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Canada: Contingent Term Repo Facility

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Canada: Contingent Term Repo Facility[1]

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Abstract

The Bank of Canada (BoC) activated its Contingent Term Repo Facility (CTRF) from April 2020 to April 2021 in response to liquidity strains in markets that stemmed from economic uncertainty and the COVID-19 pandemic. The facility complemented other BoC liquidity facilities by broadening access to the central bank's repurchase (repo) operations beyond primary dealers and their affiliates, to large asset managers active in Canadian dollar money markets or fixed income markets. The CTRF offered one-month term funding to eligible counterparties on a bilateral basis against securities issued or guaranteed by the government of Canada or a provincial government. In the second quarter of 2020, the BoC lent CAD 291.8 million (USD 223 million) through the CTRF. BoC officials said the facility was "little used" because funding market conditions improved rapidly, and the facility's pricing and terms meant "regular market sources of funding became more favorable." Officials from large pension funds, which play a major role in Canadian repo markets, reported that though they accessed the CTRF for lower amounts, it helped restore their confidence by providing backstop repo rates, "[alleviating] some of the need to build up precautionary liquidity."

Keywords: Bank of Canada, Canada, Contingent Term Repo Facility, CTRF

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Overview

The Canadian government, in line with other countries, imposed lockdowns and travel restrictions in March 2020 in response to the spread of COVID-19, triggering significant stress on its financial system and the broader economy. While businesses and households needed loans to manage income losses stemming from stay-at-home orders, asset managers needed to sell assets to handle fund outflows and potential margin calls, as well as manage exposure to volatility (Fontaine et al. 2021, 7).

Asset managers overall were net sellers of bonds during the crisis. Some mutual funds confronted redemptions by businesses and households facing uncertainty, and consequently, needed to quickly sell less-liquid assets if they depleted their buffers of cash and easily sold assets. Some pension funds sold assets to meet margin calls, and some leveraged funds sold assets to rebalance their portfolios to manage riskier products that could have been negatively impacted by the lockdowns (Fontaine et al. 2021, 5–7).

The concurrent demand for cash via asset sales and borrowing strained banks. "The proportion of [banks'] balance sheet expansion suggest banks faced a trade-off between lending to the real economy and purchases of securities (or lending against bond collateral)," and it would be easier for the banks to limit resources for new securities purchases (Fontaine et al. 2021, 18). The reliance on banks "made them a bottleneck that impeded the flow of securities among investors in financial markets" (Fontaine et al. 2021, 19). The Bank of Canada (BoC) stated in its annual Financial System Review that "[l]iquidity strains were widespread across financial markets in March" (BoC 2020g).

Key Terms

Purpose: "To counter any severe market-wide liquidity stresses and support the stability of the Canadian financial system"

Launch Dates	Announced: March 20, 2020 Activated: April 6, 2020
Expiration Date	April 6, 2021
Legal Authority	Subparagraph 18(g)(i) of the Bank of Canada Act
Peak Outstanding	CAD 291.8 million of securities in Q2 2020
Participants	Financial institutions subject to federal or provincial regulation that could prove significant activity in Canadian money or bond markets
Rate	Connected to the overnight swap index rate
Collateral	Securities issued or guaranteed by the government of Canada or a provincial government
Loan Duration	One month
Notable Features	Similar to a Global Financial Crisis–era program
Outcomes	CAD 291.8 million of securities from counterparties in Q2 2020

In response, the BoC implemented multiple programs to ensure that Canadian financial institutions had access to liquidity that could then be used to support credit needs in the broader economy (Poloz 2020).[3] This included the Contingent Term Repo Facility (CTRF), which provided a broader set of financial institutions access to term repurchase agreements (repos) against a wide range of securities issued or guaranteed by the government of Canada or a provincial government (BoC 2020e; Gravelle 2021, 3).[4] The BoC typically engages only with primary dealers for term repos (BoC 2021c).

The CTRF offered funding on a one-month term to counterparties that could prove "significant activity" in Canadian dollar markets or fixed income markets (BoC 2020b). The BoC could have conducted the repos on shorter terms at the central bank's discretion, but it is unknown if and how often it did so because the BoC reported its CTRF transactions only on an aggregate basis weekly and monthly. Collateral used in CTRF repos were subject to the same haircuts as eligible collateral in the BoC's Standing Liquidity Facility, which provided overnight advances to certain financial institutions that participate in Canada's main payments system (BoC 2020b; BoC 2021c).[5]

The central bank conducted the transactions on a bilateral basis through the securities settlement system CDSX (BoC 2020b). The BoC did not announce a program size limit for the CTRF.

The BoC's financial statement for the second quarter of 2020 shows that the central bank purchased CAD 291.8 million (USD 223 million) worth of securities through the CTRF (BoC 2020i, 23).[6] Exact utilization figures are unavailable after the second quarter because the BoC did not continue to break out CTRF purchase data in its subsequent quarterly financial statements. The BoC stated on its CTRF website that it would report such transactions at an aggregate level, along with its other repo operations, in its weekly balance sheet updates (BoC 2020b).

Still, in a chapter written for a Centre for Economic Policy Research (CEPR) book, BoC Deputy Governor Toni Gravelle and former BoC Senior Deputy Governor Carolyn Wilkins said the facility was "little used" (Gravelle, Wilkins, and Ubide 2021, 66). Similarly, BoC researchers found that Canada's largest pension funds, which play a major role in the country's repo markets (Garriott and Gray 2016, 11), did access the CTRF but not in large amounts (Bédard-Pagé et al. 2021, 8–9).

Summary Evaluation

Little research has been done regarding the CTRF's effectiveness, most likely because financial institutions did not tap it substantially. Even so, a measure the BoC used in 2020

[3] See Key Design Decision No. 3, Part of a Package, for a longer list of BoC interventions.

[4] The CTRF was modeled after a similar temporary term repo facility the BoC established during the Global Financial Crisis (Wilkins 2015, 5). See Key Design Decision No. 2, Legal Authority, for further discussion of the two CTRF programs.

[5] See the Key Design Decision No. 11, Eligible Collateral, for further discussion of the Standing Liquidity Facility.

[6] Per Federal Reserve Foreign Exchange Rate data, USD 1 = CAD 1.30 on December 31, 2019.

called the price-impact proxy, which measures the temporary impact of a trade on the price of a bond, showed a spike in illiquidity at the start of the pandemic followed by a rapid drop after the bank's interventions, including the CTRF's introduction (BoC 2020g).

Representatives from some of Canada's pension funds told BoC researchers that the CTRF helped to restore their confidence by providing backstop repo rates, alleviating "some of the need to build up precautionary liquidity" (Bédard-Pagé et al. 2021, 8–9).

The CTRF was not widely or deeply tapped because funding market conditions improved rapidly, and the facility's pricing and terms meant "regular market sources of funding became more favorable" (Gravelle, Wilkins, and Ubide 2021, 66). The CTRF was meant to complement the BoC's enhanced regular term repo facility. Market participants more actively used this enhanced regular term repo facility because banks and their broker-dealers, eligible for the regular repo facility, were and are central to the dispersion of funding and market liquidity in Canadian core fixed-income markets (Gravelle, Wilkins, and Ubide 2021, 66). They were the "best placed" to pass along funding received from the BoC (Gravelle, Wilkins, and Ubide 2021, 66).

Jeremy Kronick, a former BoC economist, argued that because the CTRF was a non-auction facility, it didn't guarantee competitive pricing and "optimal" liquidity distribution (Andolfatto, Nelson, and Kronick 2020).

BoC researchers highlighted moral hazard concerns that could arise if the central bank continued to engage directly with asset managers and other non-traditional counterparties via facilities like the CTRF and suggested that the BoC consider a variety of measures to reduce moral hazard (Fontaine et al. 2021, 28–30). One such policy change includes giving some asset managers deposit accounts of their own at the central bank, allowing the asset managers the "option to hold a safe asset that can be used as money in all weather, irrespective of bank dealers' risk limits" (Fontaine et al. 2021, 28–30). The BoC could also consider normalizing access to its operations to large investors that hold targeted securities (Fontaine et al. 2021, 28–30).

Context: Canada 2019–2020	
GDP (SAAR, nominal GDP in LCU converted to USD)	$1.8 trillion in 2019 $1.8 trillion in 2020
GDP per capita (SAAR, nominal GDP in LCU converted to USD)	$46,327 in 2019 $43,242 in 2020
Sovereign credit rating (five-year senior debt)	Data for 2019: Moody's: Aaa S&P: AAA Fitch: AAA Data for 2020: Moody's: Aaa S&P: AAA Fitch: AA+
Size of banking system	Data not available for 2019 Data not available for 2020
Size of banking system as a percentage of GDP	Data not available for 2019 Data not available for 2020
Size of banking system as a percentage of financial system	Data not available for 2019 Data not available for 2020
Five-bank concentration of banking system	84.22% in 2019 84.52% in 2020
Foreign involvement in banking system	Data not available for 2019 Data not available for 2020
Government ownership of banking system	Data not available for 2019 Data not available for 2020
Existence of deposit insurance	Yes, in 2019 Yes, in 2020
Sources: Bloomberg; World Bank Global Financial Development Database; World Bank Deposit Insurance Dataset.	

Key Design Decisions

1. **Purpose: The Bank of Canada activated the Contingent Term Repo Facility to "counter any severe market-wide liquidity stresses and support the stability of the Canadian financial system" by offering backstop repo rates and by providing a broader set of financial institutions access to term repurchase agreements.**

The Bank of Canada (BoC) in early April announced that it would initiate its Contingent Term Repo Facility (CTRF) to "counter any severe market-wide liquidity stresses and support the stability of the Canadian financial system" (BoC 2020e; BoC 2021a). The CTRF broadened the list of financial institutions that the BoC engaged with for its normal repurchase agreement (repo) operations, providing access to large asset managers active in repo markets (Gravelle 2021, 3). The BoC typically engages only with primary dealers during its routine repo and reverse repo operations (BoC 2021c).

2. **Legal Authority: Section 18(c) of the Bank of Canada Act provides the BoC authority to buy and sell securities issued or guaranteed by the Canadian government or by the country's provinces.**

The power is enumerated in the Powers and Business section of the Bank of Canada Act (*Bank of Canada Act* 1985).

As part of the central bank's efforts to learn from the fallout of the Global Financial Crisis (GFC) and shore up its operating framework (BoC 2015b, 2), policymakers created the CTRF in 2015 to deal with "severe market-wide liquidity stress" when activated and stated that the facility would not be used to address "idiosyncratic liquidity shocks at individual institutions" (BoC 2015c; BoC 2015a, 13).

The CTRF is modeled after a similar temporary term repo facility the BoC established during the GFC (Wilkins 2015, 5; Sankar 2022). The BoC updated its Framework for Financial Market Operations to create the CTRF, rather than changing its policy for buying and selling securities (BoC 2015a; BoC 2015d; BoC 2008). This BoC policy, as adopted originally in 2008, provides the central bank flexibility to offer liquidity to institutions beyond primary dealers and their affiliates (BoC 2021c).

3. **Part of a Package: The BoC activated the CTRF as part of a broader suite of liquidity provision measures at the start of the COVID-19 pandemic.**

The BoC activated the CTRF as part of a broader suite of financial stabilization and liquidity provision measures that the bank implemented in early 2020 in response to the COVID-19 pandemic. Other policies included the following (BoC 2020f, 14):

- Lowering the target for the overnight rate by a cumulative 150 basis points to the effective lower bound of 0.25 percent;

- Launching the Bankers' Acceptance Purchase Facility;
- Introducing a program to purchase Canada Mortgage Bonds in the secondary market;
- Introducing the Provincial Money Market Purchase Program;
- Introducing the Commercial Paper Purchase Program;
- Introducing the Corporate Bond Purchase Program;
- Introducing the Provincial Bond Purchase Program;
- Launching a program to purchase government of Canada securities in the secondary market (minimum of CAD 5 billion per week, across the yield curve);
- Enhancing term repo operations;
- Coordinating with international policymakers for US-dollar liquidity and announcing that a US dollar term repo facility would be made available on a contingency basis (should the need arise);
- Launching the Standing Term Liquidity Facility.

4. Management: The BoC implemented the program and utilized CDS Clearing and Depository Services Inc. to settle transactions.

No other Canadian governmental agencies were involved in the CTRF's implementation. Counterparties had to deliver collateral to the BoC through security settlement system CDSX (BoC 2020b). The system is owned and operated by CDS Clearing and Depository Services Inc., which is in turn owned indirectly by the for-profit corporation TMX Group (BoC 2020b; BoC 2021b).

The Bank of Canada Act requires that the central bank publish financial information about its assets and liabilities every week on its website. The BoC is also required to release audited financial statements and a report by the BoC's governor to the Minister of Finance (*Bank of Canada Act* 1985).

5. Administration: The CTRF was a bilateral facility open for continuous access.

The BoC transacted directly with counterparties (BoC 2020b). Eligible parties could access the facility as needed (BoC 2015a, 14), a design feature intended to restore confidence by "providing backstop repo rates" (Bédard-Pagé et al. 2021, 9). By 3 pm EST on settlement day, counterparties had to deliver securities acting as collateral to the BoC through the security settlement system CDSX (BoC 2020b).

6. **Eligible Participants: Financial institutions subject to federal or provincial regulation that could prove significant activity in Canadian money or bond markets could access the CTRF, a departure from the BoC's regular practice of engaging only with primary dealers for term repos.**

Institutions seeking access to the CTRF had to provide information describing their involvement in Canadian money and bond markets and identify the relevant regulator and the regulations that applied to the firm. The BoC also asked applicants for the following information (BoC 2020a):

- Size of Canadian fixed-income and money market assets under management;
- Number of counterparties transacted with on a regular basis;
- Breakdown of the amount of eligible securities based on the current terms and conditions that was available to be used at the Bank of Canada, including approximate market value;
- Average daily trading volumes of Canadian fixed-income and money market products in 2019 broken down by product type;
- Rationale for accessing the CTRF (e.g., testing, liquidity, loss of market access).

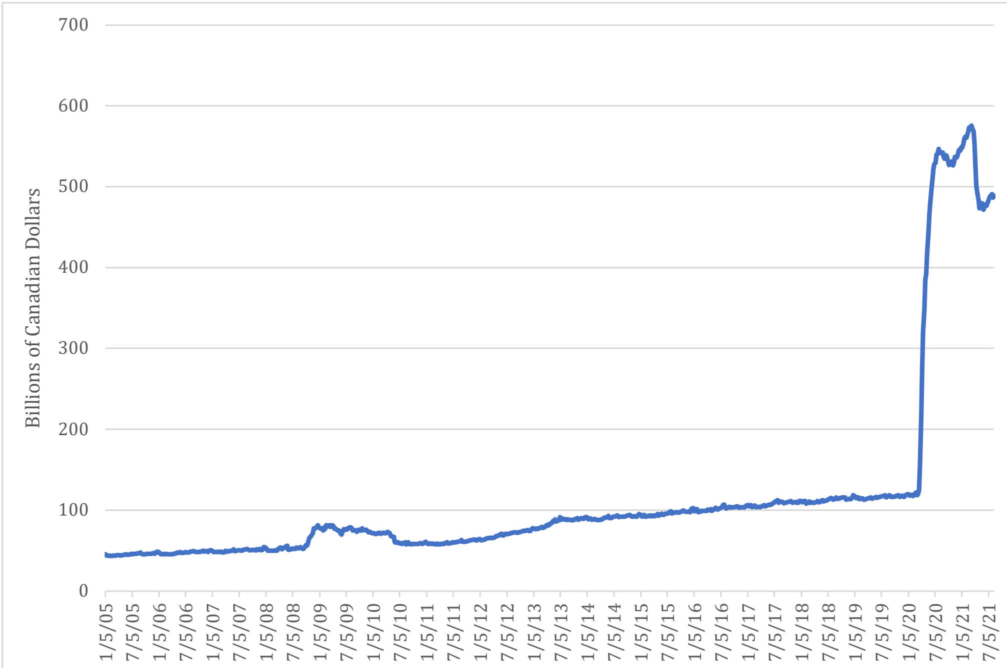
Institutions were also required to deliver the relevant securities through CDSX or have a "custodial relationship in place" to do so (BoC 2020a).

The BoC used the CTRF to provide a broader set of financial institutions access to term repos (Gravelle 2021, 3). BoC researchers found that Canada's largest pension funds play a major role in the country's repo markets (Bédard-Pagé et al. 2021, 8–9; Garriott and Gray 2016, 11).

7. **Funding Source: The BoC expanded its balance sheet to purchase eligible securities.**

The stabilization measures launched by the BoC rapidly expanded the BoC's balance sheet during the worst part of the pandemic in 2020, from March to June, leaving the central bank's ledger at historic highs. The CTRF accounted for a very small fraction of this expansion (see Figure 1).

Figure 1: Bank of Canada's Total Assets



Source: BoC 2022.

8. **Program Size: The BoC did not announce a CTRF size limit. It lent just CAD 291.8 million through the program during the first quarter of its operation, a small fraction of the BoC's broader repo operations.**

Policy documents that detailed the CTRF's official establishment in 2015 do not state that the BoC would announce such a limit if it chose to activate the CTRF (BoC 2015a, 13–14).

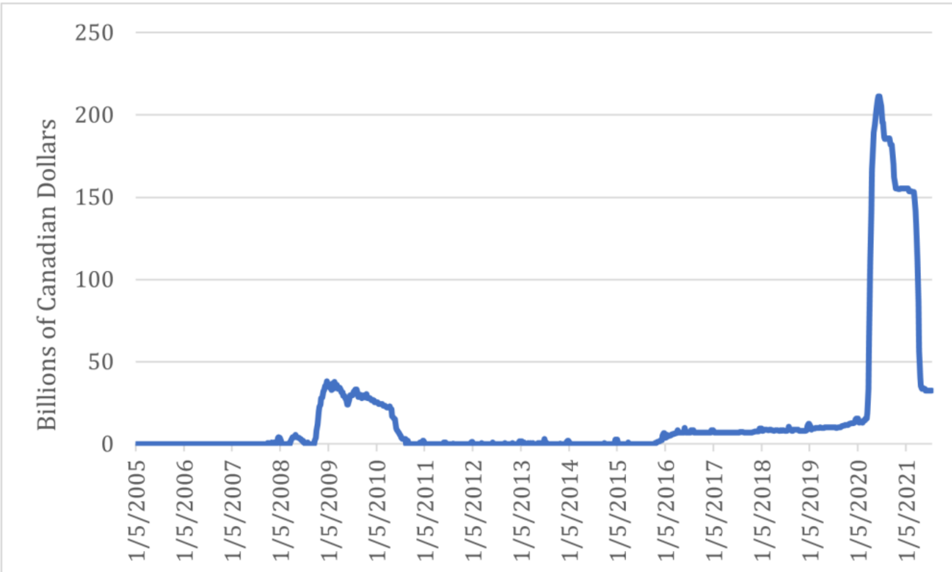
Exact utilization figures are unavailable after the second quarter of 2020 because the BoC did not continue to break out CTRF data in its subsequent quarterly financial statements. The BoC stated on its CTRF website that it would instead report such transactions at an aggregate level, along with its other repo operations, in its weekly balance sheet (BoC 2020b; BoC 2020i, 23). Two representatives of the BoC stated in a report about the central bank's interventions that the facility was "little used" (Gravelle, Wilkins, and Ubide 2021, 66).

As of November 2021, the BoC had not formally published the names of institutions that accessed the CTRF. However, BoC researchers' interviews conducted with Canada's largest pension funds, the so-called "Big Eight," revealed that they did tap the facility, albeit in small amounts (Bédard-Pagé et al. 2021, 8–9).[7]

[7] The Big Eight include the Canada Pension Plan Investment Board, Caisse de dépôt et placement du Québec, the Ontario Teachers' Pension Plan, the British Columbia Investment Management Corporation, the Public Sector Pension Investment Board, the Alberta Investment Management Corporation, the Ontario Municipal Employees Retirement System, and the Healthcare of Ontario Pension Plan (Bédard-Pagé et al. 2021, 1).

The BoC's presence in broader repo markets—through the CTRF and regular term repo facility—increased substantially at the height of the pandemic, peaking at CAD 211 billion in June 2020. This was the most the BoC had ever participated in the repo market, more than quintupling the previous peak at the height of the GFC in 2008 (see Figure 2).

Figure 2: Total Securities Purchased Under Resale Agreement



Source: BoC 2022.

9. Individual Participation Limits: The BoC did not announce individual participation limits.

The BoC's CTRF policy documents do not include language limiting the amount of funds an individual institution could receive as part of repo transactions.

10. Rate Charged: The CTRF charged a fixed rate, calculated in part using the relevant overnight index swap rate.

Officials calculated the CTRF's repo rate, an interest-like charge the counterparty pays on top of the price of the asset it originally agreed to repurchase, in the following manner (BoC 2020b).

The rate was the overnight index swap (OIS) rate of the maturity of the operation plus the higher of (1) 35 basis points, (2) the highest spread over the OIS rate on the most recent term repo with the closest tenor, or (3) as otherwise determined by the BoC at the time of the transaction. The BoC calculated the interest on an actual 365-day basis (BoC 2020b).

11. Eligible Collateral: The CTRF offered liquidity against securities issued or guaranteed by the government of Canada or a provincial government.

During its normal operations, the BoC generally limits the type of financial assets it acquires to public-issued or guaranteed assets to manage risk to its balance sheet, though it does maintain the right to purchase assets associated with a higher degree of risk (BoC 2021d). Policymakers likely used the bank's typical asset acquisition and management standards to create requirements for the CTRF, though the rationale was not explicitly stated in public CTRF documentation. Eligible securities included the following (BoC 2020b):

- Securities issued by the government of Canada;
- Government of Canada stripped coupons and residuals;
- Securities guaranteed by the government of Canada (including Canada Mortgage Bonds and NHA mortgage-backed securities with a minimum pool size of CAD 25 million);
- Government of Canada-guaranteed stripped coupons and residuals;
- Securities issued or guaranteed by a provincial government that met the criterion of sufficiently high quality as determined by the BoC;
- Stripped coupons and residuals of securities issued or guaranteed by a provincial government that met the criterion of sufficiently high quality as determined by the BoC.

With the BoC's approval, institutions could substitute a limited number of securities underlying the repo, but the transaction and the substitution date must have been pre-arranged. Unless otherwise arranged, eligible counterparties had one substitution window per operation (BoC 2020b).

Securities eligible for the CTRF were subject to the same haircut and margin requirements as those for the BoC's Standing Liquidity Facility (SLF). The BoC's SLF provided overnight advances to financial institutions that were members of the Large Value Transfer System (LVTS), Canada's main payments network. Members are required to meet certain settlement balance levels each night and may tap the SLF if the financial institution is unable to do so because of temporary liquidity shortages (BoC 2021c). As of April 9, 2020, the SLF, and by extension, the CTRF, utilized the margin schedule shown in Figure 3.[8]

[8] Central bank policymakers often deduct so-called haircuts or margins from the market value of pledged collateral. By devaluing an asset relative to its perceived riskiness (larger margins for higher risk), the central bank attempts to protect itself from a drop in the collateral's price (Chailloux, Gray, and McCaughrin 2008, 22–23).

Figure 3: Margin Requirements for Assets Eligible as Collateral Under the BoC's SLF and CTRF

Collateral type	Remaining Maturity						
	up to 3 months	>3-12 months	>1-3 years	>3-5 years	>5-10 years	>10-35 years	>35 years
Securities issued by the government of Canada	0.25%	0.50%	1.00%	1.50%	2.00%	3.00%	3.50%
Government of Canada stripped coupons and residuals	0.25%	0.50%	1.00%	1.50%	2.00%	4.00%	11.50%
Securities guaranteed by the Government of Canada (excluding NHA mortgage-backed securities)	0.50%	1.00%	1.50%	2.00%	2.50%	4.00%	4.50%
NHA mortgage-backed securities	1.50%	2.00%	2.50%	3.00%	3.50%	5.00%	5.50%
Government of Canada guaranteed stripped coupons and residuals	0.50%	1.00%	1.50%	2.50%	4.00%	5.50%	13.00%
Securities issued by a provincial government	1.00%	1.50%	2.00%	2.50%	3.00%	4.00%	6.00%
Provincial government stripped coupons and residuals	1.00%	1.50%	2.00%	3.00%	4.50%	6.00%	17.00%
Other public sector	1.00%	2.00%	2.50%	3.00%	3.50%	4.50%	6.50%
Securities guaranteed by a provincial government	1.00%	2.00%	2.50%	3.00%	3.50%	4.50%	6.50%
Provincial government guaranteed stripped coupons and residuals	1.00%	2.00%	2.50%	3.50%	5.00%	6.50%	17.50%

Source: BoC 2020b; BoC 2020c.

12. Loan Duration: CTRF transactions carried a term of one month.

Repos through the CTRF carried a one-month term. Eligible counterparties accessing the CTRF could also use the facility for repo transactions with a term of less than one month at the participant's discretion. The BoC reserved the right to allow longer-term transactions but did not publish a market notice announcing such a change (BoC 2020b).

A breakdown of CTRF use based on term length was not available in the BoC's published documentation and data.

13. Other Conditions: The BoC did not impose restrictions or requirements on eligible counterparties.

Still, the BoC reserved the right to sanction eligible counterparties for failing to meet general contract terms, such as returning the required cash on the maturity date. Sanctions could include suspension of CTRF access and restricted access to the central bank's regular Term Repo Operations. The BoC could also change, on a temporary basis, a sanctioned counterparty's bidding limit for its regular Term Repo Operations (BoC 2020b).

14. Impact on Monetary Policy Transmission: The BoC did not discuss the impact of the CTRF on monetary policy transmission.

The BoC did not discuss monetary policy transmission issues in its CTRF documentation.

15. Other Options: There is no publicly available information on other options considered by the BoC.

There is no publicly available information on other options considered by the BoC.

16. Similar Programs in Other Countries: The Bank of England activated a Contingent Term Repo Facility that was similar in purpose to the BoC's program.

The Bank of England (BoE) activated its CTRF in March 2020 as a liquidity "insurance" facility, but there is no evidence to suggest that the BoC designed its CTRF with the BoE's in mind (BoE 2020; Fulmer 2022).

17. Communication: Policymakers described the CTRF as a facility that would allow a broader variety of financial institutions to access the BoC's repo operations.

To address "severe" liquidity issues that affected Canadian markets in March 2020, the BoC injected "significant" amounts of new funding into the financial system by escalating its repo operations (Gravelle 2021, 2; BoC 2020d). This was, and is, the central bank's primary tool to jumpstart funding markets experiencing liquidity issues (Gravelle 2021, 3; BoC 2021c).

Policymakers positioned the CTRF as an additional tool the BOC could use to broaden access to its key repo operations.[9] For example, Deputy BoC Governor Toni Gravelle stated that the CTRF provided liquidity to large asset managers that were active in repo markets, rather than just primary dealers, the counterparties with which the BoC typically engages in repos (Gravelle 2021, 3).

18. Disclosure: The BoC reported aggregated CTRF transactions weekly.

The Bank of Canada Act requires that the central bank publish financial information about its assets and liabilities every week on its website (*Bank of Canada Act* 1985). The BoC reported CTRF transactions at an aggregate level with other securities purchased under resale agreements (BoC 2020b). The central bank briefly, in the second quarter of 2020, broke out CTRF figures but ceased doing so after (BoC 2020i, 23). The BoC is also required to release audited financial statements and a report by the BoC's governor to the Minister of Finance (*Bank of Canada Act* 1985).

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[9] See the BoC's 2020 quarterly reports and its 2020 annual report (BoC 2020d; BoC 2020h; BoC 2020i; BoC 2020j; BoC 2021f; BoC 2021g).

19. Stigma Strategy: The BoC did not publish the names of participating institutions.

Because of confidentiality considerations, the BoC chose not to publish the names of individual institutions (BoC 2020b). Respondents to the BoC's 2015 request for comment about the CTRF's initial establishment worried that institutions accessing the facility might face negative stigma (BoC 2015c). When announcing the establishment of the CTRF, the BoC stated it would mitigate those disclosure concerns if the facility were activated in the future (BoC 2015c).

20. Exit Strategy: The BoC ended CTRF operations, as initially scheduled, on April 6, 2021.

The BoC activated the CTRF on April 6, 2020, and said the facility would operate for 12 months (BoC 2020e). The central bank shuttered the CTRF, as originally scheduled, on April 6, 2021 (BoC 2021e). The BoC on its balance sheet does not distinguish between securities held under the CTRF from securities held under its other repo operations. Officials have said there was little usage after the second quarter of 2020 (BoC 2020b).

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