far exceeding fair value. Investors appear to be uncomfortable with the value and mechanism of monetizing this value in the contract.

1 For more on the concept of negative basis, see "Forecasting/Understanding Negative Basis in Futures" published by Montréal Exchange in April 2021.

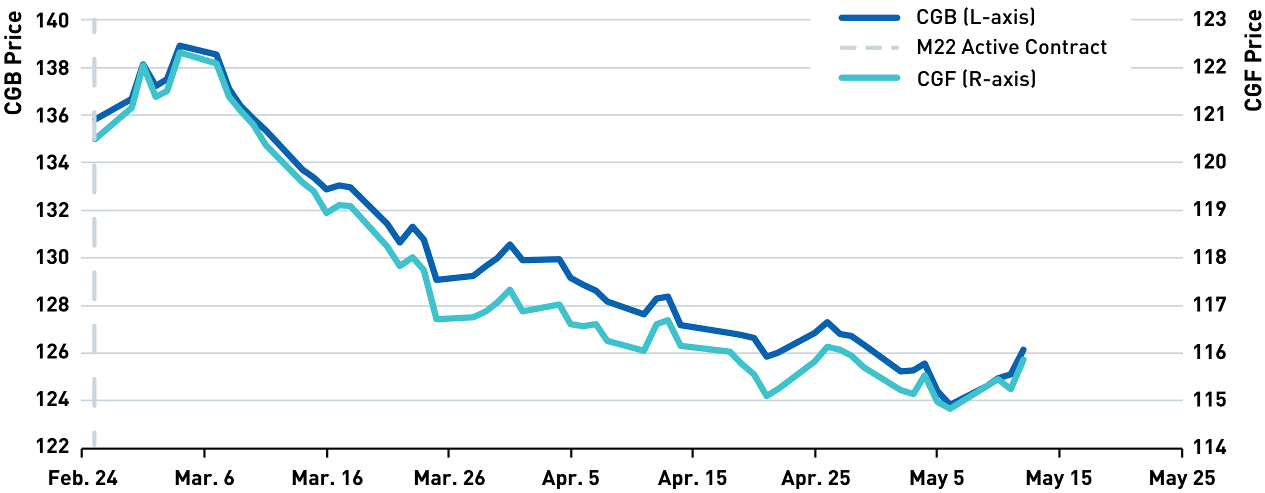
Speculative Positioning

The MacroHive/Montréal Exchange Canada CTA Trading model indicates that momentum models should have been, and would remain, short CGBM22 and CGFM22 due to the sustained selloff during the quarter. Any fixed income investor is already familiar with the details of the bond market selloff, hence we won't reiterate the salient points here[2] except to note that all M22 contracts have moved steadily lower in price, as demonstrated by the trends of the 5-year (CGF) and 10-year (CGB) in Figure 1, during their time as the active contract.

Trend-based models are probably still short both contracts going into the roll period this quarter, assuming some models incorporate the 5-year contract.

FIGURE 1

CGF & CGB Price, M22s

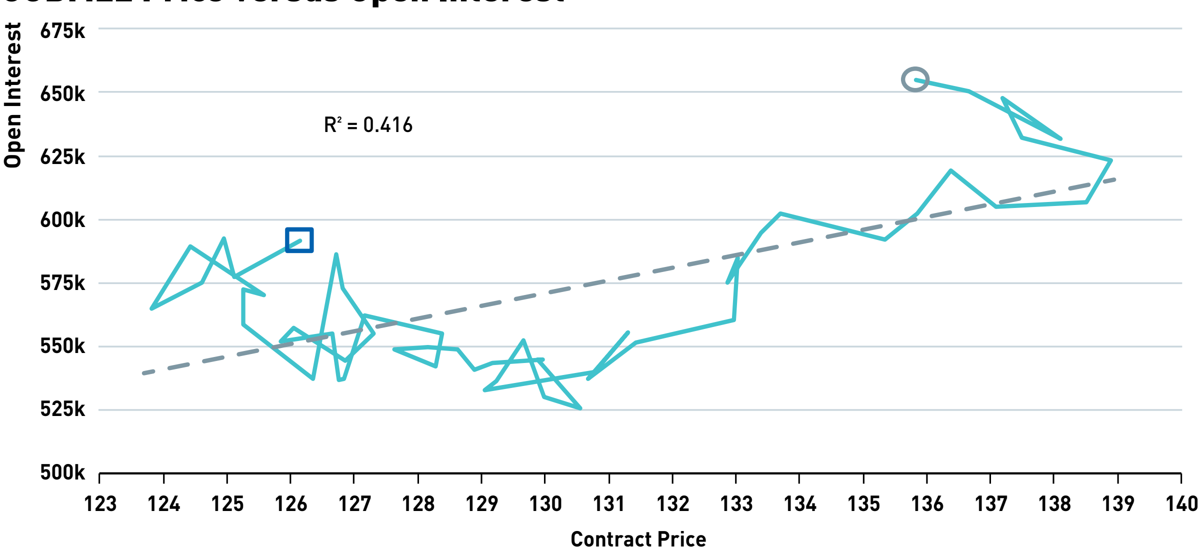


Source: Montréal Exchange

Our other measure of speculative positioning, the r-squared for a regression of each contract's open interest against price during the life of the contract, often points either to rising open interest in a bullish market – an indication of trend models adding to long positions as the trend is more firmly established – or the opposite, both good predictors of speculative account involvement, risk allocation, and positioning. This analysis appears to be of limited value for the June contracts as CGB open interest has recently fallen during the selloff, an indication of risk reduction by speculators. The CGF regression prediction has no explanatory power at all this quarter. We should conclude, then, that some portion of risk has been removed by some models recently as the selloff has lost part of the momentum from April. Risk likely remains on their books, but less than during the middle of the price moves.

FIGURE 2

CGBM22 Price versus Open Interest



Source: Montréal Exchange

2 Interested investors could refer to "A potential fixed income opportunity mid/post sell-off" published by Montréal Exchange in May 2022.

Most algorithmic models have a strong preference to avoid the delivery period and the shorts that still exist may lead to early buying pressure in CGFM22 and CGBM22 contracts accompanied by selling pressure in U22 as positions are rolled. Given that some de-risking appears to have occurred already, we assume that certain positions will be closed outright, depending on the parameters of the model.

Cheapest-to-Deliver Switch

Despite the very large rise in interest rates over the past 9 months, there is still only a remote and improbable chance of a switch in cheapest-to-deliver bonds for the 2-year (CGZ), 5-year, or 30-year contracts.

Unlike the other contracts, economic and market conditions have conspired to introduce some chance of a switch in the September 10-year (CGBU22) contract that will become active during this roll. Low yields and more frequent issuance to fund emergency fiscal stimulus during the pandemic combined to reduce the maturity difference of bonds eligible for delivery from 12 to 6 months while, simultaneously, creating one legacy 10-year bond with a very low coupon. The math to calculate the cheapest-to-deliver bond favors higher coupons and shorter maturities. There is some chance, for the first time in many quarters, that a CTD switch could occur during the life of the CGBU22 contract.

Figure 3 shows the conditions that would result in the June 1.5% 2031 becoming cheaper to deliver than the December 0.5% 2030, which would be considered the "normal" CTD bond. For the most part, the level of interest rates will not be a factor in determining the CTD but, rather, the steepness of the curve. At current yields, a steepening of 3 basis points between the yield of the two bonds would result in a switch which would (incrementally, as the probability increased) cause the CGBU22 to behave more like the June 2031 bond than the December 2030 bond.

FIGURE 3

								Dec30 Yield								
SLOPE	2.68%	2.73%	2.78%	2.83%	**2.88%**	2.93%	2.98%	3.03%	3.08%	3.13%	3.18%	3.23%	3.28%	3.33%	3.38%	3.43%
-2.0	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
-1.6	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
-1.2	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
-0.8	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
-0.4	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
0.0	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**	**Dec30**
0.8	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30
1.6	Dec30	Dec30	Dec30	Dec30	**Dec30**	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Dec30	Jun31
2.4	Dec30	Dec30	Dec30	Dec30	**Dec30**	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31
3.2	Jun31	Jun31	Jun31	Jun31	**Jun31**	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31
4.0	Jun31	Jun31	Jun31	Jun31	**Jun31**	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31	Jun31

Although interesting and a risk for long positions (short futures positions benefit, long positions suffer unexpected losses), it would be quite unusual for the curve to steepen given the current environment. In fact, as yields have risen recently, the curve has flattened, not steepened; a normal occurrence in Canadian yields. A situation could arise, usually involving rising, unconstrained, long-term inflation expectations and/or a loss of confidence in the central bank, where the curve steepened in a selloff, but that is not a central expectation of markets at this time. Nonetheless, the new CGB contract will have the most risk of a CTD switch in recent years.

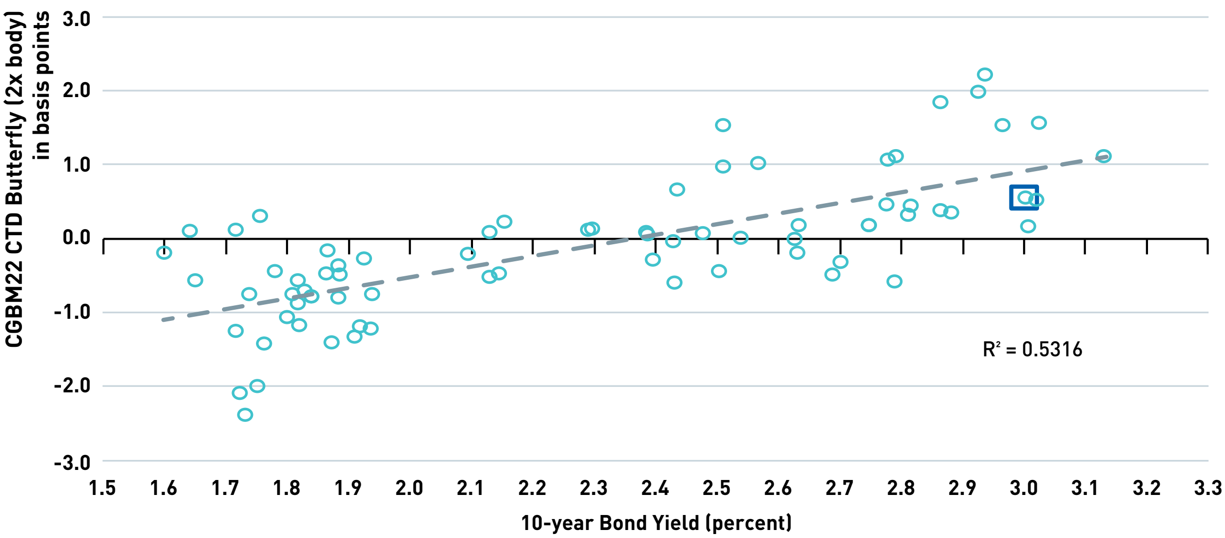
Relative Value of the CTD Bonds

The CGB cheapest-to-deliver change has typically brought about relative value changes in the bond basket, although we expect this effect to be more muted now that there will be only a 6-month maturity extension as the active contract changes from CGBM22 to CGBU22.

Figure 4 plots the swap spread butterfly[3] of the June 2030 bond versus the 10-year yield recently with the most recent observation highlighted. The June 2030 bond is, unusually for these conditions, roughly fair value in comparison to neighbour bonds; a surprising finding given the continued selloff in 10-year bonds which usually results in the contract getting cheap to bonds (which it is) and the CTD getting cheap to neighbour bonds (which it is not).

FIGURE 4

10-year Bond Yield versus CTD Butterfly



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

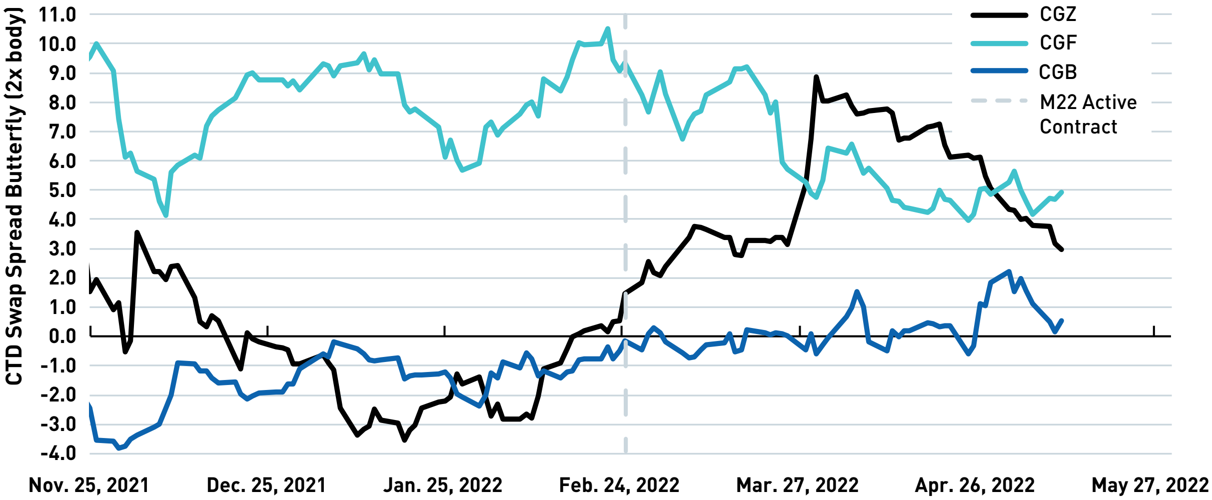
In fact, the CTD of the CGBM22 contract has been the most well-behaved of the contracts this quarter, belying the "big CTD change" dynamic that usually dominates the futures conversation in the spring quarter. As shown in Figure 5, the butterfly for the CGZ contract has been nothing if not extremely volatile, and the CGF CTD has steadily richened versus neighbours while the June 30, CTD for the CGBM22, has cheapened a little but in a stable manner.

Specifically, the CGZ CTD butterfly experienced a gut-wrenching 6 basis point move cheaper to neighbours in late March as the Bank embraced an anti-inflation stance and began hiking the target rate in earnest. Neighbour bonds have slowly caught up to the CGZM22 CTD and this butterfly has returned to normal levels. During most recent prolonged selloffs, the CTD of both CGB and CGF have cheapened versus neighbour bonds as the off-the-run neighbouring maturities to the CTD raced to catch up to the more rapid price moves associated with the futures contracts. Not this quarter.

3 A common measure of relative value, a swap spread butterfly is constructed by calculating the spread to swaps for the closest similar bonds with maturities before and after the CTD. One then multiplies the spread of the CTD by two and subtracts the spread of the nearest comparator bonds to construct the butterfly. A lower value indicates the CTD (or body of the butterfly) is rich relative to its nearest neighbour (or wing) bonds.

FIGURE 5

M22 CTD Swap Spread Butterflies

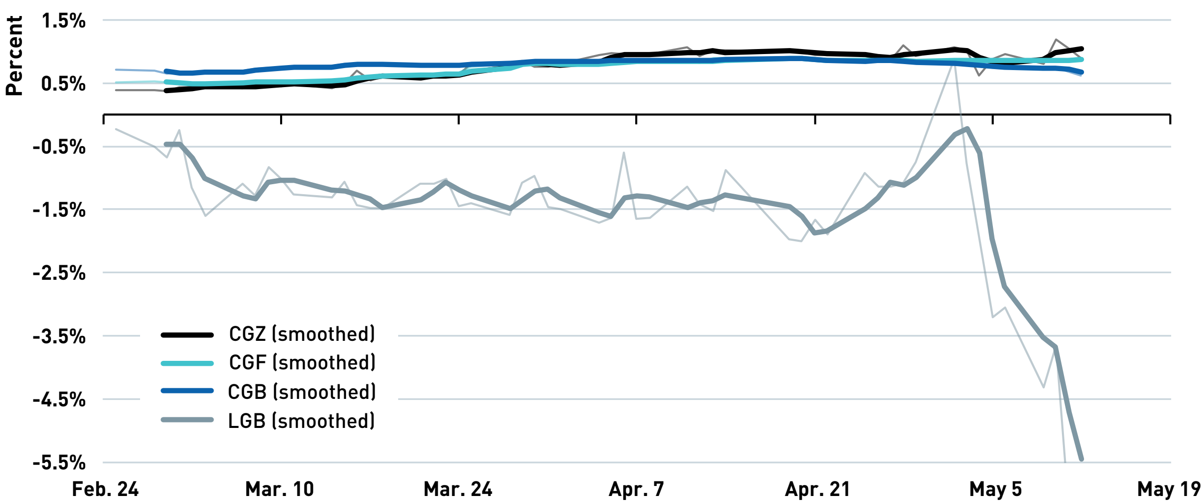


Source: BMO Capital Markets[i] Fixed Income Sapphire database

Although the cheapest-to-deliver bonds of each contract are not necessarily cheap to neighbouring bonds, almost all the futures contracts this quarter are cheap relative to their CTD bond. Although difficult to see given the extreme cheapness of the LGB contract this quarter, Figure 6 shows that the implied repo levels for CGZM22, CGFM22 and CGBM22 are between 0.6% and 0.9% with conservative delivery estimates. Making the reasonable assumption of a 1.5% Bank of Canada target rate after June 1st and early delivery for all but the LGB contract makes the contracts even cheaper relative to bonds.

FIGURE 6

Implied Repo: CGZ, CGF, CGB, LGB



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

With a valuable (but not this valuable – see below) Wildcard option, LGBM22 appears very cheap to bonds and relative to the other contracts. However, the Wildcard option is worth about 50 cents, depending on your valuation model, so it is not as cheap as it initially appears.

Key Metrics & Expectations

This quarter brings the revival of embedded option impacts for all contracts. For CGZ, the timing option is important given the low coupon on the CTD. In fact, after the June 1st Bank of Canada decision, all the contracts, except the 30-year, will probably be delivered early as the repo rate will likely exceed the coupon of the CGF and CGB June contracts resulting in negative carry during the delivery period for the short futures position. While the 30-year contract (LGB) won't become negative carry under most plausible scenarios, the Wildcard option is essential in understanding that contract.

We show some Key Metrics of importance to managers with M22 positions in Figure 7, Figure 9, Figure 10, and Figure 11. We used closing prices on May 12th and have reduced the number of CTD bonds outstanding by the holdings of the Bank of Canada, which are significant[4]. As is usual with the back contracts, none of the September contracts had traded on our price capture date so the indicated prices for the U22 contracts, and any analysis driven by the price of those contracts, are not based on a tradeable market level at this time.

CGBM22 to CGBU22

Although the impact of the CGB roll this quarter will be less significant than in prior years, it remains the most important roll given the high usage of this contract. The December 2030 bond will probably be the cheapest-to-deliver for the U22 which will trade at a negative basis due to the low coupon on that bond. The December 2030 replaces the June 2030 which was CTD for the M22 10-year contracts.

At a gross basis level of about 8.5 currently, and assuming the Bank of Canada moves the target rate to 1.5% on June 1st, the June CGB contract is trading very cheap to bonds. In fact, assuming early delivery, the contract is about 10 cents cheap to an option-free fair value metric. Given that there is no switch risk, and the valuation incorporates the timing option already, that 10 cents is the market implied value of the Wildcard option. We doubt this option is worth that much and view the CGBM22 contract as very cheap. Short positions in CGBM22 may decide to move early to close their positions at attractive levels.

Long positions should be wary of patient short investors who may seek to exploit the Wildcard option by taking some short positions into the delivery period, although we do believe those shorts would be better served by simply taking profits early by buying back the contract at cheap prices.

The roll may price some value into the switch risk present in CGBU22 but absent in CGBM22. As discussed above, we think the switch scenario, although closer than in recent memory, is still an unlikely scenario. Nonetheless, the probability is nonzero, and investors should be aware of the implications for their position if a switch does occur.

FIGURE 7

CGB Key Metrics

12-MAY-2022	FRONT (JUN22)	BACK (SEP22)	DIFFERENCE
Closing Price	126.140	127.360	-1.220
Cheapest-to-Deliver (CTD)	CAN 1.250% Jun 2030	CAN 0.500% Dec 2030	Change!
Delivery Years (Last delivery)	7.9	8.2	0.3
CTD Conversion Factor	0.7017	0.6462	
CTD Clean Price	88.6000	82.0905	
CTD Yield	2.845%	2.879%	0.034%
Gross Basis (cents)	8.8	-20.9	
Probable Delivery Date	01-Jun-22	01-Sep-22	
Net Basis (cents)	9.1	0.8	-8.3
Implied Repo (to Prob. Delivery)	-0.79%	1.47%	2.27%
DV01/100 of CTD	6.7	6.8	0.1
Open Interest	709,521	0	
CTD Outstanding (millions)	26,722	29,143	2,421
CTD Notional of Front OI	70,952	70,952	
Front OI Multiple of CTD	2.7x	2.4x	-0.2x

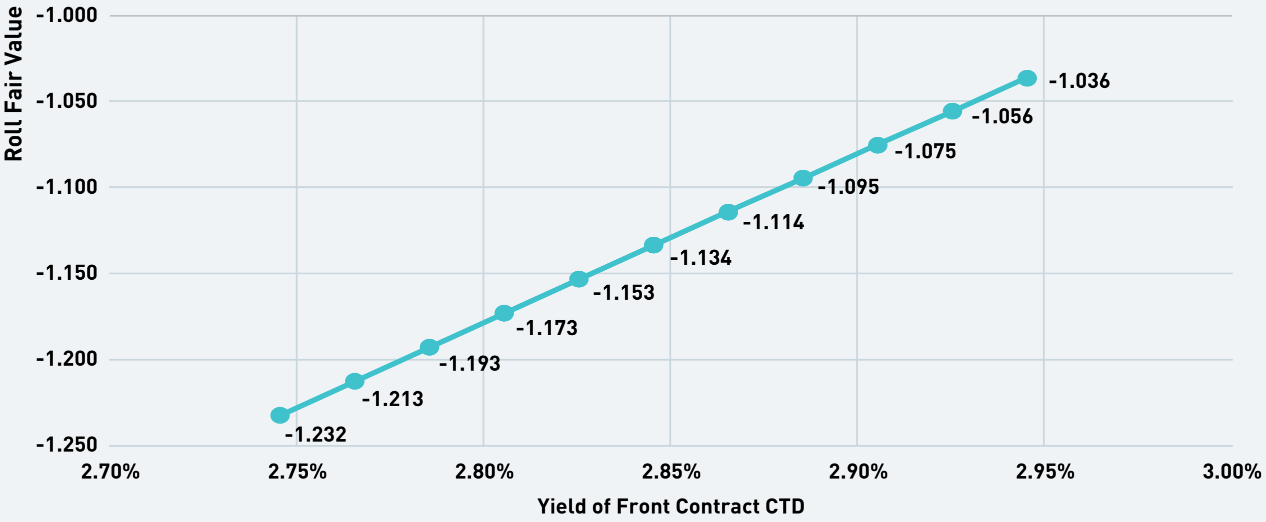
Source: BMO Capital Markets[i] Fixed Income Sapphire database, Montréal Exchange

4 Although the Bank does lend their holdings, so the bonds are still available to deliver.

Although the duration extension from CGBM22 to CGBU22 is far less for this June roll than in previous June rolls, the fair value of the roll is still dependent on the level of yields due to the duration difference between the two contracts. Investors should be careful when leaving limit orders as fluctuations in the overall level of yields changes the option-free fair value of the roll even without any change in expectations of changes to the Bank of Canada target rate, as shown in Figure 8.

FIGURE 8

CGBM22/CGBU22 Roll Fair Value v. Rate Level, May 25/22



CGZM22 to CGZU22

The CTD will change from the February 2024 bond for the M22 contract to the May 2024 bond for the U22 contract, a relatively negligible maturity extension as is usual with the 2-year contract. The DV01 extension of 13% is unlikely to cause anyone any distress but the fair value of the roll will be dependent on the overall level of interest rates, as with CGB.

The 0.75% coupon on the February 2024 means short positions in CGZM22 will carry negatively and the contract is already being priced to First Delivery with a negative basis level. Obviously, a Bank of Canada rate change would have implications for this (and all) contract and roll prices. Clients that cannot deliver or take delivery should close their positions early as notice of early delivery could easily occur.

CGZM22 currently prices about one cent cheap to bonds with an implied repo level of just 0.9% to early delivery. There is likely little involvement by algorithmic models in this contract and the modest cheapness of the contract is probably not enough to cause pricing pressure in CGZM22 contracts. The roll should be smooth, but we have no insight into directional pressure this quarter.

FIGURE 9

CGZ Key Metrics

12-MAY-2022	FRONT (JUN22)	BACK (SEP22)	DIFFERENCE
Closing Price	105.645	104.965	0.680
Cheapest-to-Deliver (CTD)	CAN 0.750% Feb 2024	CAN 1.500% May 2024	Change!
Delivery Years (Last delivery)	1.6	1.6	0.0
CTD Conversion Factor	0.9179	0.9296	
CTD Clean Price	96.9655	97.8740	
CTD Yield	2.561%	2.616%	0.055%
Gross Basis (cents)	-0.6	29.9	
Probable Delivery Date	01-Jun-22	29-Sep-22	
Net Basis (cents)	3.1	28.7	25.6
Implied Repo (to Prob. Delivery)	0.89%	0.73%	-0.16%
DV01/100 of CTD	1.6	1.9	0.2
Open Interest	49,344	0	
CTD Outstanding (millions)	13,934	10,495	-3,439
CTD Notional of Front OI	4,934	4,934	
Front OI Multiple of CTD	0.4x	0.5x	0.1x

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

CGFM22 to CGFU22

The CTD for the 5-year contract (CGF) will not change between the CGFM22 and CGFU22 contracts. In addition, as the Bank of Canada target rate will likely exceed the coupon on the CTD by the time delivery starts for both contracts, both will price to early delivery (again, a negative basis to the CTD bond) given existing market expectations.

As with the other contracts this quarter, CGFM22 is trading cheap to bonds with an implied repo of just 0.9%[5] at time of writing; that's about 5 cents cheaper than one would expect given the virtually non-existent value of embedded options in this contract. Once again, we suspect speculators are still quite short the contract and will wish to buy and/or roll early to new U22 positions to capture some of the cheapness in CGFM22 relative to the overnight index swap market at this time. Managers with long positions in CGFM22 may find it profitable to be patient as pricing pressures develop during the roll.

FIGURE 10

CGF Key Metrics

12-MAY-2022	FRONT (JUN22)	BACK (SEP22)	DIFFERENCE
Closing Price	115.860	114.340	1.520
Cheapest-to-Deliver (CTD)	CAN 1.250% Mar 2027	CAN 1.250% Mar 2027	No change
Delivery Years (Last delivery)	4.7	4.4	-0.2
CTD Conversion Factor	0.8062	0.8151	
CTD Clean Price	93.4560	93.4560	
CTD Yield	2.715%	2.715%	0.000%
Gross Basis (cents)	5.0	25.7	
Probable Delivery Date	01-Jun-22	01-Sep-22	
Net Basis (cents)	5.6	30.4	24.7
Implied Repo (to Prob. Delivery)	0.12%	0.39%	0.26%
DV01/100 of CTD	4.3	4.3	0.0
Open Interest	108,828	0	
CTD Outstanding (millions)	14,806	14,806	0
CTD Notional of Front OI	10,883	10,883	
Front OI Multiple of CTD	0.7x	0.7x	0.0x

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

LGBM22 to LGBU22

Following on the challenging roll in LGB last quarter, the LGBM22 to LGBU22 roll will be closely watched, despite rather limited open interest at this time. There is no change to the CTD for this contract this quarter.

The LGBM22 contract (and LGBU22 contract) has a very low conversion factor for the June 2051 CTD and the result is a high Wildcard option value embedded in the contract. Due to this high embedded option value, and as shown in Figure 6, the implied repo on this contract is very negative, reflecting a gross basis level that is very high and a relative value for the contract that is very cheap relative to bonds. Although the Wildcard option is very valuable, the contract appears extremely cheap relative to bonds, even when including the value of the option. We calculate a value of just 48 cents for the LGBM22 Wildcard but the contract, at a gross basis of 83 basis points at time of writing, is trading 110 cents cheaper. Although the buyer of LGBM22 is selling a valuable Wildcard option and must be compensated for this risk by paying less for their long LGB position, we were unable to create conditions that would value the embedded option anywhere close to the value the market is implying at this time.

Current pricing, justifiably assuming that the quality and timing options in the M22 contract are worthless, indicates that the market is pricing the Wildcard option at about 158 cents. Our simulation model, using a Johnson$_{SU}$ distribution calibrated to observed 3pm-5pm bond prices indicates the value of this option to be just 48 cents, although other models are undoubtedly more sophisticated. We believe the option value has been bid higher than fair value by participants that insist on closing their position before the option becomes exercisable in delivery. Long positions unwilling to take their chances[6] during the delivery period may continue to bid up the price of this option by offering their long LGBM22 positions at lower and lower prices to attract bids but we believe this is a mistake. Selling at current prices implies a 3pm-5:30pm price move that has never happened within the data set available to us nor in a reasonable scaling up to account for higher than usual volatilities currently implied in other option markets.

5 And less if one assumes early delivery.

6 In our simulation model, the Wildcard is exercised (LGBH22 delivered early after 3pm) in 95% of the simulation scenarios.

FIGURE 11

LGB Key Metrics

12-MAY-2022	FRONT (JUN22)	BACK (SEP22)	DIFFERENCE
Closing Price	181.850	180.200	1.650
Cheapest-to-Deliver (CTD)	CAN 2.000% Dec 2051	CAN 2.000% Dec 2051	No change
Delivery Years (Last delivery)	29.4	29.2	-0.2
CTD Conversion Factor	0.4499	0.4516	
CTD Clean Price	82.6550	82.6550	
CTD Yield	2.875%	2.875%	0.000%
Gross Basis (cents)	84.1	127.7	
Probable Delivery Date	30-Jun-22	01-Sep-22	
Net Basis (cents)	74.9	105.6	30.7
Implied Repo (to Prob. Delivery)	-5.78%	-2.79%	3.00%
DV01/100 of CTD	17.6	17.6	0.0
Open Interest	3,271	0	
CTD Outstanding (millions)	33,810	33,810	0
CTD Notional of Front OI	327	0	
Front OI Multiple of CTD	0.0x	0.0x	0.0x

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

Wildcard Comments

Almost no clients appear to be involved in Wildcard options[7] in CGZ and CGF contracts due to the high conversion factors; delivery tails[8] are such a small percentage of a long basis trader's position that a manager probably does not need to look very hard to find better ways to utilize risk.

Wildcard exercise is more likely in CGBM22 contracts as the carry during delivery is very low and might be negative after/if the Bank of Canada raises the target rate on June 1st. Even assuming the Bank leaves the target rate unchanged, it would take between just 1 and 2 basis points of lower yield on the CTD between 3pm and 5:30pm to make CGB Wildcard exercise profitable. If the Bank does raise rates as expected, the threshold drops to near zero.

The price change needed after settlement of the futures contract but before the delivery deadline on each day during the delivery period, assuming a 1% repo rate despite the near certainty that the Bank will raise their target to 1.5% on June 1st, is shown in Figure 12. At the start of the period, it would take a 9.7 cent price rise (1.5 basis points) after 3pm to offset the positive carry a long basis position would earn holding until the end of the month. As the positive carry accrues, this falls to under 1 basis point, or just under 3 cents by June 20th. This magnitude of price increase in the 10-year bond is relatively frequent between 3pm and 5:30pm so a Wildcard exercise could easily happen this quarter.

7 For a more full description of how a Wildcard option exercise works, refer to "[CGB Case Study: Wildcard Option Exercise]" published by Montréal Exchange in July 2019.

8 The delivery tail is equal to (1/conversion factor) – 1.

FIGURE 12

CGBM22 Wildcard Treshold

DATE	REMAINING CARRY ($ PER CONTRACT)	MINIMUM ΔCTD PRICE TO EXERCISE WILDCARD
30-May-2022	41.04	0.097
31-May-2022	39.62	0.093
1-Jun-2022	38.21	0.090
2-Jun-2022	33.96	0.080
3-Jun-2022	32.55	0.077
6-Jun-2022	31.13	0.073
7-Jun-2022	29.72	0.070
8-Jun-2022	28.30	0.067
9-Jun-2022	24.06	0.057
10-Jun-2022	22.64	0.053
13-Jun-2022	21.23	0.050
14-Jun-2022	19.81	0.047
15-Jun-2022	18.40	0.043
16-Jun-2022	14.15	0.033
17-Jun-2022	12.74	0.030
20-Jun-2022	11.32	0.027

We discuss the high value and likelihood of a Wildcard exercise occurring in LGBM22 above in the appropriate section on the LGB roll. Taking the conservative view and making the assumption, despite current expectations, that the Bank of Canada keeps the target rate unchanged at the next fixed announcement date, the price move threshold for Wildcard exercise is shown in Figure 13. We note that these types of price moves are not only possible, but likely, given the high DV01 of long bonds and that the price increases required represent only about 1.0 to 0.3 basis points of yield.

FIGURE 13

LGBM22 Wildcard Treshold

DATE	REMAINING CARRY ($ PER CONTRACT)	MINIMUM ΔCTD PRICE TO EXERCISE WILDCARD
30-May-2022	207.03	0.169
31-May-2022	199.89	0.163
1-Jun-2022	192.76	0.158
2-Jun-2022	171.34	0.140
3-Jun-2022	164.20	0.134
6-Jun-2022	157.06	0.128
7-Jun-2022	149.92	0.123
8-Jun-2022	142.78	0.117
9-Jun-2022	121.36	0.099
10-Jun-2022	114.23	0.093
13-Jun-2022	107.09	0.088
14-Jun-2022	99.95	0.082
15-Jun-2022	92.81	0.076
16-Jun-2022	71.39	0.058
17-Jun-2022	64.25	0.053
20-Jun-2022	57.11	0.047

March Delivery Summary

CDCC Delivery Reports[9] for March contracts show over 8,600 CGZH22, or about 10% of the total open interest, were delivered near or on the last delivery date. This is a little unusual given that long basis positions carried slightly negatively during the delivery period after the Bank of Canada rate hike on March 2nd. We predicted early delivery despite the ever-so-small cost of continuing the position to final delivery, at the discretion of the short position, of course, to avoid the negative carry.

Less than 4% of the open interest in CGFH22 was delivered, all on the last delivery date. Almost no CGB contracts were delivered in March.

The delivery period was important for 30-year (LGB) investors due to the valuable embedded Wildcard option in that contract. We believe[10] a client (or clients) successfully exercised the Wildcard option on about 1,400 LGBH22 contracts on dates between March 2nd and March 14th, generating profits by doing so. On the dates where we saw early delivery, the low threshold for a profitable exercise was well below the bond rally observed between 3pm and 5pm resulting in Wildcard opportunities for nimble clients who remained short into delivery, presumably to monetize the value of that option. Such activity will probably be repeated this quarter with LGBM22 contracts.

9 CDCC Delivery Reports available on the CDCC website (Delivery Reports page).

10 We can only speculate as we do not know, from public data, whether the client(s) gave delivery notice after 3pm. We have no access to internal Montréal Exchange data or non-public information.

LOOKING FORWARD & Opportunities

- Thus far, few opportunities around the roll strike us as compelling since no obvious directionality is present in the roll predictions. Nimble investors may be able to capitalize on the instability of the CGB roll as rates fluctuate intraday.
- The most obvious opportunity, but not for the uninitiated, is the apparent cheapness of the LGBM22 contract despite a valuable Wildcard option. We doubt a volatile enough scenario will play out during the delivery period to justify the current valuation but investors who go short the basis must be willing to be delivered the bonds and react the next day by buying their tail hedge. It is an opportunity only for sophisticated clients comfortable with short option risk and delivery.
- Roll prices will be more volatile than they have been in the past few years when front-end rates were permanently held low due to the mild resurgence of value to some of the embedded options, especially the timing options. Besides, with front end rates in play, a change in the implied repo rate of either the front or back contract, to reflect new expectations of overnight rates, changes the fair value of all the futures rolls.

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