

C|G|F Five-Year Government of Canada Bond Futures

Opportunity to Sell CGFZ6 Basis

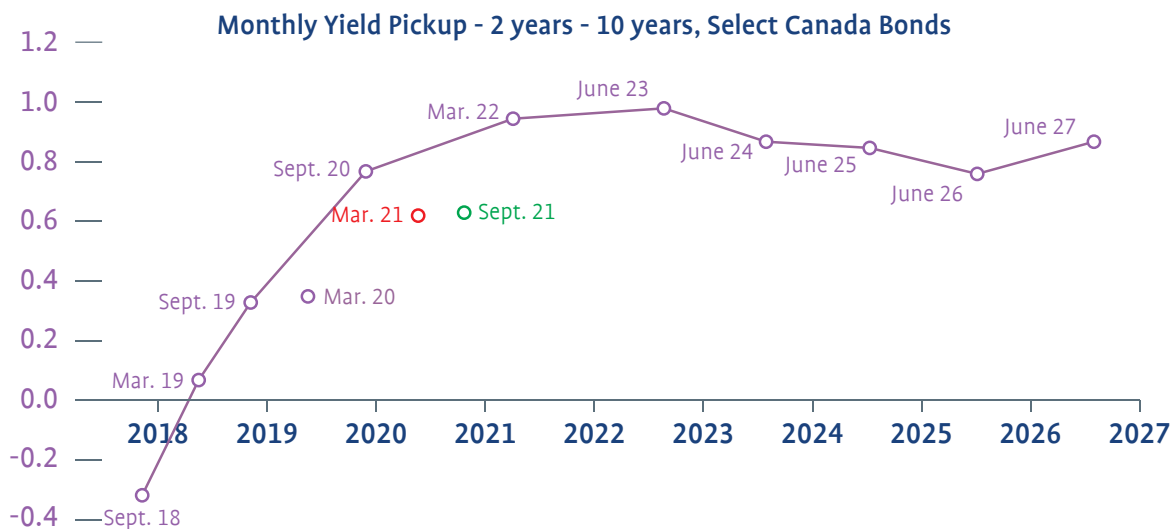
Cash owners of rich Canada bonds in the 5y sector, especially the cheapest-to-deliver (CTD) for the CGFZ6 contract, should consider selling them to pick up yield.

Since the rapid decline in Canadian bond yields in 2013 and 2014, some Canadian bonds have been subject to intense “squeezes” in the repo market that have caused them to trade expensive relative to the curve.

Identification of Rich Bonds

One simple way to identify the rich bonds in the 5y sector is by calculating the yield pickup per month between recently issued (ie. reasonably low coupon) bonds. Figure 1 shows a reasonably smooth line between September and March recent issues for original 5-year bonds as well as June-June issues for original 10-year bonds. There are two standout bonds that trade “rich” via this analysis. The green outlier below the dashed grey line is the current 5-year benchmark Canada bond (September 2021) and the red outlier in the chart is the cheapest-to-deliver bond for the CGF December 2016 contract (March 2021). Both bonds have a yield pickup per month below where one would estimate given the yields on neighboring bonds and thus offer an opportunity to augment yield of a portfolio by not owning them.

Figure 1



1. This trade is not intended for those that need to borrow the bond to deliver into the initial sale and fund the trade in the repo market

Monetizing the Anomaly

Cash, non-levered, owners of Mar21 and Sep21 bonds can capitalize on the pricing anomaly in a number of different ways. First, one could switch out of the rich 5-year benchmark and CTD into Sep20 and Mar20 bonds, creating a barbell position. That position would need to be reversed, at an undetermined cost, in the future and has an unknown P(L) as the richness or cheapness of the bonds will continue to fluctuate.

Another way to capitalize on the richness in the CTD bond is to execute a sale of the futures basis which consists of the simultaneous sale of the Mar21 bond (the CTD) and purchase of an equal amount of notional of the futures contract. The owner of the futures contract then waits for delivery of the bond, probably on December 30th and realizes a profit of \$52.10 per contract, as shown in Table 1. The profit is possible since the futures contract is relatively cheaper than the underlying bond as measured by its current 0% implied repo rate through to the last delivery date. While such trades aren't likely to make anyone's year, they can be executed again and again throughout the year to generate steady outperformance.

Table 1

DATE	ACTION	AMOUNT	COMMENTS
Oct. 17, 2016	Sell \$100,000 notional of the CTD (CAN 0.75% March 1, 2016)	Proceeds of: \$100,256.68	\$100,000 x (Bond Bid Price + Accrued)
Oct. 17, 2016 – Dec 30, 2016	Invest proceeds for 71 days at 0.5%	Proceeds of: \$97.51	\$100,256.68 x 71/365 * 0.5%
Dec. 30, 2016	Total proceeds from bond position	\$100,354.19	Bond sale + investment income
Dec. 30, 2016	Invoice Price at Delivery: Purchase back \$100,000 notional of the CTD (CAN 0.75% March 1, 2016)	Cost of: \$100,302.10	\$100,000 x (Futures Price x Conversion Factor + Accrued) ³
Dec. 30, 2016	Profit per contract	\$52.10	5.1 basis points in 71 days (≈27 bps annualized)

Trade Risks

Due to the very low level of current yields relative to the 6% yield used to calculate the conversion factor for each bond in the deliverable basket, there is virtually no risk that the futures contract buyer is delivered a different bond in December.

Temporary mark-to-market considerations should be taken into account as the trade is designed to capture an arbitrage between cash and futures prices and is thus structured to leave the original portfolio unchanged after delivery of the bonds. A DV01 discrepancy exists that will result in mark-to-market gains or losses in the interim period.

Liquidity risk exists as the open interest in CGFZ6 is quite low but the trade is structured on the assumption that the position can be held through futures delivery. Liquidity is not a concern in a futures trade where the buyer intends to take delivery but may be a concern if the trade must be reversed early.

2. For more on Implied Repo Rates and how to calculate them, see insert [CGF Implied Repo Analysis - EN.pdf](#)

3. On October 17th, 2016 the CTD bond had a bid of 100.156, the contract was offered at 124.20 and has a conversion factor of 0.8056.

4. A portion of the proceeds will need to be posted as initial and maintenance margin on the contract as prices fluctuate.

5. In fact, it would take a selloff of more than 500 bps in the 5y bond to cause a switch to another deliverable.

Opinions expressed in this article do not necessarily represent the views of the Bourse de Montréal Inc.

This article is made available for general information purposes only. The information provided in this article, including financial and economic data, quotes and any analysis or interpretation thereof, is provided solely for information purposes and shall not be construed in any jurisdiction as providing any advice or recommendation with respect to the purchase or sale of any derivative instrument, underlying security or any other financial instrument or as providing legal, accounting, tax, financial or investment advice. Bourse de Montréal Inc. recommends that you consult your own advisors in accordance with your needs before making decision to take into account your particular investment objectives, financial situation and individual needs.

FOR MORE INFORMATION

Robert Tasca

Director, Interest Rate Derivatives and Client Solutions Group

robert.tasca@tmx.com or +1 514 871-3501

m-x.ca/futures