CGB Ten-Year Government of Canada Bond Futures

TMX THE FUTURE IS YOURS TO SEE.

MONTRÉAL EXCHANGE

Hedging Provincial Bonds with CGB Contracts

2018 may present a number of good opportunities for Portfolio Managers active in Provincial bond markets due to the election schedule. We discuss Provincial bond markets and how futures contracts (CGB®) can be used to hedge spread trades before turning to the upcoming Ontario election on June 7th.

Provincial Bond Markets in 2018

Opportunities present themselves quite frequently to adept Portfolio Managers in provincial bond markets. Although dominated by large asset managers, province-specific developments influence the relative price or yield spread between Government of Canada bonds and bonds issued by each province. Developments include budget announcements, elections, spending initiatives, and any other local issues that affect the stability of government, future borrowing requirements, or both. Local developments are not always of interest to the largest players in this market as these managers are often passive players that hold provincial bonds for lengthy periods of time in a classic positive carry trade. As such, despite being very large, the provincial bond market exhibits additional spread volatility since the long term carry positions are essentially removed from the market.

In 2018 there will be a minimum of three general elections, which typically have significant effects on provincial spreads. On June 7th, Ontario will go to the polls followed by New Brunswick on September 24th and Quebec on October 1st. In addition, with a minority coalition government that clings to power during a contentious dispute with its nearest neighbor, the electorate in British Columbia could be called to the polls at any time.

One can generalize market moving events in Provincial bonds into three main categories[1].

1. Increased/Decreased uncertainty. Markets of all kinds reward certainty with lower risk premia so events that introduce uncertainty such as elections, weak governments, or turmoil in other markets on which government revenue is dependent tend to widen provincial government bond spreads. The reverse is true for a decrease in uncertainty.
2. Impacts on future borrowing. Budget deficits or new spending initiatives tend to widen provincial spreads as well since overspending today can only be carried out through borrowing assuming no new sources of revenues. Spending initiatives ahead of elections, collapses in commodity markets, or a change of government from one that typically runs larger deficits[2] to one that campaigns on smaller government or less spending all fall into this category. Again the opposite development would tend to tighten provincial bond spreads.
3. Outside factors in other markets. Provincial bond spreads are not immune to a general rise in risk premia, changing investor sentiment, or the level of interest rates. Provincial spreads generally widen on outside risk aversion and tighten in tandem with risk-taking attitudes in other markets.

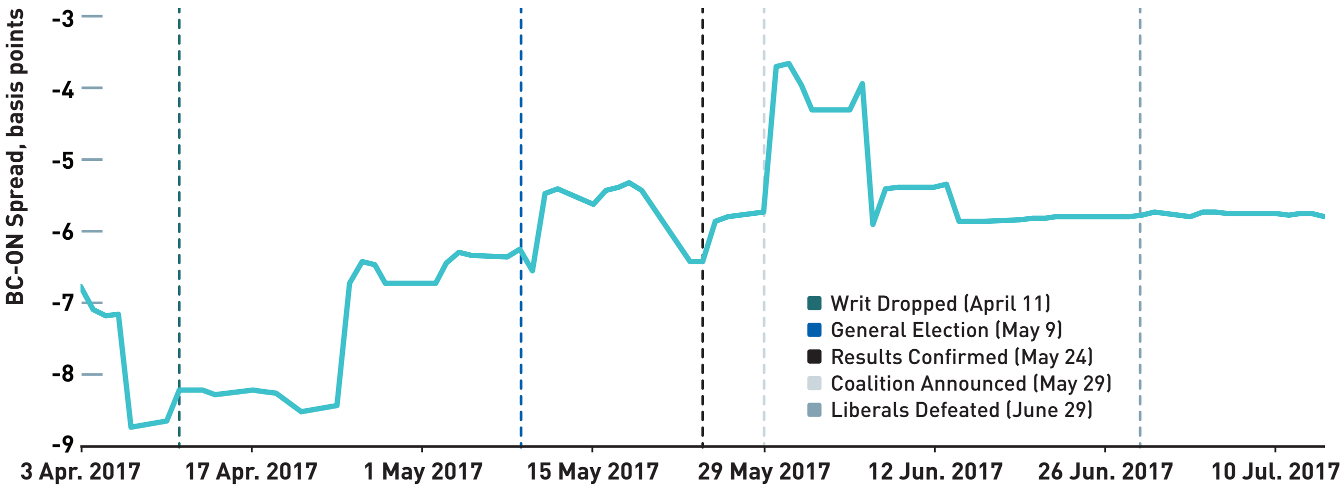
1. We do not address rating changes here since those changes are a reaction by ratings agencies to these same events.
2. Or is perceived to do so. Coalition governments which typically cooperate on spending initiatives rather than austerity initiatives also fall into this category.

Empirical Example: British Columbia in 2017

Examining the British Columbia (BC) Provincial election in 2017 provides a compelling, if unusually volatile, example. Between April 11th when the writ[3] was dropped to trigger the general election, through the general election date of May 9th and finally June 29th when the NDP-Green Party coalition finally defeated the incumbent Liberals, BC 10-year spreads fluctuated by nine basis points in absolute terms as well as nine basis points relative to Ontario spreads. Since Ontario spreads would be expected to rise or fall in tandem to BC due to outside factors (#3 above), we can assume that the relative volatility of BC spreads during this period was not due to exogenous market factors but to investors' interpretation of changes to factor #1 and #2 above.

In Figure 1, we chart the spread of BC 10-year bonds less the spread of Ontario 10-year bonds in an attempt to demonstrate the election cycle events that occurred during the election period. In Figure 1, movements to points higher on the chart, to a less negative number, indicate underperformance of BC bonds relative to those of Ontario. As we can see, BC spreads moved from roughly -8.5 to -4 relative to Ontario during the tumultuous election period but normalized to a very steady -6 after the uncertainty associated with the defeated incumbent abated in mid-June.

FIGURE 1
BC-ON Spreads, BC General Election 2017



Source: BMO Capital Markets Fixed Income Sapphire database

Construction of Trade

Without presenting full detail, we note the following structures which can capitalize on volatile Provincial bond spreads[4]. While traditionally traded versus Government of Canada bonds, the increased liquidity of CGB contracts, reduced effort in conducting frequent repo/reverse transactions to fund short or leveraged positions, and the certainty of implied repo rates rather than facing potential repo squeezes, makes futures a viable alternative for many investors. In addition, using a single CGB hedge instrument rather than multiple off-the-run bonds (or even a single 10-year bond) can reduce transaction costs when entering and exiting spread trades.

In general, spread tightening trades (i.e. spread moves to a smaller value) can be created by buying a Provincial bond and selling the identical dollar amount of interest rate sensitivity in CGB contracts. The opposite transactions create a Provincial spread widening trade.

An example where an investor has found two attractive Ontario bonds and hedged them with CGB contracts is shown in Figure 2. This construction would profit from tighter Ontario spreads, should they occur. More complex portfolios can obviously be constructed where an investor could own[5] a large number of different bonds with the interest rate component hedged by just one CGB position, or even a combination of CGB and CGF positions.

3. BC elections are every four years unless triggered early so the election date was known in advance by the electorate and markets
4. These are actually general hedging techniques that are not specific to provincial bonds. One could use these techniques to trade credit spreads, implied inflation, swap spreads, mortgage spreads, etc.
5. Or even be long some bonds and short others.

FIGURE 2
Ontario Spread Tightening Structure (2 bonds w/ CGB)

SECURITY	Security DV01	Price	Notional / Contracts	Total DV01
Buy Ontario 2.4% 2026	7,0	96,457	14 263 000	10 000
Buy Ontario 2.6% 2027	7,8	97,126	12 739 000	10 000
Sell CGBM18	9,9	130,900	-203,000	-20 047
				-48

Source: CanDeal Montréal Exchange

The above structure should be almost entirely immune to changes in the overall level of interest rates, of course, but also relatively immune from changes in curve slope since the maturity dates are closely matched. In fact, for off-the-run Provincial 10-year bonds, CGB contracts can help to reduce slope risk[6] relative to hedging Provincial bonds with on-the-run Canada bonds.

As with any good trade analysis, one should calculate the carry and rolldown over time in order to estimate the potential for slow accrual or decay. For brevity, we won't present that analysis here but, as is the norm in most spread trades, spread tightening structures almost always result in positive carry over time while spread widening structures tend to be negative carry.

Ontario 2018

Almost every poll for the Ontario general election in June indicates that the Ontario Progressive Conservative (PC) party will defeat the incumbent Liberals. Of note in this election, it appears that the electorate will defeat an incumbent that has made significant promises of future spending in favor of a party that appears[7] to endorse austerity, or at least smaller government[8]. Given the large lead by the PCs and their reluctance to match spending promises with the governing Liberals, one would expect tighter Ontario spreads in future, all else equal. Thus far in the election cycle, this has not always been the case.

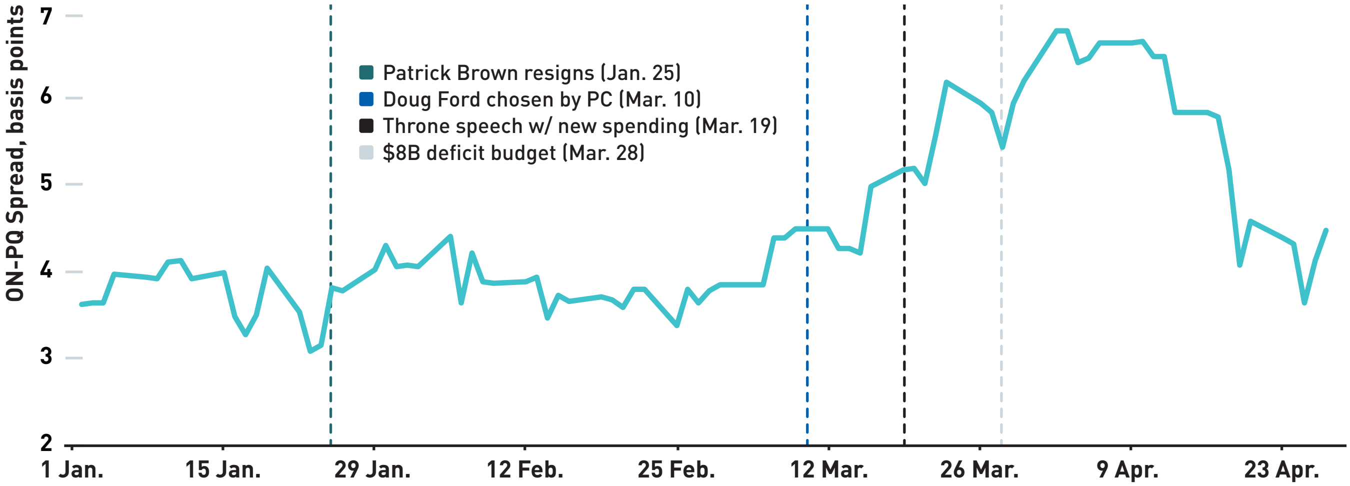
Perhaps some of this dynamic has played out already as we can see in Figure 3 which plots Ontario provincial bond spreads relative to Quebec spreads since the beginning of the year[9]. As we can easily see in that figure, Ontario spreads began widening from about 3.5 basis points wider than Quebec to 6.5 basis points wider than Quebec as the governing Liberals announced multiple spending initiatives which culminated in the deficit budget presented on March 28th. However, shortly afterwards spreads began to tighten in earnest as market participants (presumably) realized that polls indicate the new spending programs will never be implemented due to the defeat of the Liberal government on June 9th. In fact, just five weeks before the election, Ontario spreads are just a basis point wider than they were in January. We don't expect that to last as the news cycle picks up and the election nears.

During the coming election campaign Ontario spreads will probably widen again at various times as markets attempt to anticipate the outcome of the general election. Perhaps the catalyst will be the PCs slipping in one of the polls, showing poorly in a televised debate, or appearing vulnerable in some other significant way. Given the sizeable lead and general philosophy of the likely winner, there is a significant likelihood that spread trades in Ontario bonds will be lower if the Progressive Conservative party takes power. Spread moves during the campaign will almost certainly generate opportunities for Portfolio Managers who opportunistically trade an active portfolio as the election cycle plays out over the next month.

6. An even more advanced hedging strategy could use regression parameters to weight the CGB contracts based on the sensitivity of the yield of the provincial bond relative to the yield of the cheapest-to-deliver bond and.
7. Both the PCs and Liberals have mostly run government budget deficits while in power within recent decades. Little actual correlation exists in Canada between government budget deficits and the position on the political spectrum of the governing party.
8. As of May 3rd, the Ontario Progressive Conservative Party has not released an official platform.
9. This spread pair would ordinarily be quoted as Quebec minus Ontario (i.e. a negative) but we've chosen to reverse it here to make interpretation of Figure 3 identical to Figure 1

FIGURE 3

ON-PQ Spreads, 2018



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

Kevin Dribnenki writes about fixed income derivatives and opportunities in Canadian markets. He spent over 10 years managing fixed income relative value portfolios as a Portfolio Manager first at Ontario Teachers' Pension Plan and then BlueCrest Capital Management. During that time he managed domestic cash bond portfolios as well as international leveraged alpha portfolios and has presented at several fixed income and derivatives conferences. He received a BA in Economics from the University of Victoria, an MBA from the Richard Ivey School of Business, and holds the Chartered Financial Analyst designation.

For more information:

T: +1 514 871-3501

E: irderivatives@tmx.com

m-x.ca/futures

i BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking business of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Ireland plc., and Bank of Montreal (China) Co. Ltd and the institutional broker dealer businesses of BMO Capital Markets Corp. (Member SIPC) in the U.S., BMO Nesbitt Burns Inc. (Member Canadian Investor Protection Fund) in Canada and Asia and BMO Capital Markets Limited (authorized and regulated by the Financial Conduct Authority) in Europe and Australia. "BMO Capital Markets" is a trademark of Bank of Montreal, used under license.

Printed in Canada
© Bourse de Montréal Inc., May 2018

W-ED-STR-HedgingProvincialBondswithCGBContractsE- 6a0cb0b568a