CIRCULAR 076-19
May 22, 2019

REQUEST FOR COMMENTS

AMENDMENTS TO ARTICLE 12.212 OF THE RULES OF BOURSE DE MONTRÉAL INC. TO MODIFY THE DELIVERY STANDARDS OF THE FIVE-YEAR GOVERNMENT OF CANADA BOND FUTURES (CGF)

On May 9, 2019, the Rules and Policies Committee of Bourse de Montréal Inc. (the "**Bourse"**) approved amendments to article 12.212 of the Rules of the Bourse in order to modify the delivery standards of the CGF contract.

Comments on the proposed amendments must be submitted at the latest on **June 21, 2019**. Please submit your comments to:

Alexandre Normandeau
Legal Counsel
Bourse de Montréal Inc.
1800-1190 av des Canadiens-de-Montréal
P.O. Box 37
Montreal, Quebec H3B 0G7
E-mail: legal@tmx.com

A copy of these comments shall also be forwarded to the *Autorité des marchés financiers* (the "**Autorité**") to:

Me Anne-Marie Beaudoin
Corporate Secretary
Autorité des marchés financiers
800 Victoria Square, 22nd Floor
P.O. Box 246, Tour de la Bourse
Montréal (Québec) H4Z 1G3
E-mail: consultation-en-cours@lautorite.qc.ca

Please note that comments received by one of these recipients will be transferred to the other recipient and that the Bourse may publish a summary of such comments as part of the self-certification process concerning this file. Unless specified otherwise, comments will be published anonymously by the Bourse.

Appendices

You will find in the appendices an analysis as well as the text of the proposed amendments. The implementation date of the proposed amendments will be determined by the Bourse, in accordance with the self-certification process as established by the *Derivatives Act* (CQLR, chapter I-14.01).

Process for Changes to the Rules

The Bourse is authorized to carry on business as an exchange and is recognized as a self-regulatory organization by the Autorité. The Board of Directors of the Bourse has delegated to the Rules and Policies Committee of the Bourse its powers to approve and amend the Rules, the Policies and the Procedures, which are thereafter submitted to the Autorité in accordance with the self-certification process as determined by the *Derivatives Act* (CQLR, chapter I-14.01).

AMENDMENTS TO ARTICLE 12.212 OF THE RULES OF BOURSE DE MONTRÉAL INC. TO MODIFY THE DELIVERY STANDARDS OF THE FIVE-YEAR GOVERNMENT OF CANADA BOND FUTURES (CGF)

TABLE OF CONTENTS

I. SUMMARY

Bourse de Montréal Inc. (the “Bourse”) hereby proposes to update its rules pertaining to delivery standards on the Five-Year Government of Canada (“GoC”) bond futures (“CGF”), in order to better reflect market conditions and stimulate more activity on the contract. The Bourse considers that a well-functioning CGF market is desirable for the growth of its products and wants to ensure that its contract design is in line with the needs of its market participants. Therefore, the Bourse proposes to change the remaining maturity range of deliverable bonds from 4.25-5.25 years to 4.5-5.5 years and to reduce the minimum amount outstanding of deliverable bonds from C$3.5B to C$3B . The Bourse believes that these proposed amendments will better serve the needs of market participants and enhance market efficiency.

II. ANALYSIS

a. Background

Benchmark bonds are usually the most liquid bonds in the over-the-counter (“OTC”) bonds market. Because of this liquidity pool concentration, they represent the primary tool for participants wishing to manage and adjust their fixed income portfolios during a given day. Following these transactions in benchmark bonds, a number of clients and brokers transfer this exposure into more efficient futures contracts via the Exchange for Physical (“EFP”) facility of the Bourse. Therefore, an efficient interaction between the benchmark bonds and their associated GoC bond futures contracts is desirable to help clients and brokers in their portfolio and balance sheet management. However, EFP transactions (often referred to as “basis trade” or “cash and carry trade”) are predominantly quoted against the cheapest-to-deliver (“CTD”) bond, since it is the bond most likely to be delivered during the delivery month. If the benchmark bond is not the same as the CTD bond, participants can roll (or convert) their benchmark bond exposure into the CTD bond, enabling easier EFP trades thereafter. However, market participants’ feedback is that this conversion between the benchmark bond and the CTD bond is not convenient to execute in the 5-year segment of the yield curve, potentially explained by the fact that the CGF is not liquid enough at the moment. This benchmark bond to CTD conversion trade also represents an additional step (cost) for clients. Thus, the longer the benchmark bond remains the CTD bond, the easier it is for participants to interact with the Bourse’s CGF contract to manage fixed income portfolios.

In 2013, the Bourse implemented a similar modification to the CGF delivery standards, reducing the remaining maturity range of deliverable bonds from 3.5-5.25 years to a maturity of 4.25-5.25 years. While this change did improve the attractiveness of the CGF contract by increasing the duration of the CTD bond and reducing the tracking error relative to the on-the-run five-year GoC bond, the CTD bond is still not the five-year GoC benchmark bond for about half the year, a situation participants would like to see corrected.

Regarding the minimum amount outstanding of deliverable bonds, the last eight 5-year bond auctions held by the Bank of Canada (“BoC”) had an amount issued of C$3B per auction. This represents a reduction from the amount issued at 5-year bond auctions in 2016 and 2017, where the average was C$3.8B per auction. Given that a mature 5-year bond has a total amount outstanding between C$12B toC$18[1], and that each five-year bond usually gets auctioned four times before reaching maturity, that C$3B amount issued at each auction is in line with the lower bound of the total amount outstanding target. However, given that the current minimum amount outstanding of deliverable bonds is C$3.5B, it now takes more time (at least two auctions) for a bond to be eligible for delivery.

b. Description and Analysis of Market Impacts

The Bourse proposes to modify article 12.212 of the rules to change the basket of deliverable bonds from a remaining maturity range of 4.25-5.25 years to 4.5-5.5 years, and to change the minimum amount outstanding of deliverable bonds from C$3.5B to C$3B for the CGF contract. The table 1 below summarizes the modification contemplated:

Table 1: Current and proposed CGF maturity range and minimum amount outstanding requirements for deliverable bonds

Current CGF maturity range requirement	Proposed CGF maturity range requirement
Government of Canada bonds which have a remaining time to maturity of between 4.25 years and 5.25 years as of the first day of the delivery month, calculated by rounding down to the nearest whole month period	Government of Canada bonds which have a remaining time to maturity of between 4.5 years and 5.5 years as of the first day of the delivery month, calculated by rounding down to the nearest whole month period
Current CGF amount outstanding requirement	Proposed CGF amount outstanding requirement
Government of Canada bonds which have an outstanding amount of C$3.5 billion nominal value[2].	Government of Canada bonds which have an outstanding amount of C$3 billion nominal value[3].

The proposed modifications are based on a consultation with market participants and end-user clients, aiming to increase CGF's effectiveness as a trading and hedging instrument. The feedback the Bourse is receiving from the industry is that a better alignment between the CGF and the underlying cash bond market will help grow the acceptance of the futures contract.

GoC 5-year issuance pattern

Each spring, the BoC publishes its debt management strategy for the upcoming year. Here is the projected 5-year bond issuances for 2019-2020, a pattern that has been relatively stable in the last few years. The impacts of the proposed modifications discussed thereafter are based on these conditions:

- Eight auctions per year (Jan, Feb, Apr, May, July, Aug, Oct, Nov)
- Two new 5-year bonds issued per year (March and September maturity)

[1] See Debt Management Strategy for 2019-2020: https://www.budget.gc.ca/2019/docs/plan/anx-04-en.html#Debt-Management-Strategy-for-2019%E2%80%9320

[2] net of all potential purchases by the Government of Canada up until the end of the period during which the Bond issue is deliverable.

[3] See note 2.

- Target size for each 5-year bond is C$12-18B.

Given this debt issuance pattern and strategy, the 5-year benchmark bond changes two times per year (mid-February and mid-August). For the front month contract, the benchmark bond is not the CTD for about half the year, including the entire active trading period of the June and December expiries.

Impacts of the proposed changes to the remaining maturity range on the delivery basket
The impacts of changing the remaining maturity range of deliverable bonds from 4.25-5.25 years to 4.5-5.5 years only relates to the June and December contract expiry. Specifically for those contracts, the modifications would imply[4]:

- One less deliverable bond in the delivery basket, reducing the deliverable amount outstanding from a minimum of C$30B to C$18B for these expiries.
- A reduction of position limit for the first contract month, from a maximum of 15,000 contracts to 9,000 contracts.
- The five year benchmark bond would be the CTD bond for the entire "active" trading period of the contract.

Tables 2-5 below summarizes the impacts of the proposed modifications to the remaining maturity range on the deliverable baskets and on the CTD bond. As illustrated, all four contract expiries would now have two bonds in their respective delivery basket.

Table 2: Current CGF delivery basket

Expiry Month	# of eligible bonds	remaining maturity (as of the 1st day of the delivery month)	Amount outstanding (in C$ billions)
March and September	2	4.5Y and 5Y	C$24B - 30B$
June and December	3	4.25Y, 4.75Y and 5.25Y	C$30B-36B

Table 3: Proposed CGF delivery basket

Expiry Month	# of eligible bonds	remaining maturity (as of the 1st day of the delivery month)	Amount outstanding (in C$ billions)
March and September	2	4.5Y and 5Y	C$24B - C$30B
June and December	2	4.75Y and 5.25Y	C$18B - C$21B

[4] Based on debt issuance projections, derived from the amount issued at most recent 5-year bond auctions and from the GoC 5-year issuance pattern strategy section described above.

Table 4: Current CGF delivery basket - Period of time when 5-year benchmark bond is or is not the same as the CTD

CGF expiry	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
March	Y Y Y Y	Y Y N N	N N N								Y	Y Y Y Y
June		N	N N N N	N N N N	N N N N	N N N						
September					Y	Y Y Y Y	Y Y Y Y	Y Y N N	N N N			
December								N	N N N N	N N N N	N N N N	N N N

Legend	
	Contract active period
	Roll period
	Delivery period

Y: Benchmark bond is the CTD
N: Benchmark bond is not the CTD

Table 5: Proposed CGF delivery basket - Period of time when 5-year benchmark bond is or is not the same as the CTD

CGF expiry	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
March	Y Y Y Y	Y Y N N	N N N								Y	Y Y Y Y
June		Y	Y Y Y Y	Y Y Y Y	Y Y Y Y	Y Y Y						
September					Y	Y Y Y Y	Y Y Y Y	Y Y N N	N N N			
December								Y	Y Y Y Y	Y Y Y Y	Y Y Y Y	Y Y Y

Impacts of the proposed change to the minimum amount outstanding on the delivery basket

The rationale for reducing the minimum amount outstanding for a GoC bond to be eligible for inclusion in the deliverable basket from C$3.5 billion to C$3 billion is to bring it in-line with the nominal amount issued for auctioned 5-year bonds (see table 6 below). That way, a new 5-year bond issue would become eligible in the delivery basket as of its first auction, like it was the case in 2016 and 2017. This change is similar to the one the Bourse did for its two-year GoC bond futures in 2006, when it reduced the minimum amount outstanding requirement from C$3.5B to C$2.4B[5]. Given the remaining maturity range change discussed earlier, having a new bond eligible for delivery quicker in the basket would also reduce the risk of having only one bond in the June and December delivery basket should the BoC decide to change its maturity date pattern for the 5-year segment of the yield curve.

Table 6: Most recent auctioned 5-year GoC bonds

5-year GoC bond (maturity date)	Coupon	# of auction	Issue Size (per auction)
March 1, 2024	2.250	4	C$ 3B
September 1, 2023	2.000	4	C$ 3B
March 1, 2023	1.750	4	3 of C$ 3.7B, 1 of C$ 3.9B
September 1, 2022	1.000	4	C$ 3.9B
March 1, 2022	.500	4	2 of C$ 3.7B and 2 of C$3.8B
September 1, 2021	.750	4	2 of C$ 3.7B and 2 of C$3.8B

5 https://www.m-x.ca/f_circulaires_en/136-06_en.pdf

Source: Bank of Canada

Impacts of the proposed modifications on position limits

The position limits for the Bourse's GoC bond futures are based on the amount outstanding of the deliverable baskets. Removing one matured bond from the June and December basket will reduce the position limits (all expiries combined and first contract month) for the June and December contracts, as illustrated in table 7 below. On the other part, having a new 5-year bond become eligible for delivery quicker will increase the amount outstanding for delivery and thus, mitigating the impact of the proposed maturity range change. Note that position limits (all expiries combined) are published at the beginning of each month and that first contract month position limits are published just prior to the beginning of each delivery month (March, June, September and December).

Table 7: CGF position limit impacts (all expiries combined) - Example for 50,000 contracts of open interest with current remaining maturity range and proposed remaining maturity range: Reduction of 35%-40% depending on the month, for six months out of twelve.

CGF Postion limits (all expiry combined) for an Open Interest of 50,000 contracts (Remaining maturity range of 4.25-5.25 years)												
CGF expiry	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
March	23k	26k										35k
June			29k	29k	29k							
September						35k	23k	26k				
December									29k	29k	29k	
CGF Postion limits (all expiry combined) for an Open Interest of 50,000 contracts (Remaining maturity range of 4.5-5.5 years)												
CGF expiry	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
March	23k	26k										**23k**
June			29k	**17k**	**20k**							
September						**23k**	23k	26k				
December									29k	**17k**	**20k**	

Table 8: CGF position limit impact (first contract month): Reduction from 15k to 9k for the month of June and December.

	Contract expiry cycle	Deliverables Amount Outstanding of first contract month (entering the first notice day)	CGF position limit (first delivery month)
Current CGF delivery standards	March and September	C$ 24B	12,000
	June and December	C$ 30B	15,000
Proposed CGF delivery standards impact	**June and December**	**C$ 18B**	**9,000**

The Bourse is comfortable with these position limits impacts, as it is in line with its current position limits methodology. Market participants surveyed are aware of this impact and this should not represent an impediment for them to trade the contract and hold the positions desired for their different strategies. The position limits (all expiries combined) still represent a minimum of 35% of the open interest (at the 50,000 open interest level), which is sufficient to cover clients' needs based on feedback from key market participants. The impact on the first contract month is also limited as only a small fraction of the CGF open interest is expected go into delivery.

c. Comparative Analysis

The replacement of the current remaining maturity range of 4.25-5.25 years with a minimum remaining time to maturity of 4.5-5.5 years will result in a bond dropping out of the deliverable basket sooner (the one with the shortest time to maturity), thus increasing the modified duration and the DV01[6] of the contract. In the current low interest rate environment, the CGF contract would be more aligned with Eurex's five year bond futures contract, as illustrated by the table 9 below.

Table 9: Remaining maturity range requirement for 5-year bond futures

Exchange	MX	MX - proposal	CME	Eurex	ICE	JPX
Product	CGF	CGF	5Y US T-Note Futures	Euro-Bobl	Medium Gilt	5Y JGB
Maturity range (of deliverable basket)	4.25 - 5.25 Years	4.5 - 5.5 Years	4.167 - 5.25 Years	4.5 - 5.5 Years	4 - 6.25 Years	4 - 5.25 Years
Modified duration (june 2019 contract)	4.30	4.79	4.20	4.79	4.31	4.38

Source: Contract specification on exchanges websites, Bloomberg

Regarding the minimum outstanding amount requirement, the proposed modification doesn't really change how the Bourse is positioned compared to its international peers.

Table 10: Minimum amount outstanding requirement for government bond futures

Bond Futures	MX	MX-Proposal	CME	Eurex	ICE	JPX
2Y	C$ 2.4B	C$ 2.4B	No minimum amount outstanding required	EUR 5B (or CHF 500M if the bond is issued by Swiss confederation)	GBP 1.5B	n/a
5Y	C$ 3.5B	C$ 3B				No minimum amount outstanding required
10Y	C$ 3.5B	C$ 3.5B				
30Y	C$ 3.5B	C$ 3.5B				

Source: Contract specification on exchanges websites

[6] Dollar value of a basis point.

Based on this international benchmarking, the Bourse considers that the proposed modifications are justified as the CGF delivery standards will still be comparable with other exchanges' products (mainly Eurex) while taking into account local market needs.

d. Proposed Amendments

The Bourse proposes to amend article 12.212 of the Rules of the Bourse to modify the delivery standards of the CGF contract. Specifically, the Bourse proposes replacing the current remaining maturity range of 4.25-5.25 years and replacing it with a remaining maturity range of 4.5-5.5 years, and to reduce the minimum amount outstanding for deliverable bonds from C$3.5B to C$3B. See attached proposed rules changes.

III. AMENDMENT PROCESS

The drafting process was initiated by the request from participants to evaluate a change in the CGF delivery standards. Given the Bourse's current and upcoming initiatives regarding the revitalization of the yield curve, the Bourse believes that having a deliverable basket adapted to market needs should help generate further interest and activity in the CGF contract.

IV. IMPACTS ON TECHNOLOGICAL SYSTEMS

The proposed changes should have no impact on the technological systems of the Bourse, CDCC, approved participants, independent software vendors, or any other market participants. The Bourse has not identified any impediments, whether technical, operational or other, to the implementation of the proposed amendments.

V. OBJECTIVES OF THE PROPOSED AMENDMENTS

The objective of the proposed amendment is to ensure that the 5-year benchmark bond in the cash market is the CTD bond of the CGF contract as often as possible (in particular for the June and December contract expiry). The Bourse believes that the proposed modifications will increase the utility and the effectiveness of the CGF contract for hedgers and speculators.

VI. PUBLIC INTEREST

The Bourse considers these amendments to be in the interest of the public as they will increase the efficiency and cost-effectiveness of the CGF contract for market participants. A contract that is better tailored to participants' requirements will be more liquid and will attract more activity to the transparent and centrally-cleared futures market.

VII. EFFICIENCY

The Bourse's proposal should attract additional trading volume by offering market participants a CGF contract design that is based on their needs, thus being more efficient to trade. Aligning the

CTD bond with the 5-year benchmark bond in the market will enable a more efficient and liquid basis market.

VIII. PROCESS

The proposed amendments, including this analysis, must be approved by the Bourse’s Rules and Policies Committee and submitted to the Autorité des marchés financiers, in accordance with the self-certification process, and to the Ontario Securities Commission for information purposes.

IX. ATTACHED DOCUMENTS

Proposed amendments to the Rules of the Bourse.

Chapter C—Five Year Government of Canada Bond Futures

[...]

Article 12.212 Delivery Standards

(a) For Five-year Government of Canada Bond Futures, shall be deliverable only those Government of Canada Bond issues which:

(i) have a remaining maturity of between four years and ~~three~~ six months and five years and ~~three~~ six months, as of the first day of the Delivery Month (for the purpose of determining the maturity of a Bond eligible for Delivery and for settlement, the time to maturity of a given issue shall be calculated in complete one month increments, by rounding down to the nearest entire one month period. e.g. four years five months and 14 days shall be considered four years and five months from the first day of the Delivery Month);

(ii) have an outstanding amount of $3~~.5~~ billion nominal value (net of all potential purchases by the Government of Canada up until the end of the period during which the Bond issue is deliverable);

(iii) are originally issued at five-year Government of Canada Bond auctions (an issue which has an original maturity of more than five years and nine months and which would otherwise meet the standards of this rule, is also deemed to be deliverable, if during the last 12-month period preceding the first Delivery notice day of the Delivery Month, its re-openings total a minimum nominal amount of $3~~.5~~ billion);

(iv) are issued and delivered on or before the 15th day preceding the first Delivery notice day corresponding to the Delivery Month of the contract;

(v) have a face value at maturity in multiples of $100,000; and

(vi) have a coupon of 6%. However, at the seller's choice, a Government of Canada Bond having a coupon other than 6% can be substituted. The amount of Premium or discount for each deliverable issue shall be calculated on the basis of a yield equivalent to a Government of Canada Bond bearing a 6% coupon and selling at par.

(b) The price of a deliverable Government of Canada Bond shall be determined according to the conversion factors tables published by the Bourse.

(c) The conversion factor of a deliverable issue is the actualized value of the deliverable issue to the notional yield of the Futures Contract considered on the first day of the Delivery Month, minus the interest accrued until Delivery day.

(d) The amount to be paid at Delivery is equal to $1,000 multiplied by the conversion factor of the deliverable issue and multiplied by the Settlement Price of the Futures Contract being delivered, plus accrued interests to the Delivery day. Accrued interest is charged to the Approved Participant taking Delivery.

(e) All Government of Canada Bonds being delivered in respect of a Futures Contract must be of the same issue.

(f) Before a contract is listed for trading, the Bourse shall have the right to exclude any deliverable Government of Canada Bond issue, even if it meets all the standards specified in this Article.

[...]

Chapter C—Five Year Government of Canada Bond Futures

[...]

Article 12.212 Delivery Standards

(a) For Five-year Government of Canada Bond Futures, shall be deliverable only those Government of Canada Bond issues which:

(i) have a remaining maturity of between four years and six months and five years and six months, as of the first day of the Delivery Month (for the purpose of determining the maturity of a Bond eligible for Delivery and for settlement, the time to maturity of a given issue shall be calculated in complete one month increments, by rounding down to the nearest entire one month period. e.g. four years five months and 14 days shall be considered four years and five months from the first day of the Delivery Month);

(ii) have an outstanding amount of $3 billion nominal value (net of all potential purchases by the Government of Canada up until the end of the period during which the Bond issue is deliverable);

(iii) are originally issued at five-year Government of Canada Bond auctions (an issue which has an original maturity of more than five years and nine months and which would otherwise meet the standards of this rule, is also deemed to be deliverable, if during the last 12-month period preceding the first Delivery notice day of the Delivery Month, its re-openings total a minimum nominal amount of $3 billion);

(iv) are issued and delivered on or before the 15^{th} day preceding the first Delivery notice day corresponding to the Delivery Month of the contract;

(v) have a face value at maturity in multiples of $100,000; and

(vi) have a coupon of 6%. However, at the seller's choice, a Government of Canada Bond having a coupon other than 6% can be substituted. The amount of Premium or discount for each deliverable issue shall be calculated on the basis of a yield equivalent to a Government of Canada Bond bearing a 6% coupon and selling at par.

(b) The price of a deliverable Government of Canada Bond shall be determined according to the conversion factors tables published by the Bourse.

(c) The conversion factor of a deliverable issue is the actualized value of the deliverable issue to the notional yield of the Futures Contract considered on the first day of the Delivery Month, minus the interest accrued until Delivery day.

(d) The amount to be paid at Delivery is equal to $1,000 multiplied by the conversion factor of the deliverable issue and multiplied by the Settlement Price of the Futures Contract being delivered, plus accrued interests to the Delivery day. Accrued interest is charged to the Approved Participant taking Delivery.

(e) All Government of Canada Bonds being delivered in respect of a Futures Contract must be of the same issue.

(f) Before a contract is listed for trading, the Bourse shall have the right to exclude any deliverable Government of Canada Bond issue, even if it meets all the standards specified in this Article.

[...]