Implementation of a framework in support of a fee for failing to settle Government of Canada bond and T-bill trades

Executive Summary

In January 2020, the Canadian Fixed-Income Forum (CFIF)[1] established the Government of Canada (GoC) Market Functioning Steering Group (GMF) to develop a framework for supporting GoC market functioning in a low-rate environment.[2] This framework includes a fee for failing to settle GoC bond and bill transactions, which is necessary to create financial incentives for timely settlement, especially in a low interest rate environment.[3] Similar work on improving and strengthening the settlement process has been carried out in other major jurisdictions, including the US, the EU, Japan and Australia. A Governance Group that reports directly to CFIF will be responsible for the governance of the framework.

While the GoC market is not currently experiencing a major fails issue, GMF and CFIF believe that it is prudent to safeguard the functioning of the GoC market by putting in place a robust framework to ensure that the settlement process continues to function in all rate environments. The framework also includes a set of best market practices for settlement. The GMF consulted publicly on the framework in December 2022, and subsequently incorporated the feedback it received. This paper outlines the updated final framework. The summary of comments to the consultation and the GMF's responses have been published concurrently. A supplementary Q&A relating to the framework has also been published concurrently with this paper.

The fail fee has been calibrated to be appropriate to the GoC marketplace. It will be set at 50bps and apply to delivery-versus-payment (DvP) transactions settled through the Canadian Depository for Securities (CDS). Should fails become elevated and persistent, the fee would increase so that the total incentive rises to a maximum of 150bps. The fee is applied if collateral is not delivered by the applicable settlement deadline. Transactions that settle on a delivery-vs-delivery (DvD) or free-of-payment (FoP) basis are not directly within scope of the fee.

Prior to any final decision on whether to permanently turn on the fee, an extended two-stage trial will be conducted. During the first stage of the trial period (a minimum of 18 months), CDS will track fails and provide an audit trail along with indicative monthly fail fee payments to its members. CDS will also publish daily fail rates to enhance public transparency. However, no payments will be exchanged and the Governance Group for the framework will monitor for any potential implementation issues. After 12 months, the Governance Group will conduct a review and make a recommendation to CFIF of when to proceed with the second stage of the trial

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[1] CFIF is a senior level industry committee established by the Bank of Canada to discuss developments in fixed income market structure and functioning, market practices and related policy issues. See https://www.bankofcanada.ca/markets/canadian-fixed-income-forum/
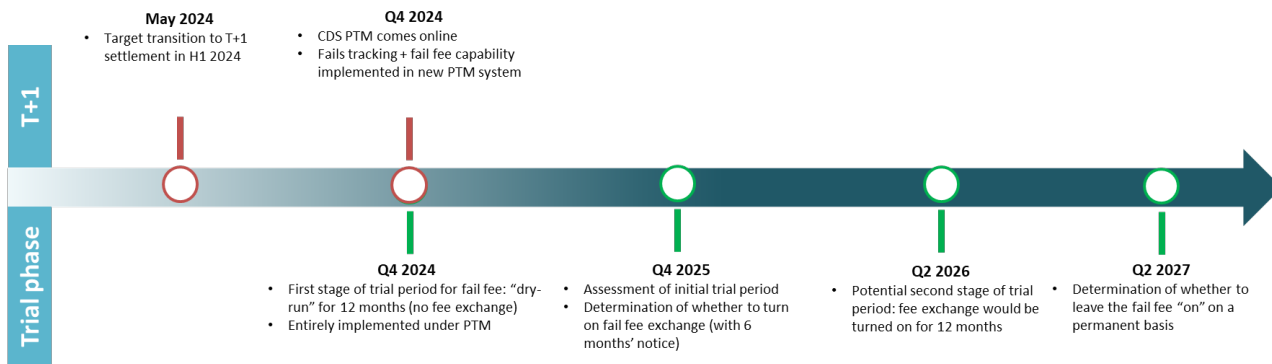
[2] The GMF's Terms of Reference are available at https://www.bankofcanada.ca/2020/01/cfif-meeting-january-29-2020/

[3] An early version of the Blueprint of the Framework is available at https://www.bankofcanada.ca/wp-content/uploads/2022/01/GoC-Market-Functioning-Steering-Group-GMF.pdf

period, during which fail fee exchange would be enabled for 12 months. Market participants would be given a minimum of 6 months' notice prior to the activation of fail fee exchange to ensure operational readiness. Fail fee exchange would therefore start no earlier than 18 months into the trial period. Following the conclusion of the entire trial period, the Governance Group and CFIF would conduct a final review to determine whether to keep the fail fee permanently activated, or cease the activation of the fail fee regime until conditions warrant permanent or conditionally permanent activation. The review would include an assessment of any impacts on market functioning.

In case of a recommendation to postpone the implementation of the second stage of the trial period (fail fee exchange), the Governance Group would continue to monitor fails and, if market conditions deteriorate, fail fee exchange (including the dynamic component) could be activated permanently, with CFIF approval, with minimal notice. The publication of fail rates and provision of an audit trail by CDS would continue irrespective of when fail fee exchange is enabled.

The tentative implementation timeline below highlights the major proposed milestones of the initiative. The milestone dates have been adjusted to minimize overlap with other important industry initiatives, including the transition to T+1 settlement and CDS's Post-Trade Modernization (PTM) project. The dates could be further adjusted by CFIF, e.g., to further accommodate potential timing changes in the overlapping industry initiatives or to incorporate findings from any of the planned reviews by the Governance Group.

T+1

May 2024
- Target transition to T+1 settlement in H1 2024

Q4 2024
- CDS PTM comes online
- Fails tracking + fail fee capability implemented in new PTM system

Trial phase

Q4 2024
- First stage of trial period for fail fee: "dry-run" for 12 months (no fee exchange)
- Entirely implemented under PTM

Q4 2025
- Assessment of initial trial period
- Determination of whether to turn on fail fee exchange (with 6 months' notice)

Q2 2026
- Potential second stage of trial period: fee exchange would be turned on for 12 months

Q2 2027
- Determination of whether to leave the fail fee "on" on a permanent basis

1. Background

GMF's work addresses the diminished financial incentives to deliver GoC securities against payment when interest rates are low. Current market convention for settlement fails in the Canadian fixed-income market postpones settlement to the next trading day and maintains the original terms of the transaction. The implicit opportunity cost of failing to deliver is therefore equivalent to the overnight rate.[4] In this sense, the overnight rate can act as a soft price cap in the securities financing market. Participants have no financial incentive to pay more to borrow bonds than the cost of failing to deliver, as the cap compresses the bargaining space for collateral. This compression becomes more pronounced at lower levels of the overnight rate and is not conducive to establishing efficient market-clearing prices in the collateral market. In a negative policy rate environment, the current market structure provides no financial incentives for market participants to avoid failing. The primary approach to address this issue is to add a financial incentive to deliver, such as a fail fee or a mandatory buy-in for failed settlements.

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[4] The overnight rate is the foregone interest that could have been earned on the received cash proceeds.

GMF concluded that the fail fee approach was more appropriate for the Canadian market than prescribing mandatory buy-ins, such as in the EU's settlement discipline regime.[5]

Fails occur in both cash and repo GoC trades, but persistently elevated fails have been infrequent in recent times, despite historically low overnight rates. The GoC market did not experience a substantial increase in fails, except at the onset of the pandemic due to increased operational issues due to work-from-home pressures. Thus, the minimal financial incentive to settle in a low-rate environment need not immediately translate to elevated fails. However, market functioning was also supported by the Bank of Canada during this time by providing GoC securities from its balance sheet on a daily basis. The GoC market may still require support to ensure market functioning during future periods of low, or potentially negative interest rates, especially if fails become widespread, as was the case for several benchmark bonds during 2015, or if bonds are not available to be borrowed from the Bank of Canada.[6]

The framework has been designed primarily as an insurance policy to ensure effective GoC market functioning at low interest rates. Outside of a low-rate environment, the framework could also improve market discipline and bring more focus on operational inefficiencies through increased monitoring of the actual fail fee, as has been the case in the US. Since it would be neither feasible nor advisable to rush a fail fee into place during a period of market stress, the GMF proposal is structured to allow sufficient time for market participants to observe and operationalize the fee through an extended evaluation period prior to making any final decision on whether to keep the fail fee permanently active.

To guide the design of a framework that is appropriate for the GoC marketplace, GMF conducted extensive outreach with market participants. GMF also benchmarked its initiative to similar work on improving the settlement process, which has been carried out in other jurisdictions, including the US, the EU, Japan and Australia.

2. Blueprint of the GoC Market Functioning Framework

Chart 1 outlines the proposed Blueprint of the GoC Market Functioning Framework. The best practices and any potential structural adjustments are not part of this publication. Instead, they will be published on the CFIF website after further input and review by the Governance Group.
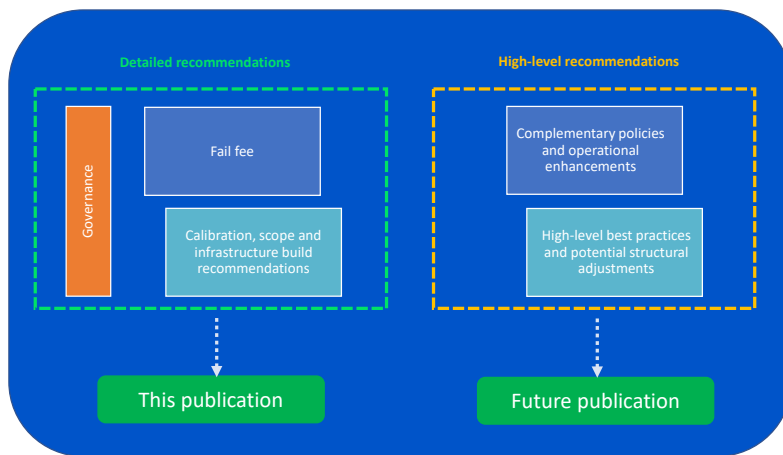

Chart 1: Framework Blueprint

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[5] Part of the CSD Regulation; application of the mandatory buy-in regime has been postponed for 3 years.

[6] Although the Bank of Canada identified a policy rate of 25bps as the effective lower bound during the Covid-19 crisis, negative policy rates remain in the Bank of Canada's toolkit.

The fail fee component of the framework is described in detail in the following sections:

- Section 3: Calibration of the fee's main parameters
- Section 4: Application of the fail fee in CDS and transactions in scope
- Section 5: Trial period for the framework
- Section 6: Governance considerations

3. Fail fee calibration

This section encompasses the fee's parameters and the conditions that would trigger or turn on the fee.

3.1 Fail fee parameters

The GoC market has not experienced the kind of dysfunction that precipitated the introduction of the fails charge for US Treasuries in 2008, and spikes in GoC fails have tended to be more short-lived in general.[7] However, the GoC market experienced a period of persistently elevated fails during 2014-2015 which negatively impacted the functioning of specific segments of the Canadian yield curve. Fails averaged around $3.9 billion/day in Q1-Q3 2015 before dropping to a more typical $1.2 billion/day in Q4 and onwards.[8]

To provide appropriate financial incentives for timely GoC settlement and to reflect that the GoC market does not currently exhibit a problematic level of fails, the fail fee has a hybrid structure: a permanently activated 50bp static fail fee floor, and a contingent dynamic component that would provide up to 150bps of total incentive if fails rise above a pre-defined trigger level. GMF judges that a 50bp floor would be a de-minimis amount that alleviates concerns about the potential impact that a large fee, such as that imposed in the US, might have on Canadian market functioning. The dynamic component would work similarly to the TMPG fails charge, but would only be activated in an environment of elevated and persistent fails. In such an environment, the dynamic component further expands the bargaining space to allow collateral markets to clear at low or negative interest rates. The fail fee and corresponding payments would be determined as follows:

$$\text{Fail fee} = \begin{cases} 0.50\% & \text{(floor)} \\ \max\{1.50\% - \text{BoC Target, } 0.50\%\} & \text{(dynamic component)} \end{cases}$$

$$\text{Fail fee payment} = \frac{1}{365} * \text{fail fee} * P * t$$

P = proceeds due from the non-failing party (for a DvP transaction)

t = duration of fail (calendar days)

To illustrate, Charts 2 and 3 break down the total financial incentive to deliver for the floor and the dynamic component, respectively.[9] The overnight interest rate could be earned on the funds that are received upon delivery, which provides a natural financial incentive to deliver, especially at higher interest rates. But this incentive

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[7] See https://www.newyorkfed.org/tmpg for more information on the Treasury Market Practices Group (TMPG). The TMPG recommended the adoption of a fail fee that imposes a 3% total penalty for failing.

[8] The fails were highly concentrated: around 50% of the failed volume was in two consecutive 5-year benchmarks and a 2-year bond that were trading deeply special.

[9] The Bank of Canada's target for the overnight rate typically follows a step function with a minimum increment of 25bps; for ease of exposition, the reference rate in the chart is shown as continuous.

(the "reference rate" blue wedge) diminishes in a low-rate environment. The 50bp fail fee floor provides a fixed "top-up" to the incentive to deliver in all environments (Chart 2). If the dynamic component is activated, this top-up becomes variable: the fail fee (salmon-coloured) increases as the Bank of Canada (BoC) target for the overnight rate decreases, so as to maintain the total incentive to deliver at 150bps (Chart 3). As calibrated, the dynamic component would only be activated in situations where the BoC target is below 1%, as it does not provide any added incentive to the 50bp floor amount in higher-rate environments.
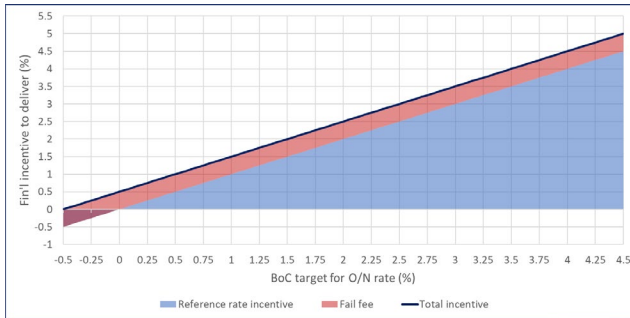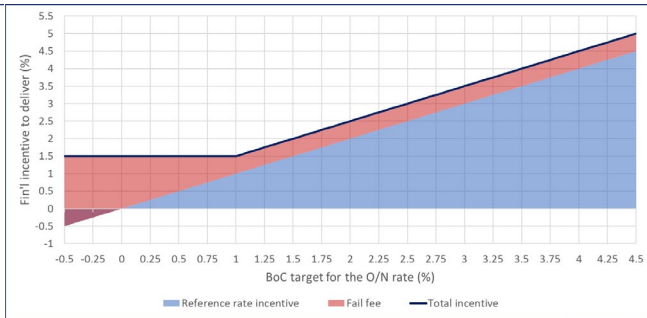
Chart 2: 50bp floor

Chart 3: Contingent dynamic component

3.2 Fail fee calculation and example

Fail fee payment amounts for each failed transaction will be calculated daily, but only exchanged monthly on a net basis between CDS participants transacting in GoC securities. Counterparties who failed, on a net basis, will be required to pay the corresponding fail fee amount, while counterparties who were failed to, on a net basis, will receive the corresponding fail fee amount.

The following sample calculations illustrate the fee associated with a 3-day failure to deliver a $50mm trade of a GoC bond in exchange for a $49.8mm payment. The total financial incentive to settle is the sum of the fail fee and the BoC target.

	Dynamic component inactive	**Dynamic component activated**
BoC target for o/n rate (%)	0.25	0.25
Fail fee (%)	0.50 (floor)	1.25 (=1.50 – 0.25)
Total incentive (%)	0.75	1.50
Fail fee amount	$49.8mm*0.50%*(3/365) = $2,046.58	$49.8mm*1.25%*(3/365) = $5,116.44

3.3 Activation and deactivation criteria for the dynamic component

All features related to the dynamic component are only activated if the GoC market experiences material and sustained fails and the BoC target rate is below 1% (the dynamic component does not provide any additional incentive in rate environments above 1%).[10]

To reflect sustained fails, **the activation trigger is based on a combined 10-day moving average (MA) of the daily fail rate** in the GoC cash and repo markets. The daily fail rate is calculated as GoC DvP trades that fail to settle on CDS divided by CDS' total GoC settlement volume on a given day. The dynamic component would be activated once the 10-day moving average of the daily fail rate crosses a threshold that is set near the maximum

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[10] Should significant fails be encountered in an environment of higher rates, the Governance Group could recommend changes to address the situation. For example, raising the fail fee floor above 50bps or increasing the total incentive of the dynamic component to higher than 150 bps would provide additional incentives to settle in rate environments above 1%. Similarly, the Governance Group could also modify the dynamic component if, after being activated, the 150bps total incentive proves insufficient when rates are below 1%.

observed daily fail rates over the data analysis horizon. This ensures that activation is not triggered by single-day spikes in fail rates that subsequently clear quickly.

There is also a separate, lower warning level.[11] The BoC, on behalf of the Governance Group responsible for the framework, would inform market participants via market notices when the 10d-MA fail rate crosses the warning level and activation of the dynamic component could be imminent. The warning threshold level will be set to avoid unnecessary warnings while providing enough room for the market to self-correct ahead of a potential activation. GMF believes that the warning threshold itself can provide a deterrent to persistently elevated fails and allow markets to self-correct without needing to activate the dynamic component. If the dynamic component is subsequently triggered, the BoC would again publish a notice to advise of the higher fee coming into effect.

The threshold levels below are indicative and minor adjustments may be made as new fails data become available prior to any permanent activation of the fail fee. The Governance Group will finalize the thresholds and subsequently monitor their appropriateness. To provide transparency on fail rates to market participants, CDS will make fail rates available daily.

Feature	Criteria based on combined repo and cash fails
Warning	10d-moving average (MA) fail rate $\geq$ 4%
Activation	10d-moving average (MA) fail rate $\geq$ 5%

Using data from 2016 to 2021, Chart 4 illustrates the indicative thresholds along with the 10-day moving average that would trigger a warning and activation of the dynamic component. The daily fail rates underlying the moving average are also provided for completeness. During this period, the dynamic component would not have been triggered, but the 10-day MA approached the warning level on several occasions.

The dynamic component has a simple built-in deactivation switch: once the BoC raises the target for the overnight rate to 1% or higher, the fail fee reverts back to the static 50bps floor (as per the calculation in Section 3.1) and remains at that level until the dynamic component is triggered again. Therefore, should the dynamic fee be triggered, it will remain in place until rates rise to 1% or higher. An explicit "off switch" for the dynamic component was considered by GMF. But since the bar for activating the dynamic component is high, the "off switch" was deemed unnecessary and complicated to calibrate.

Chart 4: Thresholds for the dynamic component

Source: CDS and Bank of Canada calculations   Last observation: December 31, 2021
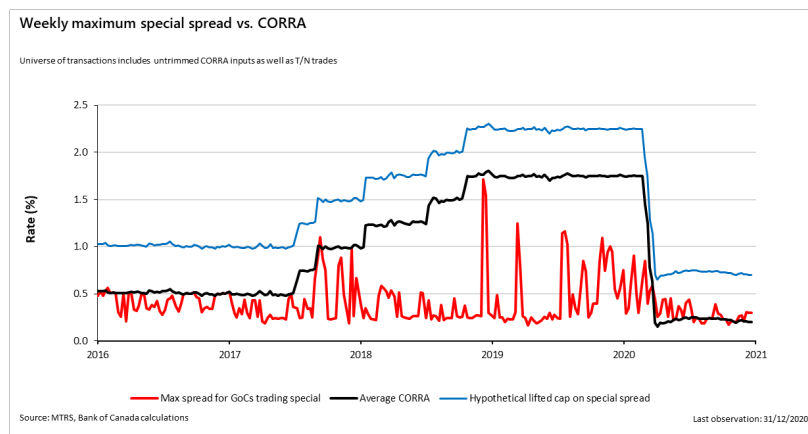
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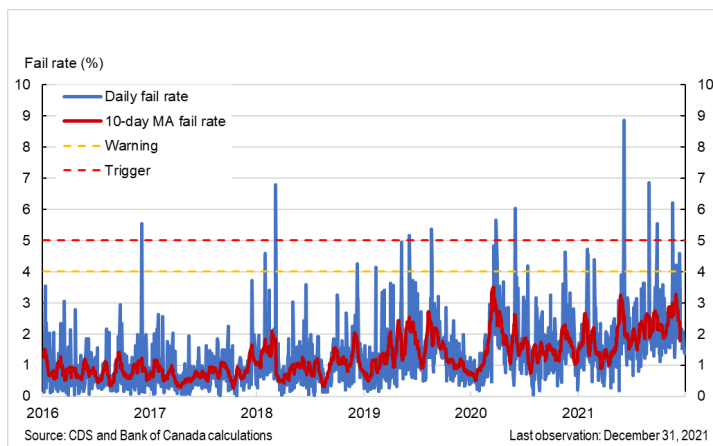
[11] The warning (and trigger) thresholds are set at approximately 3 times (4 times) the average daily fail rate over the 2016-2022 period.

3.4 Rationale for the chosen parameters

Discussions with both Canadian and US market participants reflected that a permanently turned-on fail fee ensures operational continuity of the practice, which is preferable to a fee that toggles on and off depending on market conditions.[12] For this reason, the floor is active in all interest rate environments.

Consistent with the fail fee's purpose as an insurance policy, the parameters have been established based on an analysis of maximum specialness in the GoC market over a five-year period for which reliable data exist.[13] Chart 5 shows that from 2016 to mid-2017, the observed maximum weekly specialness was around 50bps (red line), which was visibly constrained by the soft cap imposed by the overnight rate (black line). From mid-2017 to March 2020, when the cap was raised through a series of interest rate hikes, the average of the maximum weekly specialness continued to remain around 50bps, while peaks occurred in the 100-150bps range. A 50bp floor and 150bp dynamic component were therefore deemed sufficient for expanding the bargaining space to promote market functioning. The floor provides an incremental financial disincentive to fail in interest rate environments up to -50bps, while the contingent dynamic component expands the bargaining space further, if needed.

Chart 5: Maximum specialness in the GoC market

Weekly maximum special spread vs. CORRA

Universe of transactions includes untrimmed CORRA inputs as well as T/N trades

Source: MTRS, Bank of Canada calculations

Last observation: 31/12/2020

4. Application of the fail fee in CDS and transactions in scope

To take effect, the fail fee will be incorporated into CDS rules and procedures in order to allow CDS to automatically debit or credit CDS members' accounts with the monthly net fee payable or receivable.[14] The primary application of the fee will be through CDS, and CDS will provide transparency at the client/sub-account level. CDS will calculate the fee payments daily and bill and disburse them monthly. The following table summarizes the scope of the fail fee:

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[12] The TMPG introduced a permanent floor of 1% in 2018 to avoid "toggle risk" as the fed funds target approached 3%.

[13] Data source is the Market Trade Reporting System (MTRS 2.0).

[14] The changes to CDS rules and procedures would be part of a separate public consultation and subject to approval by the Bank of Canada, the Autorité des Marchés Financiers, the Ontario Securities Commission and the British Columbia Securities Commission.

| Broad categorization	Included instruments and transaction types	Mode of fail fee application
Delivery-vs-payment (DvP)	GoC bills, nominal bonds, real return bonds, strips (cash and repo transactions)	Centrally tracked and paid/credited through CDS
Delivery-vs-delivery (DvD), free-of-payment (FoP), pledges	Securities lending market (failure to deliver GoCs)	Bilateral claim; central tracking of fails is challenging
	Options, futures and forwards (physical GoC delivery)	Bilateral claim; central tracking of fails is challenging. Applicability only to failure to deliver the underlying when there is physical delivery

4.1 Delivery-vs-payment (DvP) transactions

The fail fee will capture all DvP transactions that fail to settle in CDSX, the settlement system operated by CDS. A chargeable fail in a GoC DvP transaction generally occurs when the seller of the GoC securities did not take the necessary steps to ensure that the trade settles by the deadline for CDSX Payment Exchange on the settlement date. Specifically, the seller in a GoC DvP transaction would incur the fail fee if the seller's security position is insufficient to ensure settlement and the transaction therefore fails.

The fail fee will not apply to trades that fail to settle due to insufficient funds in the buyer's account, as GMF has not identified such fails as a significant issue. The lack of financial incentives to settle is more applicable to collateral that is non-fungible, rather than to funds, which are fungible. However, the trial period will allow for monitoring of fails that occur due to insufficient funds, and further enhancements to the framework could be made by the Governance Group.

Chart 6 provides a description of the logic within CDSX to assess whether a chargeable fail has occurred:

Chart 6: Technical definition of a fail in CDSX
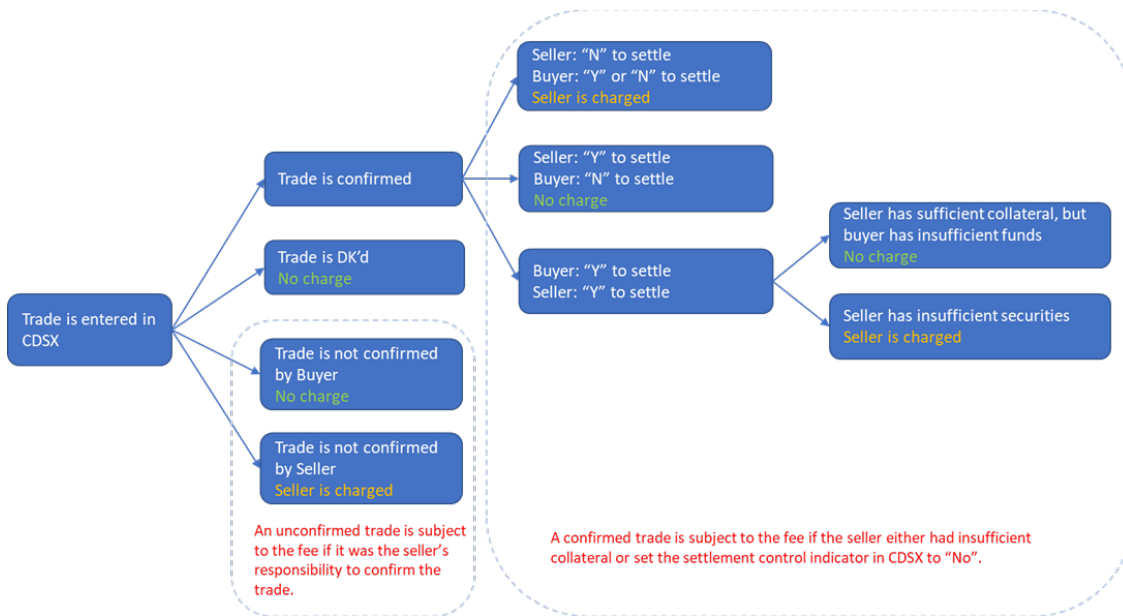
Considerations for bilaterally cleared trades

For bilateral transactions, fails are to be assessed at 7:30pm ET. The fail fee is not intended to incentivize settlements that occur after CDSX Payment Exchange (usually at 4pm), as such settlements can create settlement

risk for any resulting movement of uncollateralized funds. However, some inter-affiliate settlements commonly occur after payment exchange. To not interfere with such settlements, a deadline of 7:30pm will apply to the definition of a fail. The Governance Group will monitor the prevalence of settlements taking place after CDSX Payment Exchange.

Considerations for centrally cleared trades

For transactions that are centrally cleared through CDCC, fails will be assessed in CDSX at Payment Exchange (4pm). The current methodology for settling trades with insufficient collateral will be used to also allocate the fail fee. Specifically, trade size and time priority will apply first, followed by partial settlements (in minimum increments of $10 million). The fail fee will be applied to the residual unsettled amounts.

Considerations for deleted trades

Trade submitters can unilaterally delete trades in CDSX. No fail fee will be applied to deleted trades. However, the best practices will clearly state that it is not an acceptable practice for a submitter (who is short securities) to delete a trade in order to avoid paying the fail fee, and that bilateral agreement should be sought prior to any trade deletion.

4.2 Delivery-vs-delivery (DvD) and free-of-payment (FoP) transactions

In Canada, securities loans are predominantly versus securities collateral.[15] This complicates capturing chargeable fails through the standard CDSX settlement process. For example, a GoC delivery fail in a securities loan may occur because the incoming collateral was not delivered by the counterpart and therefore should not incur the fee. But establishing the reason for a fail would be challenging, and for this reason, central tracking of fails in CDS is not feasible for transactions that settle as delivery-vs-delivery (DvD) or free-of-payment (FoP).

However, it is possible that a fail to deliver in a DvP transaction is caused by an incoming fail in a DvD or FoP transaction. This could happen if, for example, a security is sold while it is on loan and not recalled in time.[16] In this situation, existing counterparty agreements would allow for a bilateral fails charge claim from the counterparty that fails on a DvD or FoP delivery.[17] A counterparty that relies on an incoming DvD or FoP delivery to make a DvP delivery would therefore be able to pass on a fail fee resulting from a DvP fail due to a fail of incoming DvD or FoP delivery. The fail fee is not intended to apply in situations where other rules (such as those set up by exchanges or clearing agencies) may already stipulate penalties for non-delivery of a GoC security.

The GMF recognizes that the bilateral claim process may pose specific challenges. For example, there may be disagreement over the amount of the claim if a small fail to receive forces the failed-to counterparty to then fail to deliver on a full $50 million tranche, which is the standard settlement increment in CDSX.[18] These issues will be referred to the Governance Group for further consideration and incorporated in the best practices for the framework.

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[15] The GoC securities lending market is large, with approximately $120B on loan at any given time, and loans are predominantly against securities collateral.

[16] However, compared to cash and repo markets, it is uncommon to lend a security without having it in inventory.

[17] Existing documentation that would allow for bilateral claims include Global Master Securities Lending Agreements and Master Securities Lending Agreements.

[18] Another example of a non-DvP fail is a fail of a margin transfer. ISDA has developed best practices for the OTCD collateral process, which recommend that the failing party should honour a claim from the failed-to party if the margin fail in turn led to a claim for a Fails Charge under the TMPG (see https://www.isda.org/a/rLDDE/2013-isda-best-practices-for-the-otc-derivatives-collateral-process-final.pdf).

4.3 Services provided by CDS

In addition to applying the fail fee, CDS will also publish daily fail rates and provide a full audit trail of all underlying failed transactions to participants. The audit trail will comprise daily .csv files of failed settlements and associated fail fees, as well as a monthly file for net amounts. This will help participants like agent lenders, custodians, and prime brokers to operationalize the pass-through of any fail fee payments or receipts to their clients as appropriate. Appendix 1 provides preliminary sample reports, with the main features summarized below:

Frequency	Function
Daily	• Capture information for DvP fails in all designated securities • Disseminate fail rates

Monthly	• Aggregate information to create an audit trail of all failed transactions at the client/sub-account level
	• Provide audit trail in machine-readable format by participant, date, role (deliverer or receiver), including participant account details available to CDS and the fee due/owed by trade
	    ○ Audit trail comprises daily .csv files of failed settlements and associated fail fees, as well as a monthly file for net amounts
	    ○ Audit trail enables custodians, agent lenders and prime brokers to pass through and apportion the fail fee from CDS to their clients
	• Sum the amounts due and owed and process the necessary entries to the cash ledgers of all parties

CDS will resolve disputes over clerical or billing errors related to fail fee payments. However, CDS will not, and is in no position to provide dispute resolution over issues such as assigning fault, .e.g., if there are disputes between counterparties on who was ultimately responsible for the fail.

Preliminary estimates suggest an initial build cost at CDS of approximately $500,000 to create the tracking and billing infrastructure to facilitate the introduction of the fail fee. CDS would also incur a total annual operating cost of approximately $100,000 (excluding the initial build cost) to administer the fail fee. Both the annual and on-going operating costs would be allocated to those CDS members that are active in settling GoC securities.

5. Trial period for the framework

The fail fee has been calibrated to minimize any potential unintended consequences to market functioning. However, since it represents a significant structural change to the GoC market, there will be an extensive phase-in and trial period prior to CFIF making the decision of whether to keep the fee permanently active.

5.1 Features of the trial period

Chart 7 illustrates the various stages and decision points of the trial period to the full implementation of the fail fee. To minimize the risk of any potential market disruption, the dynamic component would remain inactive and would not be triggered during the trial period. During the first stage of the trial period (a minimum of 18 months), CDS would provide its members with daily .csv files of failed transactions and a monthly file of net fees payable or receivable, calculated using the 50bp fail fee rate. CDS would also provide the full audit trail of failed transactions and would publish daily fail rates to provide public transparency. No fail fee payments would be exchanged between market participants during this stage.

The Governance Group would monitor and resolve any unforeseen potential issues during the first stage. Following a review, the group would recommend to CFIF when fail fee exchange should go live for an additional 12 months during a potential second stage of the trial period. The group's review could consider factors such as fail rates after the transition to T+1 settlement, as well as cost estimates of potential system builds that some market participants may require, e.g., to facilitate fail fee pass-through to clients. Prior to the trial proceeding into

the fail fee exchange stage, market participants would be given at minimum 6 months' prior notice to ensure operational readiness for fail fee exchange. After the trial period, the Governance Group responsible for overseeing the framework would assess how the market has adjusted and recommend to CFIF whether the fee should be kept permanently active. If kept active, the dynamic component and its triggers would be enabled.

Chart 7: Trial period for the framework
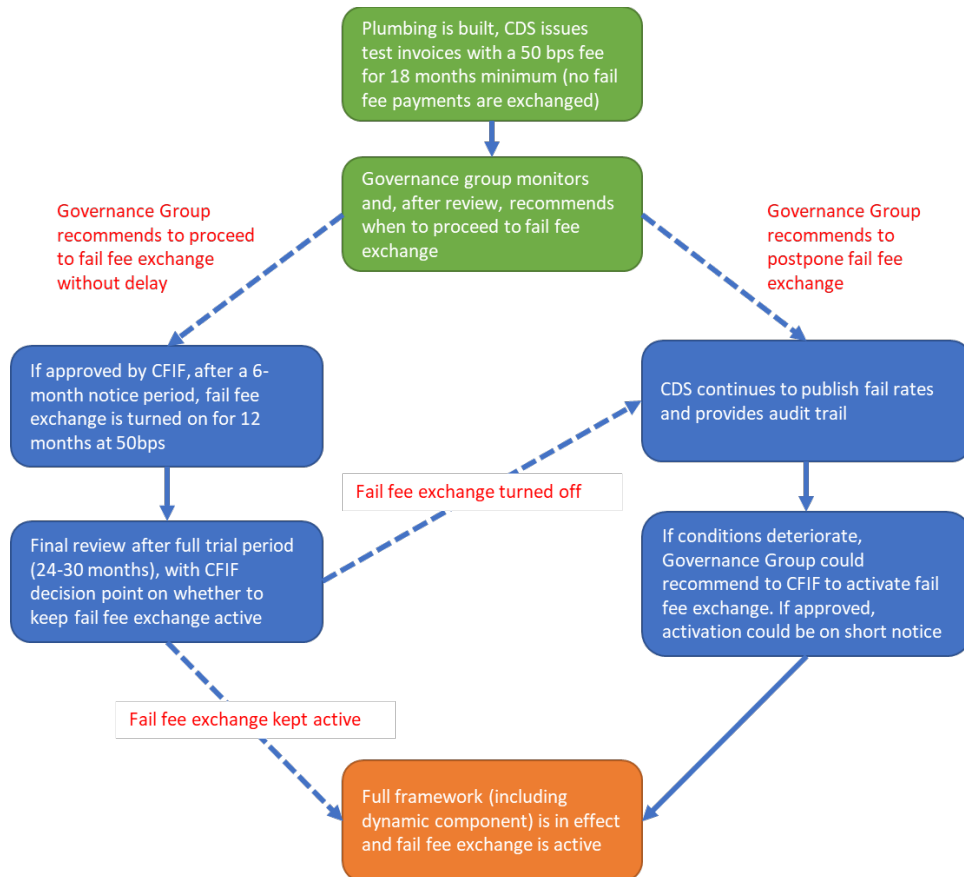
In case of a recommendation to postpone the implementation of the second stage of the trial period (fail fee exchange), the Governance Group would continue to monitor fails. If market conditions deteriorate, fail fee exchange (including the dynamic component) could be activated permanently, with CFIF approval, with minimal notice. The publication of fail rates and provision of an audit trail by CDS would continue irrespective of when fail fee exchange is enabled, either during the trial period or permanently.

To illustrate the approximate magnitude of fail fee payments and receipts, Chart 8 shows an estimate of the distribution of average net monthly fail fee payments across all CDS participants, based on fails from January to August 2020. Each blue bar in the chart corresponds to a CDS participant (CUID); for the vast majority of participants the net monthly payment or receipt would have been small over the period.[19]

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[19] These estimates are at the direct CDS participant level. For participants that act as fiduciaries in a custodial role, the estimates do not take into account that payments and receipts for different clients may not net.

Net monthly average fees

Monthly avg. fees (CAD) paid/received, by CDS participant
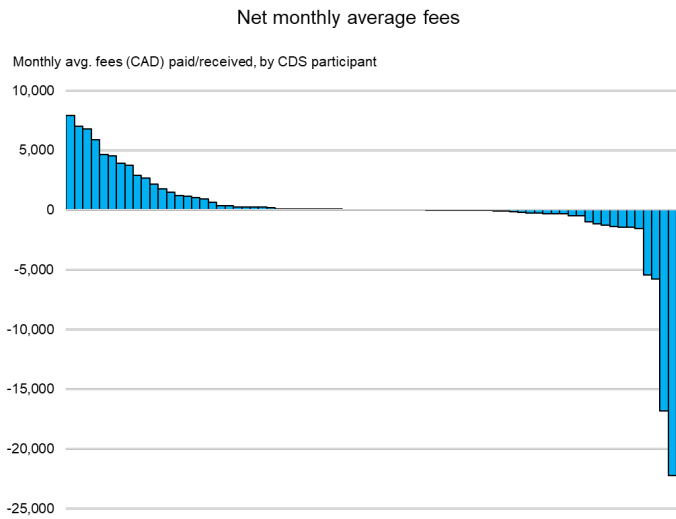
6. Governance considerations for the Framework

While the calibration of the fail fee takes into a account a range of scenarios, it may nonetheless be necessary to make changes to the framework, either during the trial period or during potential future periods of sustained fails. For this reason, the overall responsibility for governance of the GoC market functioning framework and its components will continue to rest with CFIF. A separate Governance Group will be formed before the fail fee enters the trial period. Specifically, the newly-to-be-formed Collateral Infrastructure and Market Practices Advisory Group (CIMPA), is proposed to take on the governance responsibilities for the framework. The group will include a broad range of stakeholders, including sell-side, buy-side, and infrastructure representatives.

Any changes recommended by the Governance Group would need to be approved by CFIF before becoming effective. Any proposed significant changes may also be subject to either targeted or public consultations.

Ongoing responsibilities of the Governance Group would include the following:

- Monitor fails and any structural changes to the settlement process, holistically review the framework's effectiveness and recommend changes, including to the fail fee parameters, if necessary

- In consultation with market participants, monitor for operational issues and impacts on market functioning, participation and liquidity (especially during the trial period)

- Formulate a recommendation of whether to keep the fail fee permanently on after the end of the trial period

- Maintain associated best practices and documentation

- Conduct periodic reviews of the framework and provide regular updates to CFIF

Prior to any potential activation of exchanging fail fee payments, the Governance Group will also finalize the best practices associated with the GoC Market Functioning Framework. These best practices will include recommendations directly related to the fail fee component of the framework. Potential topics for further Governance Group work include the following:

- Develop best practices for partial fails and the bilateral claims framework

- Formulate guidelines for bilateral dispute resolution

- Investigate potential tax implications of fail fee payments to non-Canadian entities

Appendix 1: Preliminary specifications of the CDS reports

Layout of the Daily CSV File:

Attribute	Description
Ledger	Participant's Ledger
Name of Ledger	Name of Participant at CDS
Role	B = Buyer, S = Seller
Other-CUID	the counterparty to the trade
Transaction ID	CDSX generated transaction ID of the trade
ISIN	GoC's Issuer code = CA 1350Z7,13501Z,13506Z,13508Z,135087,13509Z
Trade Type	All trade types
Account	GA 000, SA 000
Net Amount	value of the trade (includes accrued interest) should be greater than $0.00. Format of this field should be separated by comma at every change of 1000, and rounded to 2 decimal.
Currency	CAD or USD
Status	Trade status = "C" - Confirmed, "U" - Unconfirmed, "P" = Pending
Trade Date	Date when trade was executed
Value Date	Date of settlement
Rate	(25BPS/365), ability to adjust the rate and should not be hard coded
Fail Fee	Credit when role = B, debit when role = S. Format of this field should be separated by comma at every change of 1000, and rounded to 2 decimal.
SMTR INTL A/C	Internal Account data entered by the submitter of the trade
ACCPTR INTL A/C	Internal Account data entered by the acceptor of the trade

Sample Layout of File:

Daily File Extract for PTM20															
Ledger	Name of Ledger	Role	Other-C UID	Transac tion ID	ISIN	Trade Type	Accoun t	Net Amount	CUR	Stat us	Trade Date	Value Date	Fail Fee Rate	Fail Fee	SMTR INTL A/C	ACCPTR INTL A/C
PTM20	Post Trade Mod Inc	S	TATI	T202114 04521U	CA135087J397	C	GA	$34,113,437.50	CAD	C	20210520	20210525	0.0000137	-$467.31		
PTM20	Post Trade Mod Inc	S	TATI	T202114 054926	CA135087K940	C	GA	$36,384,062.50	CAD	C	20210520	20210525	0.0000137	-$498.41		
PTM20	Post Trade Mod Inc	B	TATI	T202114 07650E	CA135087J397	C	GA	$54,000,887.67	CAD	C	20210520	20210525	0.0000137	$739.74		

Daily File Extract for TAT01															
Ledger	Name of Ledger	Role	Other-C UID	Transac tion ID		Trade Type	Accoun t	Net Amount	CUR	Stat us	Trade Date	Value Date	Fail Fee Rate	Fail Fee	SMTR INTL A/C	ACCPTR INTL A/C
TAT01	Totally Awesome Trio Ltd.	B	PTML	T202114 04521U	CA135087J397	C	GA	$34,113,437.50	CAD	C	20210520	20210525	0.0000137	$467.31		
TAT01	Totally Awesome Trio Ltd.	B	PTML	T202114 054926	CA135087K940	C	GA	$36,384,062.50	CAD	C	20210520	20210525	0.0000137	$498.41		
TAT01	Totally Awesome Trio Ltd.	S	PTML	T202114 07650E	CA135087J397	C	GA	$54,000,887.67	CAD	C	20210520	20210525	0.0000137	-$739.74		

Month-end Fail Fee File

In the evening of month-end the system will execute the following for each participant:Pull all records from the daily tables from day 1 of the month to the last day of the month, and group by counterparty, and sum all fail fees captured in the daily extract between the participant and the counterparty.

1. The month-end extract will be made available in a CSV format for participants to reconcile against the daily extract or internal records. The only difference between the daily file and the month-end file is that the month-end file will have subtotals by counterparty reported under the Month-end Fail Fee column.

Layout of Month-end Fail Fee File

Attribute	Description
Ledger	Participant's Ledger
Name of Ledger	Name of Participant at CDS
Role	B = Buyer, S = Seller
Other-CUID	the counterparty to the trade
Transaction ID	CDSX generated transaction ID of the trade
ISIN	GoC's Issuer code = CA 1350Z7,13501Z,13506Z,13508Z,135087,13509Z
Trade Type	All trade types
Account	GA 000, SA 000
Net Amount	value of the trade. Format of this field should be separated by comma at every change of 1000, and rounded to 2 decimal.
Currency	CAD or USD
Status	Trade status = "C" - Confirmed, "U" - Unconfirmed, "P" - Pending
Trade Date	Date when trade was executed
Value Date	Date of settlement
Benchmark Rate	As captured in the daily CSV file
Fail Fee	Fee applied the next day to participants, credit when role = B, debit when role = S. Format of this field should be separated by comma at every change of 1000, and rounded to 2 decimal.
SMTR INTL A/C	Internal Account data entered by the submitter of the trade
ACCPTR INTL A/C	Internal Account data entered by the acceptor of the trade
Month-end Fail Fee	Subtotal by Counterparty

Sample Month-end CSV File

Daily File Extract for PTM20																	
Ledger	Name of Ledger	Role	Other -CUID	Transaction ID	ISIN	Trade Type	Account	Net Amount	CUR	Status	Trade Date	Value Date	Fail Fee Rate	Fail Fee	SMTR INTL A/C	ACCPTR INTL A/C	Month-end Fail Fee
PTM20	Post Trade Mod Inc	S	TATI	T20211404521U	CA135087J397	C	GA	$34,113,437.50	CAD	C	20210520	20210525	0.00001370	-$467.31			
PTM20	Post Trade Mod Inc	S	TATI	T202114054926	CA135087K940	C	GA	$36,384,062.50	CAD	C	20210520	20210525	0.00001370	-$498.41			
PTM20	Post Trade Mod Inc	B	TATI	T20211407650E	CA135087J397	C	GA	$54,000,887.67	CAD	C	20210520	20210525	0.00001370	$739.74			
PTM20	Post Trade Mod Inc		TATI						CAD								-$225.98
Daily File Extract for TAT01																	
Ledger	Name of Ledger	Role	Other -CUID	Transaction ID		Trade Type	Account	Net Amount	CUR	Status	Trade Date	Value Date	Fail Fee Rate	Fail Fee	SMTR INTL A/C	ACCPTR INTL A/C	
TAT01	Totally Awesome Trio Ltd.	B	PTML	T20211404521U	CA135087J397	C	GA	$34,113,437.50	CAD	C	20210520	20210525	0.00001370	$467.31			
TAT01	Totally Awesome Trio Ltd.	B	PTML	T202114054926	CA135087K940	C	GA	$36,384,062.50	CAD	C	20210520	20210525	0.00001370	$498.41			
TAT01	Totally Awesome Trio Ltd.	S	PTML	T20211407650E	CA135087J397	C	GA	$54,000,887.67	CAD	C	20210520	20210525	0.00001370	-$739.74			
TAT02	Totally Awesome Trio Ltd.		PTML						CAD								$225.98