



Rain down on me (Canada's December bond market cash)

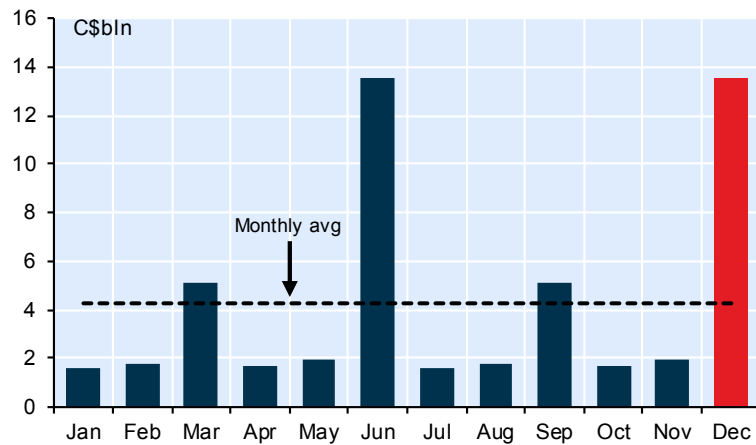
By Warren Lovely & Taylor Schleich

Bond market cash flows come and go, but a couple of times each year they are simply too large to ignore. As it happens, an extraordinary amount of cash is set to rain down on Canada's bond market in December, triggering secondary market adjustments and creating scope for primary issuance too. In particular, December 1st and 2nd are at or very near the top of the list of cash flow days to watch and prep for, December 15th coupon and roll adjustments also of the non-trivial variety. As we write this, December 1st is precisely 20 week days away. That means we are entering a traditional 'performance window' for Canadian bonds, one that has historically extended towards the end of the calendar year. This *Market View* report highlights key elements of the December cash flow effect, dissecting the performance record in Canadian rates (yields, curves, flies and cross-market). We draw attention to the most consistently profitable aspects of cash flow seasonals. At the same time, however, we urge caution and would resist placing blind faith in empirical tendencies. Today's market location is nothing like what we've seen in the past, yields having vaulted higher in 2022 as central banks attacked inflation, curves diving into inverted territory as recession risks mounted and cross-market levels moving to extremes as relative risks were recalibrated. Nor are cash flows the only thing holding sway in the days to come. Important data loom (jobs, inflation and growth being top of mind), which will help clarify thinking on upcoming policy rate decisions (BoC December 7th; FOMC December 14th). In the immediate near term, a federal government *Fall Economic Statement* should re-set GoC bond supply expectations lower, hinting at technical support. All that to say, one should season this seasonal analysis with a grain of salt.

An empirical examination of Canada's December cash flow effect, based on 12Y sample from 2010-21

Chart 1: Heavy seasonal concentration of bond index cash

Projected FTSE Canada Universe Bond Index cash flows: 2022 by month

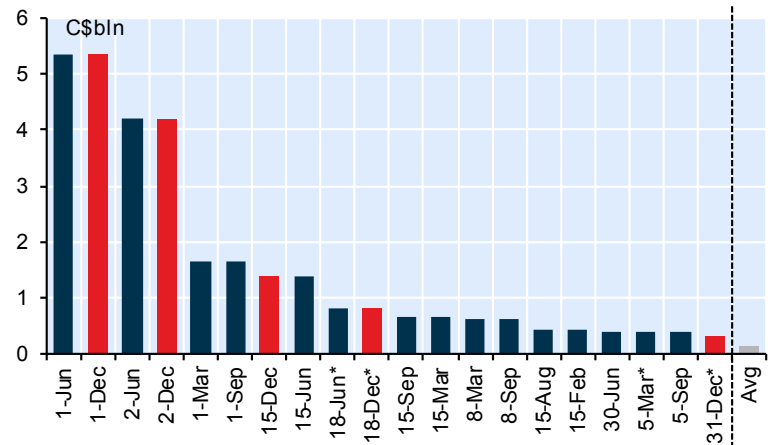


Source: NBF, FTSE Russell | Note: Based on estimated cash flows at start of year

When it comes to bond index cash, June & December stand out above the crowd, where cash flows tend to be at least 3X the monthly average. 2022 is no different, a slug of cash looming.

Chart 2: Cash rains down on a handful of days (notably Dec 1st/2nd)

Largest projected FTSE Canada Universe Bond Index cash flow days: 2022

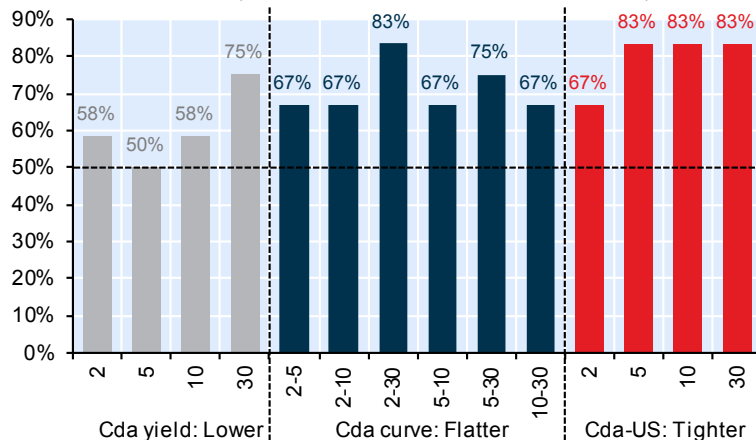


Source: NBF, FTSE Russell | Note: Asterisk denotes a day that falls on weekend in 2022

December's cash is heavily concentrated on the 1st, 2nd & 15th of the month, where coupon & roll effects drive waves of duration extension. We'll detail specific index effects in a separate report

Chart 3: A handful of consistently profitable elements

12Y success rates vs. expected direction in Canadian rates 20D up to 1-Dec

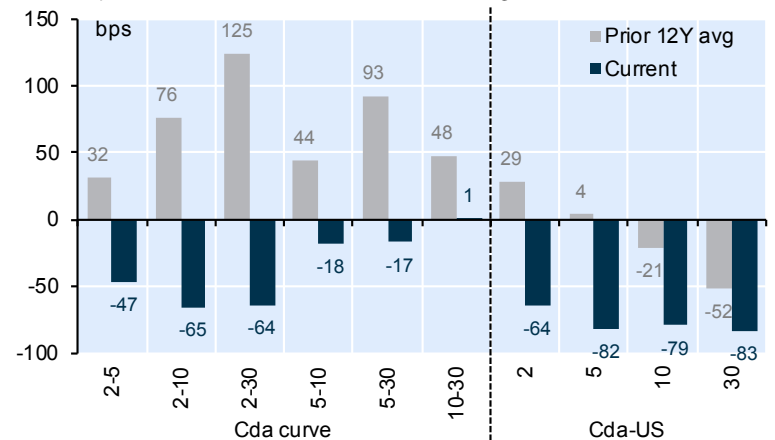


Source: NBF, Bloomberg | Note: Success rates based on 12Y period from 2010-21

All else equal, December seasonals support flatter curves & relative performance of Canadas vs. USTs. Success rates (pre or post cash flows) aren't necessarily 100%, however. Looking at moves in the days leading up to 1-Dec, Canada-US 5s, 10s & 30s have been consistently tighter.

Chart 4: Current vs. average levels, there's no comparison!

Canada yield curves & differentials: Current vs. avg level 20D before 1-Dec

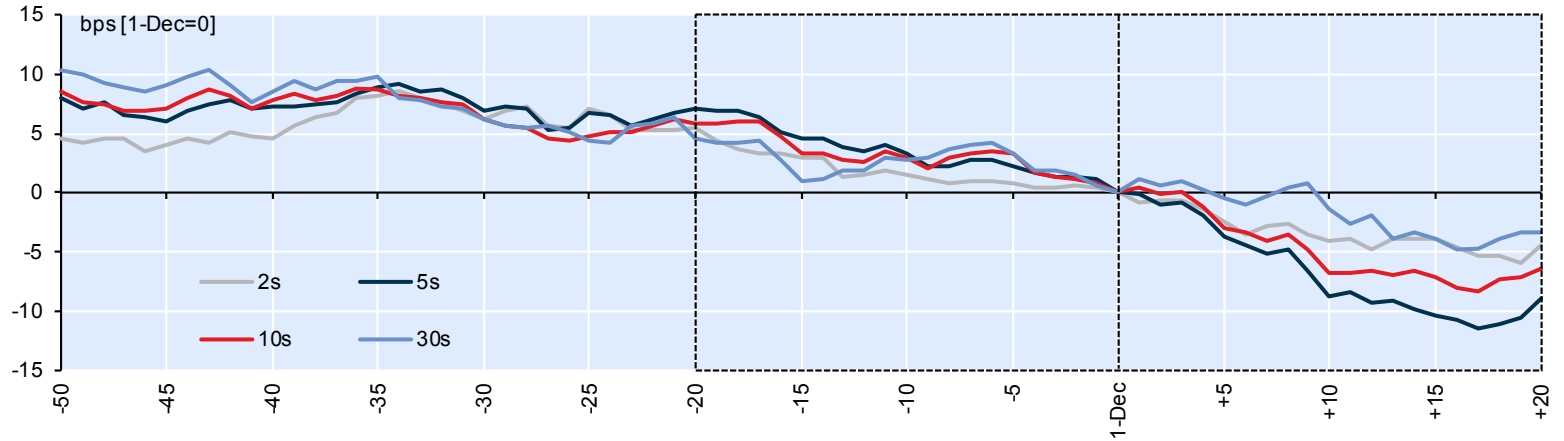


Source: NBF, Bloomberg | Note: Prior 12Y average based on 2010-21

Today's curves are relatively flat (in some cases deeply inverted) relative to where we've often been this time of year. Duration extension may add flattening fuel, but policy rate re-pricing remains a major wildcard. Another caution: Canadas are relatively rich to USTs vs. past periods.

Chart 5: Historically, it has paid to be long Canada vs. US heading into 1-Dec, keeping trade on for much of December

Cumulative change in Canada-US yield differentials relative to 1-Dec, based on prior 12Y average (2010-21)

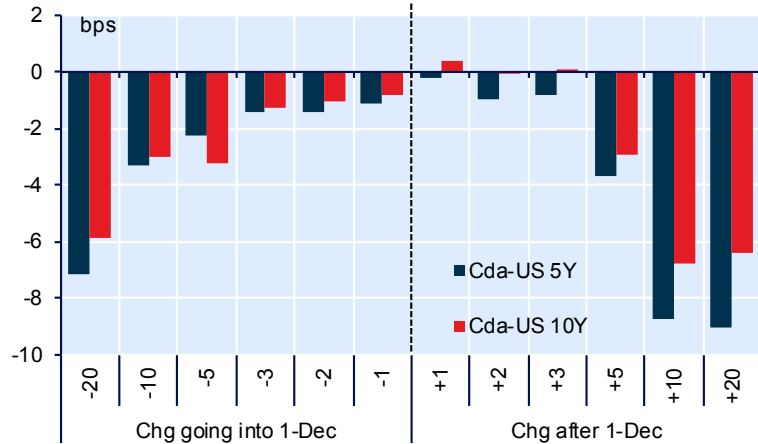


Source: NBF, Bloomberg | Note: Cumulative change in yield differentials based on generic benchmarks; horizontal axis reflects weekdays relative to 1-Dec (which is set to 0)

We've tended to observe material & sustained outperformance of Canada vs. the US heading into December's large cash flows. When it comes to post-December 1st performance vs. the US, the historical record (based on 2010-21) appears best in 5s & 10s. We caution that past performance is no guarantee, particularly with Canada's trading at noted premiums across the curve.

Chart 6: Canada-US tends to perform pre & post 1-Dec

Avg change in Canada-US 5s & 10s leading up to & following 1-Dec (2010-21)

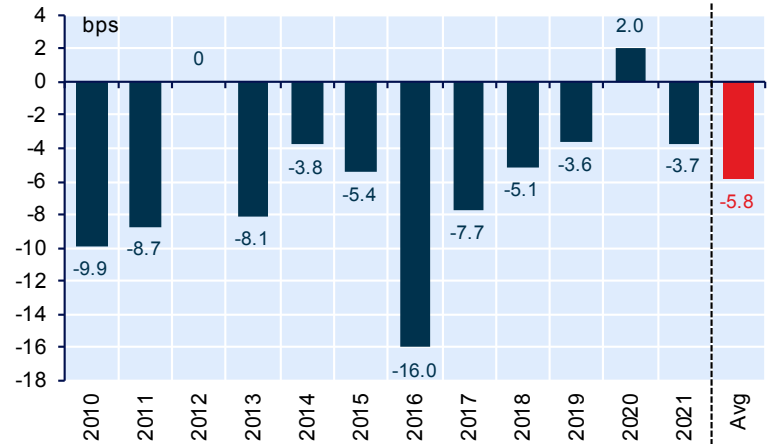


Source: NBF, Bloomberg | Note: Avg chg for given number of weekdays vs. 1-Dec

History suggests it pays to put the Canada-US trade on early (i.e., now). It likewise tends to be profitable to maintain a long Canada, short US bias into mid-December (if not year-end).

Chart 7: Consistent success in Cda-US10s (tighter 10 of 12 years)

Net change in Canada-US 10s in 20D leading up to 1-Dec

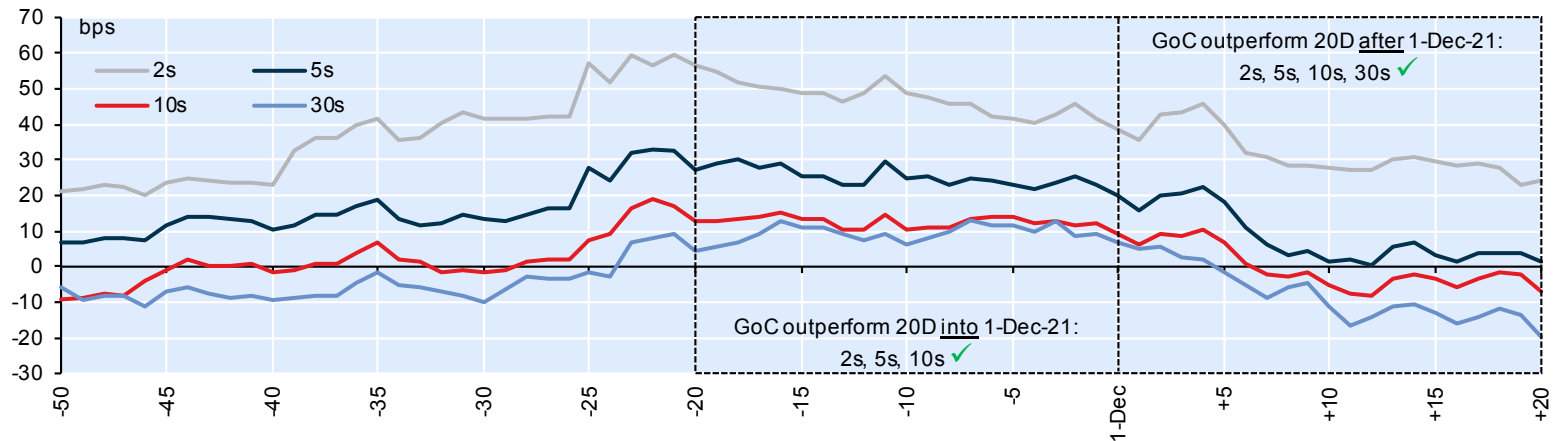


Source: NBF, Bloomberg | Note: Based on relative changes in generic 10Y benchmarks

Canada 10s have outperformed Treasuries in 10 of 12 years, based on the 20D change leading up to 1-Dec. Only once, in a pandemic-distorted 2020, did Canada 10s lag the US pre-cash.

Chart 8: Canada outperformance trend was on display pre & post 1-Dec in 2021

Cumulative change in Canada-US yield differentials relative to 1-Dec-2021

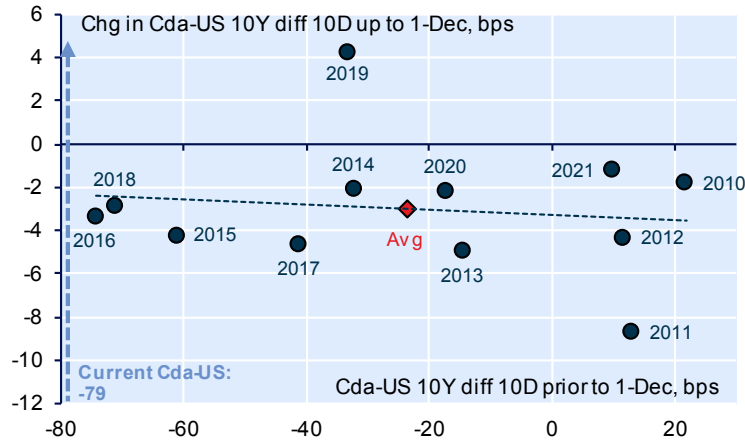


Source: NBF, Bloomberg | Note: Cumulative change in yield differentials based on generic benchmarks; horizontal axis reflects weekdays relative to 1-Dec-21

Reflecting on 2021, Canada enjoyed a degree of outperformance in the lead-up to December 1st. But cross-market performance was more broadly based & observable after the cash started to flow, Canada tightening an outsized 14-27 bps over the course of Dec-2021. There's plenty to keep our eyes on this go round, with upcoming data helping to fine-tune thinking on both the Fed & BoC.

Chart 9: Canada performance impervious to location?

Change in Canada-US 10s relative to prevailing level 10D before 1-Dec

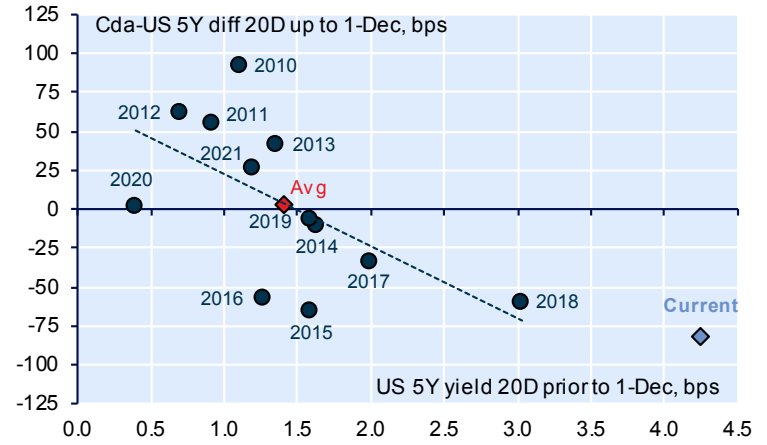


Source: NBF, Bloomberg | Note: Current -78 bp level as of 2-Nov

In the past, seasonal cash supported Canada vs. US, even when starting from notionally 'rich' territory. Saying that, we haven't seen Canada this rich to Treasuries in our post-GFC sample.

Chart 10: Underlying market level & direction a consideration

Canada-US 5s relative to underlying US yield level 20D before 1-Dec

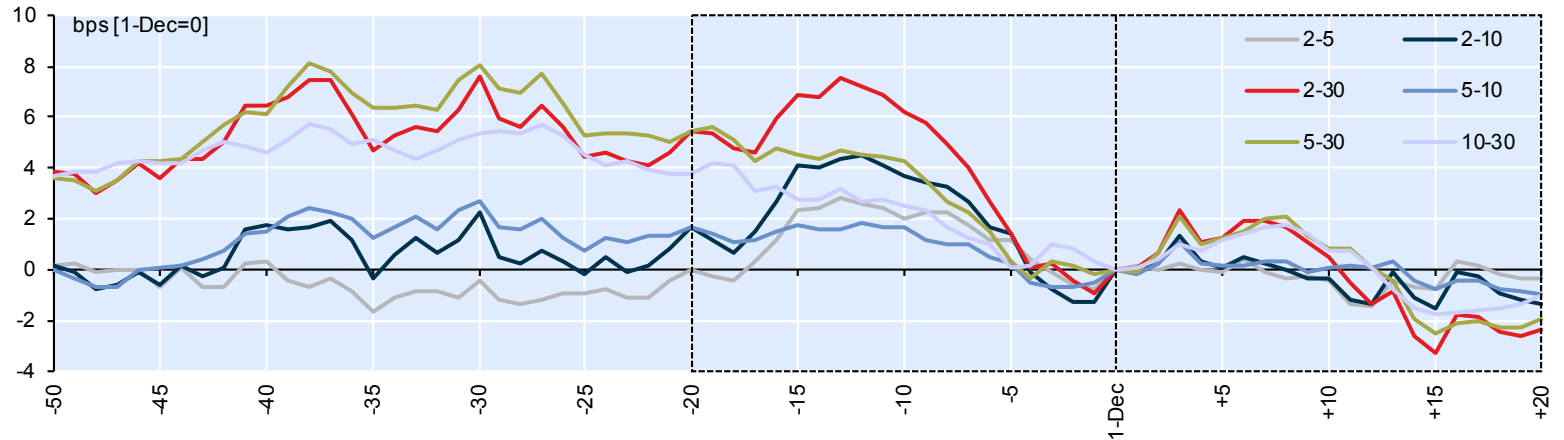


Source: NBF, Bloomberg | Note: Current levels 4.25% & -82 bps as of 2-Nov

Market directionality remains another key consideration. Canada outperformed as yields surged this year. A less hawkish BoC has supported this trend, the FOMC as yet unwilling to blink.

Chart 11: The flattener has, on average, been in vogue in the lead-up to 1-Dec

Cumulative change in key Canada yield curves relative to 1-Dec, based on prior 12Y average (2010-21)

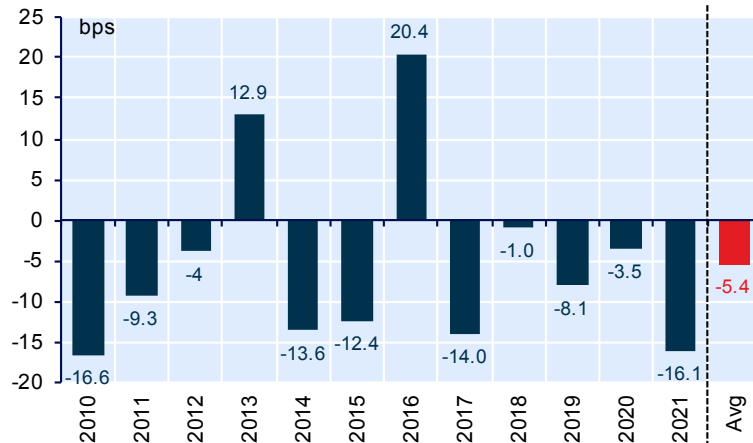


Source: NBF, Bloomberg | Note: Cumulative change in yield differentials based on generic benchmarks; horizontal axis reflects weekdays relative to 1-Dec (which is set to 0)

Historically, there's a distinct tendency towards flatter curves as investors positioned for duration extensions in/around December 1st. Most curves have flattened no less than two-thirds of the time in the 10D heading into December, Canada 2s30s seeing the most consistent & significant flattening. As noted, however, we're at relatively extreme levels today, all but 10s30s curve now inverted.

Chart 12: This is what 83% success looks like (for Cda 2s-30s)

Net change in Canada 2s-30s curve in 20D leading up to 1-Dec

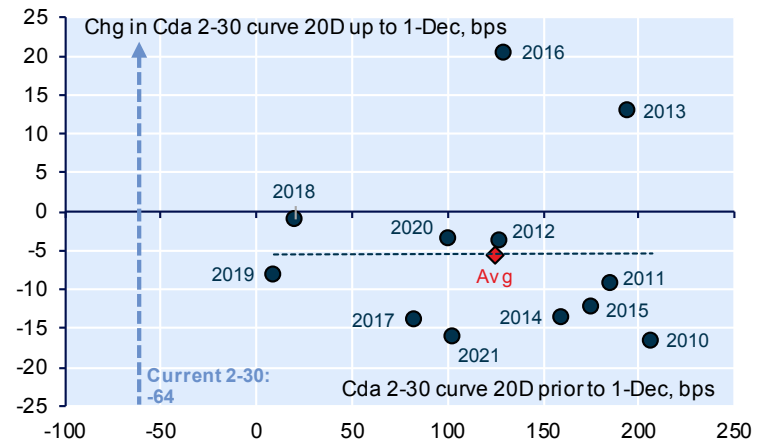


Source: NBF, Bloomberg | Note: Based on relative changes in generic 2Y/30Y benchmarks

Keying on 2s30s, this curve flattened in 10 of the past 12 years going into December 1st. That included a significant flattening last year, which continued right up to calendar year-end.

Chart 13: Caution: Curve flatter (more inverted) than prior years

Change in Canada 2s-30s curve relative to level prevailing 20D before 1-Dec

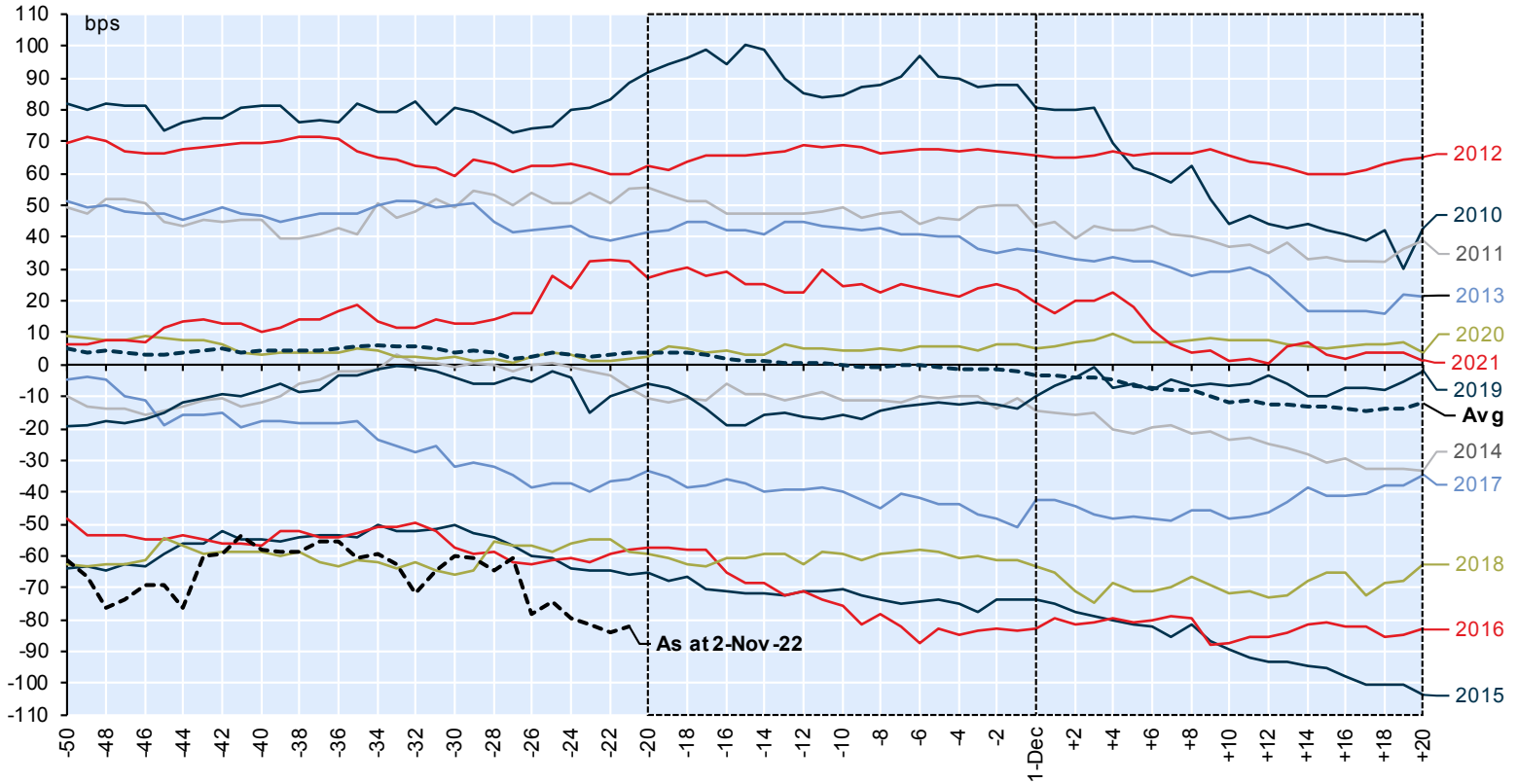


Source: NBF, Bloomberg | Note: Current level -64 bps as of 2-Nov

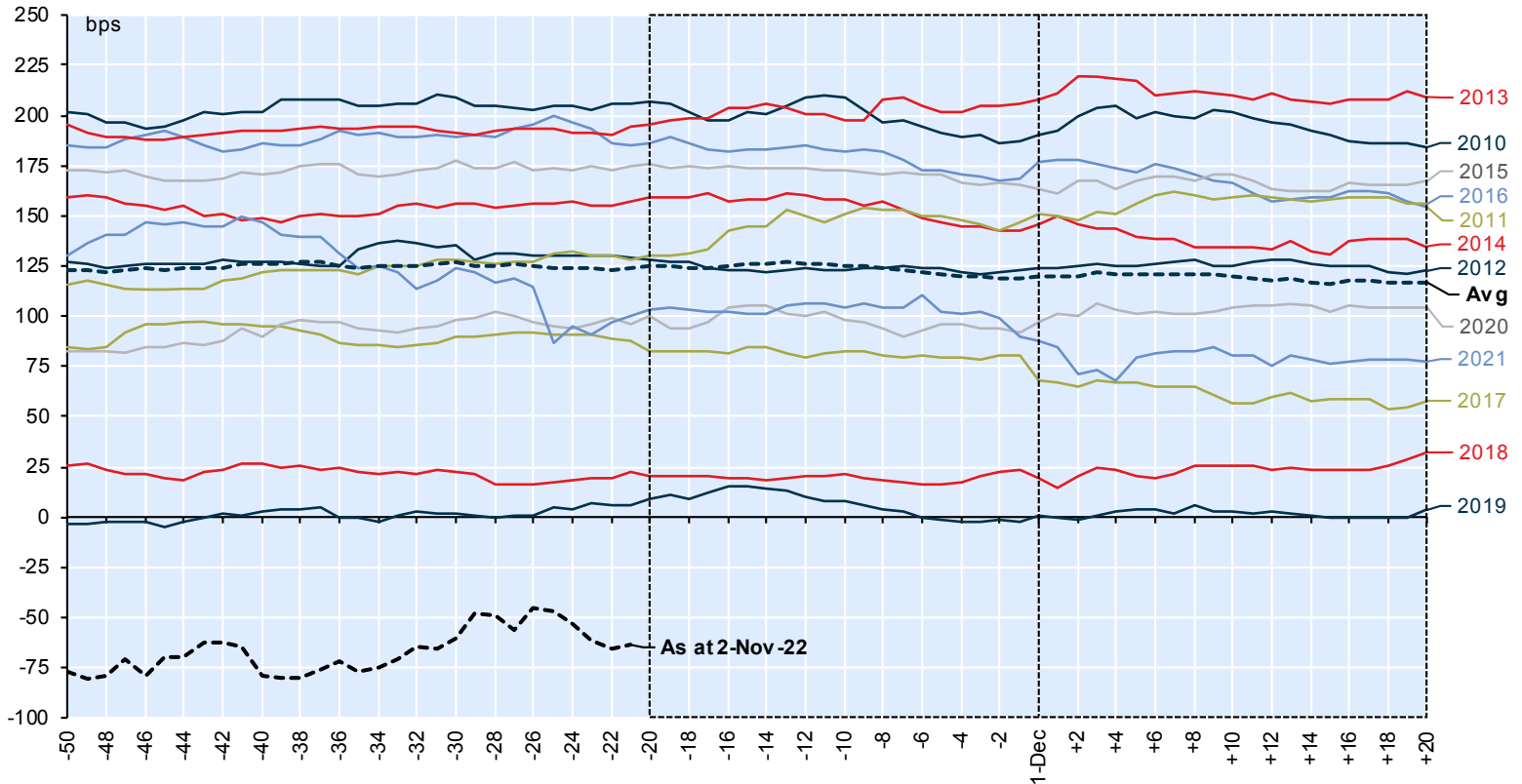
In the past, the flattener tended to work irrespective of starting location. But we've never kicked off the seasonal cash flow trade from such inverted levels, which is a potential complication.

Charts 14-15: Visualizing today's relatively extreme levels (cross-market & curve) compared to prior years

Evolution of Canada-US 5Y yield differential pre & post 1-Dec, including current trajectory (up to 2-Nov)



Evolution of Canada 2s30s yield curve pre & post 1-Dec, including current trajectory (up to 2-Nov)



Source: NBF, Bloomberg | Note: Yield differentials & yield curves based on generic benchmarks; horizontal axis reflects weekdays

Deviation from trend is the theme for this year. Today's 5Y cross-market premium to USTs, at 82 bps, stands 1.6 standard deviations inside of the mean for this time of year (based on our 12Y sample). The Z score on Canada's 2s30s curve is even more extreme, the current 64 bp inversion, almost 3 standard deviations flatter than average. Extreme levels argue for caution when positioning for cash.

Table: Average moves & detailed performance record in Canadian rates

Average move & success rates in Canada interest rates (outright yields, curves, butterflies & vs. US) leading up to & following December 1st (based on 2010-21)

Wk days		Canada Outright				Canada Curves						Canada Flies			
		2-year	5-year	10-year	30-year	2s-5s	2s-10s	2s-30s	5s-10s	5s-30s	10s-30s	2s-5s-10s	2s-5s-30s	2s-10s-30s	5s-10s-30s
Before 1-Dec	-20	1.4	1.4	-0.3	-4.0	0.0	-1.7	-5.4	-1.7	-5.4	-3.8	1.7	5.4	2.1	2.1
	-10	1.4	-0.6	-2.3	-4.8	-2.0	-3.7	-6.2	-1.7	-4.2	-2.5	-0.3	2.3	-1.2	0.8
	-5	-1.6	-2.7	-3.0	-3.0	-1.2	-1.4	-1.4	-0.2	-0.3	0.0	-0.9	-0.9	-1.3	-0.2
	-3	0.2	0.4	1.0	0.0	0.1	0.8	-0.2	0.7	-0.4	-1.0	-0.5	0.5	1.8	1.7
	-2	0.4	1.0	1.7	0.8	0.6	1.2	0.4	0.7	-0.2	-0.8	-0.1	0.7	2.1	1.5
	-1	0.7	1.5	2.0	1.7	0.8	1.3	1.0	0.5	0.2	-0.3	0.2	0.6	1.6	0.9
After 1-Dec	+1	-0.7	-0.5	-0.7	-0.6	0.2	0.0	0.1	-0.2	-0.1	0.1	0.3	0.3	-0.1	-0.3
	+2	-0.5	-0.5	-0.3	0.1	0.0	0.2	0.6	0.3	0.7	0.4	-0.3	-0.7	-0.2	-0.2
	+3	-1.0	-0.7	0.4	1.4	0.3	1.4	2.3	1.1	2.1	1.0	-0.8	-1.8	0.3	0.1
	+5	-0.5	-0.6	-0.4	0.7	-0.1	0.1	1.2	0.2	1.3	1.1	-0.2	-1.3	-1.0	-1.0
	+10	-0.3	-0.7	-0.6	0.2	-0.4	-0.3	0.4	0.1	0.9	0.8	-0.5	-1.3	-1.1	-0.7
	+20	0.3	-0.1	-1.1	-2.1	-0.4	-1.3	-2.4	-1.0	-2.0	-1.0	0.6	1.6	-0.3	0.0
Success rate (%)	-20	58%	50%	58%	75%	67%	67%	83%	67%	75%	67%	50%	42%	50%	50%
	-10	42%	42%	50%	83%	58%	67%	75%	67%	75%	67%	50%	50%	50%	42%
	-5	58%	50%	50%	58%	58%	50%	42%	33%	50%	50%	58%	50%	50%	33%
	+5	58%	50%	33%	33%	50%	58%	33%	33%	25%	25%	50%	58%	67%	50%
	+10	42%	58%	58%	50%	50%	33%	33%	33%	33%	42%	42%	50%	50%	50%
	+20	25%	50%	58%	50%	50%	42%	50%	58%	67%	67%	50%	50%	58%	50%
Test >	Lower yield				Flatter curve						Belly outperformance vs. wings				

Wk days		Canada-US Differential				Canada-US Boxes						Canada-US "Fly Trap"			
		2-year	5-year	10-year	30-year	2s-5s	2s-10s	2s-30s	5s-10s	5s-30s	10s-30s	2s-5s-10s	2s-5s-30s	2s-10s-30s	5s-10s-30s
Before 1-Dec	-20	-5.4	-7.1	-5.8	-4.5	-1.7	-0.4	0.9	1.3	2.7	1.4	-3.0	-4.4	-1.8	-0.1
	-10	-1.5	-3.3	-3.0	-2.8	-1.8	-1.5	-1.3	0.3	0.5	0.2	-2.2	-2.4	-1.7	0.1
	-5	-0.8	-2.3	-3.2	-3.2	-1.4	-2.4	-2.4	-1.0	-1.0	0.0	-0.5	-0.5	-2.4	-0.9
	-3	-0.5	-1.4	-1.2	-1.9	-0.9	-0.7	-1.4	0.2	-0.5	-0.7	-1.1	-0.4	-0.1	0.8
	-2	-0.6	-1.4	-1.1	-1.5	-0.8	-0.5	-0.8	0.3	-0.1	-0.4	-1.1	-0.7	-0.1	0.7
	-1	-0.5	-1.1	-0.8	-0.7	-0.7	-0.3	-0.2	0.3	0.4	0.1	-1.0	-1.1	-0.5	0.2
After 1-Dec	+1	-0.8	-0.2	0.4	1.2	0.6	1.2	2.0	0.6	1.4	0.8	0.0	-0.8	0.4	-0.2
	+2	-0.7	-1.0	0.0	0.7	-0.3	0.6	1.3	0.9	1.6	0.7	-1.2	-1.9	-0.1	0.2
	+3	-0.7	-0.8	0.1	0.9	-0.1	0.8	1.6	0.9	1.7	0.8	-1.1	-1.8	0.0	0.2
	+5	-2.5	-3.7	-2.9	-0.5	-1.2	-0.5	1.9	0.8	3.2	2.4	-2.0	-4.4	-2.9	-1.6
	+10	-4.0	-8.7	-6.8	-1.5	-4.7	-2.8	2.6	1.9	7.3	5.3	-6.6	-11.9	-8.1	-3.4
	+20	-4.5	-9.0	-6.4	-3.3	-4.6	-2.0	1.2	2.6	5.7	3.1	-7.1	-10.3	-5.1	-0.5
Success rate (%)	-20	67%	83%	83%	83%	58%	58%	50%	33%	42%	33%	58%	50%	50%	50%
	-10	58%	83%	92%	67%	67%	75%	58%	50%	50%	58%	58%	67%	67%	42%
	-5	67%	75%	83%	75%	58%	75%	58%	67%	58%	50%	42%	42%	75%	58%
	+5	58%	67%	58%	50%	58%	58%	33%	42%	17%	17%	67%	75%	58%	67%
	+10	75%	75%	67%	50%	83%	58%	25%	33%	8%	17%	92%	100%	75%	67%
	+20	58%	75%	67%	50%	75%	58%	42%	33%	25%	42%	67%	67%	67%	50%
Test >	Relative outperformance of Canada				Relatively greater flattening in Canada						Relative outperformance of Canada belly				

Source: NBF, Bloomberg | Note: Success rates reflect the percentage of time the expected direction of trade held; examples of the a priori direction of trade include: Canada outright=lower yield; Canada curves=flatter; Canada-US yield differentials=tighter, etc; Canada-US "fly trap" represents a Canada butterfly vs. US butterfly trade involving six bonds

More to come...

This Market View report kicks off our analysis of December's cash flow effects. Supplemental analysis will include a closer look at the specific bond index adjustments we see coming on three key days: December 1st, 2nd & 15th. We will also offer an empirical assessment of credit spread seasonals, focusing on Canada's high-grade public sector credit markets and controlling for current valuation.



Economics and Strategy

Montreal Office

514-879-2529

Stéfane Marion

Chief Economist and Strategist
stefane.marion@nbc.ca

Kyle Dahms

Economist
kyle.dahms@nbc.ca

Alexandra Ducharme

Economist
alexandra.ducharme@nbc.ca

Matthieu Arseneau

Deputy Chief Economist
matthieu.arseneau@nbc.ca

Daren King, CFA

Economist
daren.king@nbc.ca

Angelo Katsoras

Geopolitical Analyst
angelo.katsoras@nbc.ca

Jocelyn Paquet

Economist
jocelyn.paquet@nbc.ca

Toronto Office

416-869-8598

Warren Lovely

Chief Rates and Public Sector Strategist
warren.lovely@nbc.ca

Taylor Schleich

Rates Strategist
taylor.schleich@nbc.ca

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