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CGF Five-Year Government of Canada Bond Futures

CGB Ten-Year Government of Canada Bond Futures

March 2020

Five Ideas in a Challenging Bond Market

After the intense week of March 6-13 with probably more to come by the time you read this, we make some observations on the futures market and identify some ideas for the brave, and even the not-so-brave.

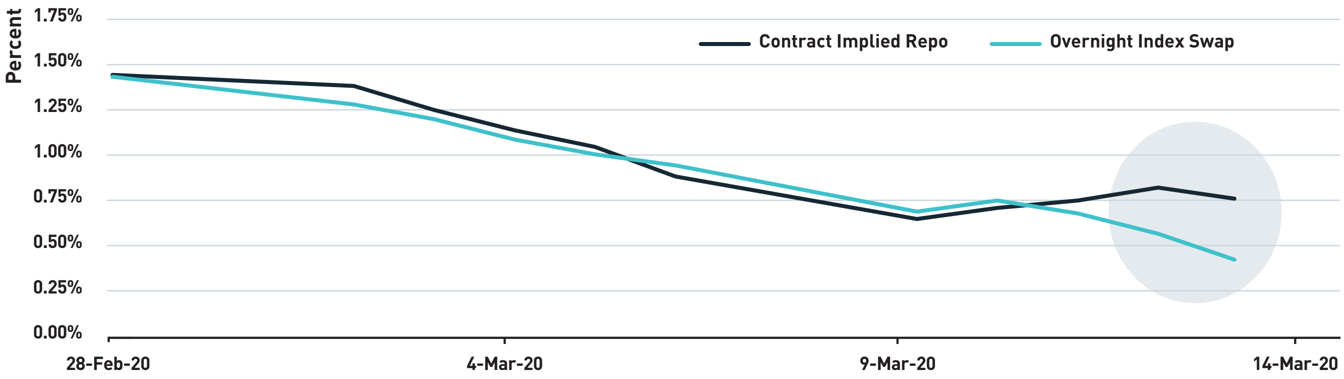
CGF and CGB Observations

Although undoubtedly volatile intra-day, we take heart in the observation that 5-year and 10-year Government of Canada bond futures (CGF and CGB) basis was reasonably well-behaved during the week's volatility. Figure 1 plots the Implied Repo of CGBM20 through the steady drop in yields to the delivery date on the contract[1]. The contract implied repo tracked the Overnight Index Swap market closely, even through the Bank of Canada rate cut on the March 4th fixed announcement date.

However, in the final days of the week as equity markets whipped by 10% daily, the price of futures and the cheapest-to-deliver (CTD) bond finally diverged more significantly, leaving futures contracts rich to bonds at the end of week. Still, in comparison to some other products (more on that below), the futures/CTD relationship held up well in a wild market that showed some signs of coming unhinged. The chart for CGF isn't shown here but it looks similar.

FIGURE 1

CGBM20 Implied Repo and OIS to Delivery



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

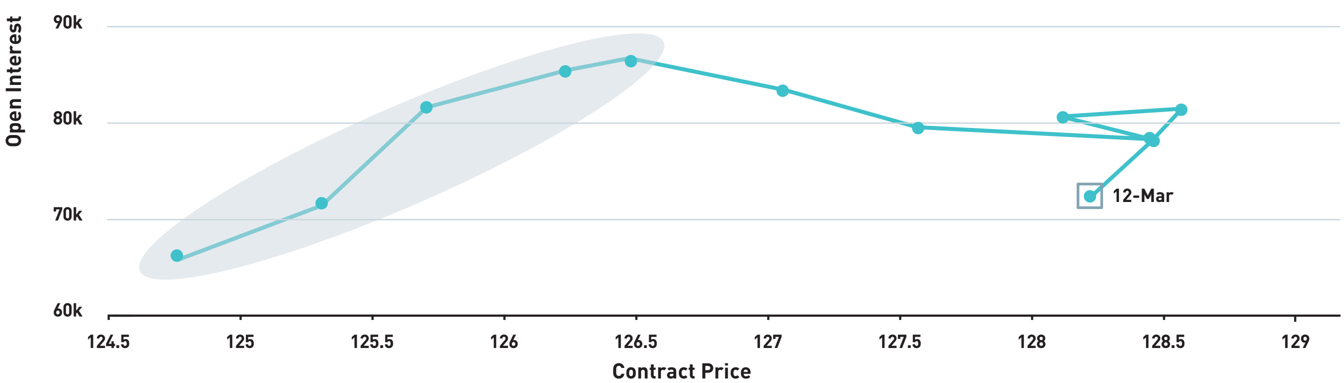
1. Last business day of June for the CGBM20 contract as the contract carries positively.

Given the huge reduction in implied repo on both CGF and CGB in March, there are a few follow-on observations that market participants should take note of:

- Implied repo much lower means gross basis for both CGF and CGB moved much higher, of course, as they are different expressions of the same price differential.
- CGFM20 started off quoted at a negative gross basis because it was going to be carrying negatively during delivery as the 1.25% March 2025 bond that is the CTD had a coupon below the term repo rate to delivery. That initial premise of negative carry changed with the March 4th rate cut to 1.25% and was compounded by the intra-meeting cut on March 13th to 0.75%. Since a hedged long basis position in CGFM20 now carries positively, delivery is unlikely to be made early and the correct date to evaluate the implied repo to is now the final delivery date, not the first delivery date.
- There was some extreme curve steepening toward the end of the week. However, this steepening was not nearly enough to introduce switch risk back into either contract. In fact, both contracts have less probability (essentially zero) of switching to a different CTD now that 5-year and 10-year rates are 80 basis points lower than at our last **Roll Update** in late February.
- These have been difficult times for speculative trend following models, although they may have made some great profits early in the month. We believe most of these models now have pared back risk given the market froth of the final three days of the March 6th week. Figure 2 plots CGFM20 open interest and price, and demonstrates how new positions were being added as 5-year prices rose. Many of those new positions have now been closed out and open interest in the contract has declined from over 80,000 to 72,000 in just a few days.

FIGURE 2

CGFM20 Price versus Open Interest



Source: Montréal Exchange

Five Ideas in a Terrible Bond Market

Although we doubt there are many participants with an appetite for new risk after the recent volatility, opportunities abound for those with risk to deploy and there are even some opportunities to hedge more efficiently for those uninterested in new trades.

For Everyone

We remind participants that the ultra-low rates of early 2015 caused a widespread series of failures in the repo market, especially in bonds of 5 years to maturity and lower. One important reason for this is that significant portions of shorter-term bonds are often held outside Canada by participants that need the sizeable profit potential to be drawn into focusing on lending their holdings in the Canadian market. With rates very low, these participants may ignore Canadian security lending opportunities causing shortage of bonds available to be borrowed. We would not be surprised to see this phenomenon re-emerge now that rates are again near lows.

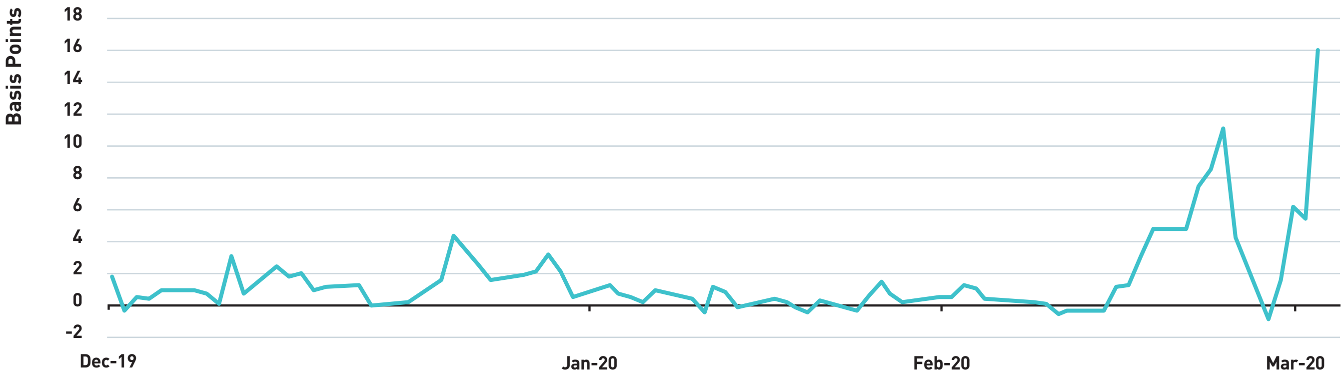
One solution that should be available to almost all mandates is to use futures contracts as your interest rate hedge rather than bond shorts. While contracts are occasionally cheap to bonds and could at times appear less interesting than a bond short, a Portfolio Manager can't be surprised by a repo squeeze that goes on for weeks or longer since the futures contract doesn't involve borrowed securities. For some, the certainty of the known implied repo rate can be enough in uncertain environments especially if, as is the case at the end of the current week, contracts are rich versus bonds and represent a better short from a value perspective.

For the Nimble and Engaged Manager

It seems obvious that a lot of markets are suffering from a lack of liquidity provision now and the 5Y-10Y curve shown in Figure 3 seems to show that quite well. Normally, providing liquidity in something like 5Y-10Y slope in Canada is best done in the short-term by the dealer community, but the swings are so wild that a nimble and engaged manager on the buy side could potentially fill this role if he or she wanted. Doing so efficiently is probably only possible in futures contracts since there is a **5Y-10Y ratio pricing mechanism** in place for this spread already and the Montréal Exchange offers a venue to any participant to essentially make markets and provide liquidity. Although a strange suggestion for an essentially buy-side readership, volatility is high but even this normally well-behaved spread seems to be screaming for additional liquidity and a good trader should get paid to provide it.

FIGURE 3

Canada 5Y-10Y Bond Slope



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

For the Relative Value Obsessed Manager

For those looking for relative value ideas, the simple idea is to buy net basis[2]. At the end of this wild week, futures are rich to bonds in a magnitude we haven't seen for several months. In fact, the opposite has been true since at least mid-November of 2019. The owner of basis gets all the embedded options (admittedly all are pretty much worthless except the Wildcard option[3]) in the futures contract at no cost when implied repo is higher than the OIS rate to the delivery date and the position carries positively in both CGF and CGB. In addition, any unexpected monetary accommodation would result in gross basis moving in your favor. Right now, it's very hard to imagine the risk scenario where accommodation is withdrawn by the Bank of Canada before the delivery date, but it is a risk for a poorly hedged basis position.

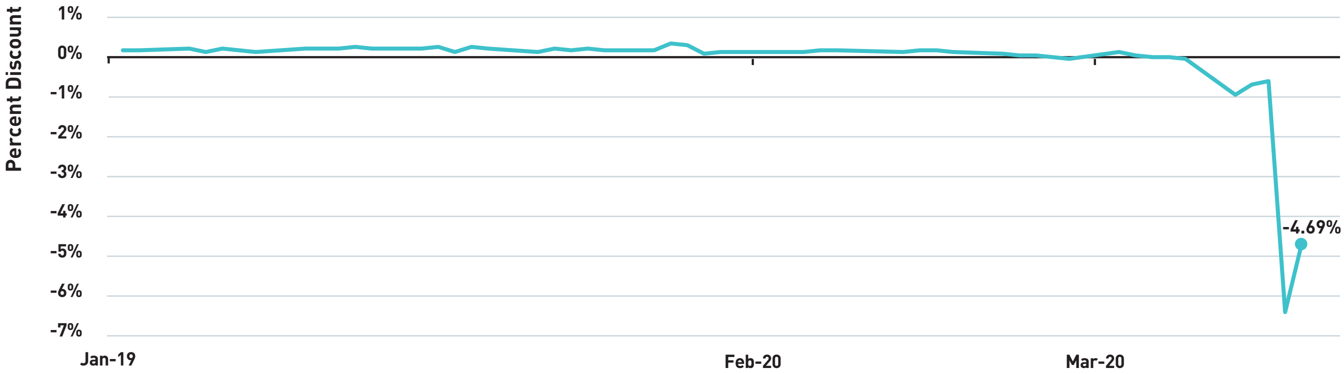
For the Creative Ninja Manager

For years, market commentators have worried aloud about how highly liquid exchange-traded funds (ETFs) on illiquid underlying products would fare in an extreme environment and now the debate has been resolved. The stress on credit products near the end of the week has caused some products to trade at incredible discounts which, for someone with risk to deploy, presents opportunities never seen before. While somewhat outside our area of expertise and normally a product for smaller investors[4], we note that the Vanguard Canadian Short Term Corporate Paper ETF (VSC), to cite just one example of many, and shown in Figure 4, was trading at a discount to the underlying assets of a very unusual 5% at the closing prices on Friday March 13th.

2. Sell futures, buy bonds in equivalent DV01 amounts.
3. See here for a recent article on the value of the **CGB Wildcard option**.
4. Not all of our readers and futures market participants are very large institutions.

FIGURE 4

Net Asset Value Discount, 2020



Source: www.vanguard.ca

For managers more accustomed to measuring relative value differentials in basis points rather than percentage points, this is an incredible discount. One can imagine a simple enough trade where the manager buys the ETF which has a yield-to-maturity of underlying assets of 3 years, and hedges interest rate risk with CGF contracts.

For those that (correctly) identify the maturity mismatch between 3 and 5 years in this trade, recall that you get the assets at a 5% price discount to fair value whereas your two years of slope risk is probably measured at most in tens of basis points. To sketch out the math, if everything was at par, that pricing differential would be 5 dollars divided by, say, 3 cents per basis point or 166 basis point spread over the spread. The actual spread is 1.9% less the 5-year yield of 54 basis points so you're in a spread tightener on investment grade corporate paper at, say, 300 basis points instead of 130 basis points. It's all back-of-the-napkin and spreads could widen or the discount could increase even more but 5% price discounts on investment grade assets are rare at best and a creative manager at a smaller firm may find a way to capitalize on this.

For the Gutsy Free-Wheeling Optimist Manager

Although incredibly serious and far from over, the COVID-19 crisis seems to us unlikely to cause a permanent change in human behavior. For the same reason that everyone's New Year's resolutions get broken, good intentions fall by the wayside over time. Certainly some demand destruction is taking place in services – movies, concerts and restaurants not gone to this month will not likely be made up in future – but surely some demand is just being postponed and the consumption will take place after the emergency has passed[5]. Vacations come to mind as a good example as I doubt anyone that can't travel in March is going to forego their vacation this year; the same consumption will occur when the vacation is taken some time later in the year.

For anyone with the view that the reaction (in markets, we're not trying to talk the health authorities out of measures to control the virus spread) has been too much, too fast, or both, there will come a time to short bonds. Monetary stimulus today should lead to an eventual pickup in consumer demand and production in industry in the future as, after all, that is the purpose of delivering such policy. At some point, that accommodative policy needs to be reversed and, while probably premature at time of writing, managers of a certain view may expect a near-term move higher in yields when/if the end of the crisis appears on the horizon.

Fixed income managers may consider a CGF/CGB steepening trade appropriate as even a recession today should eventually lead to steeper curves as recessions rarely last for multiple years. With the 5Y-10Y slope steepening to 16 basis points near the end of the week, even the most convinced should be patient for better entry points.

The truly bold may recognize that the Bank of Canada long-term target for inflation at 2%[6] is now 120 basis points higher than the 10-year bond rate. Unless the Bank's run of success hitting that target over the last 29 years has completely ended, 10-year bond yields will be higher in the future and a CGB short will eventually be the position to have.

5. There are other semi-permanent effects to consider also. The wealth effect is real and can lead to less total consumption. Further, some industries can be irreparably hurt by even short-term disruptions such that they take years to re-attain the efficiencies of scale that they once had.
6. Technically a target of 2% but range of 1-3%.

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