BANK OF CANADA
BANQUE DU CANADA

Staff Discussion Paper/Document d'analyse du personnel—2025-5

Last updated: March 17, 2025

Will Asset Managers Dash for Cash? Implications for Central Banks

David A. Cimon
Financial Markets Department
Bank of Canada
dcimon@bankofcanada.ca

Jean-Philippe Dion
Financial Markets Department
Bank of Canada
jdion@bankofcanada.ca

Jean-Sébastien Fontaine
Financial Markets Department
Bank of Canada
jsfontaine@bankofcanada.ca

Jabir Sandhu
Financial Markets Department
Bank of Canada
jsandhu@bankofcanada.ca

DOI: https://doi.org/10.34989/sdp-2025-5 | ISSN 1914-0568

Acknowledgements

This work builds on and expands ideas discussed in Bank of Canada Staff Discussion Paper No. 2021-2 titled “COVID-19 Crisis: Lessons Learned for Future Policy Research” by Jean-Sébastien Fontaine, Corey Garriott, Jesse Johal, Jessica Lee and Andreas Uthemann as well as on a rich set of unpublished work by Patrick Aldridge, Nicholas Kazaka, Jessica Lee and Andreas Uthemann. We thank Toni Gravelle, Mark de Guzman, Grahame Johnson, Scott Kinnear, Alexandra Lai, Stéphane Lavoie, Philippe Mueller, Christopher Reid and Virginie Traclet for helpful suggestions and guidance. The authors are also grateful to Anne-Herty Génard and Sofia Tchamova for their research assistance. Finally, we thank Nicole van de Wolfshaar for editorial assistance and Denis Clairand and Joëlle Lefrançois-Couturier for translation assistance.

Abstract

In times of stress, if the potential demand from asset managers for market liquidity approaches or exceeds dealers' ability to intermediate, it could lead to a precautionary but disruptive dash for cash and may lead central banks to intervene. If the likelihood of such a dash for cash increases in the future, central banks may wish to consider enhancing their tool kits to provide asset managers with greater access to cash-like assets, regardless of dealers' capacity to intermediate, while managing moral hazard and asset managers' expectations of support from central banks in a crisis. We explore ways for central banks to use new facilities that make it easier for asset managers to convert existing assets to cash as well as possible ways to introduce new assets with liquidity that central banks would guarantee.

Topics: Central bank research; Coronavirus disease (COVID-19); Financial institutions; Financial markets; Financial stability; Financial system regulation and policies
JEL codes: E, E5, E58, G, G0, G00, G01, G1, G2

Résumé

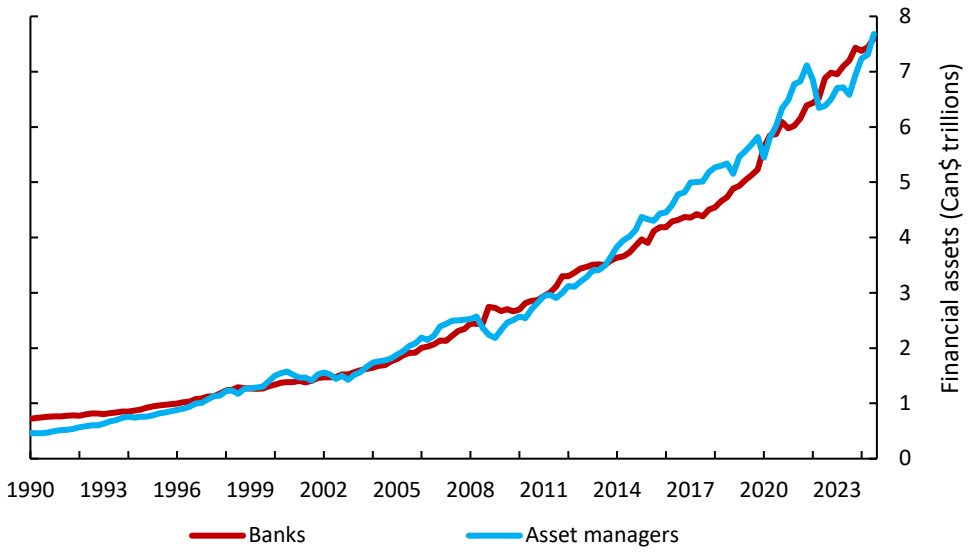
En périodes de tensions, si la demande potentielle de liquidités de la part des gestionnaires d'actifs est près d'atteindre ou dépasse la capacité d'intermédiation des courtiers, cela pourrait entraîner une ruée vers les liquidités, motivée certes par la précaution mais qui perturberait les marchés et pourrait amener les banques centrales à intervenir. Si la probabilité d'une telle ruée vers les liquidités s'accentuait dans l'avenir, les banques centrales pourraient envisager d'améliorer leur gamme d'outils pour faciliter l'accès des gestionnaires d'actifs à des actifs facilement convertibles en liquidités, quelle que soit la capacité d'intermédiation des courtiers. Mais elles devraient aussi gérer en même temps le risque moral et les attentes des gestionnaires d'actifs à l'égard de leur soutien en cas de crise. Nous étudions comment les banques centrales pourraient utiliser de nouveaux mécanismes qui permettraient aux gestionnaires d'actifs de convertir facilement des actifs existants en liquidités ainsi que des façons d'introduire de nouveaux actifs liquides qui seraient garantis par chaque banque centrale concernée.

Sujets : Recherches menées par les banques centrales; Maladie à coronavirus (COVID-19); Institutions financières; Marchés financiers; Stabilité financière; Réglementation et politiques relatives au système financier
Codes JEL : E, E5, E58, G, G0, G00, G01, G1, G2

Asset managers hold liquidity buffers to prepare for risks

Asset managers are institutions that invest in securities and other assets on behalf of investors. These institutions play an important role in the Canadian financial system and economy because they allocate funding to Canadian firms and governments by investing in the securities issued by these organizations.[1] **Chart 1** shows that asset managers have grown significantly over the past three decades and now represent almost $7 trillion in financial assets, where both the trend and the level closely track the total financial assets of Canadian banks.

Chart 1: Asset managers have grown significantly



Note: *Asset managers* include pension, insurance, money market mutual funds and other mutual funds.
Sources: Statistics Canada and Bank of Canada calculations Last observation:2024Q3

Asset managers face a range of risks in their business models. One type is liquidity risk, which they manage by using a pool of cash or other liquid assets to meet certain obligations. These obligations can include requests for redemptions, margin calls on derivatives positions or collateral calls on other leveraged positions. The exposures to these liquidity risks vary across types of asset managers:

- **Mutual funds**: Mutual funds typically offer their investors daily redemptions, which can result in the need for sudden sales of assets. Given regulatory restrictions, mutual funds have limited exposure to derivatives and make minimal use of many types of leverage, such as repurchase (repo) agreements. Mutual funds therefore have low exposures to margin calls and refinancing risks.

- **Hedge funds**: Hedge funds face a lower degree of redemption risk than mutual funds because they typically offer redemptions at longer frequencies. However, they tend use more derivatives and other types of leverage. This exposes them to the risk of margin calls and refinancing, which can result in sudden asset sales through deleveraging of leveraged positions.

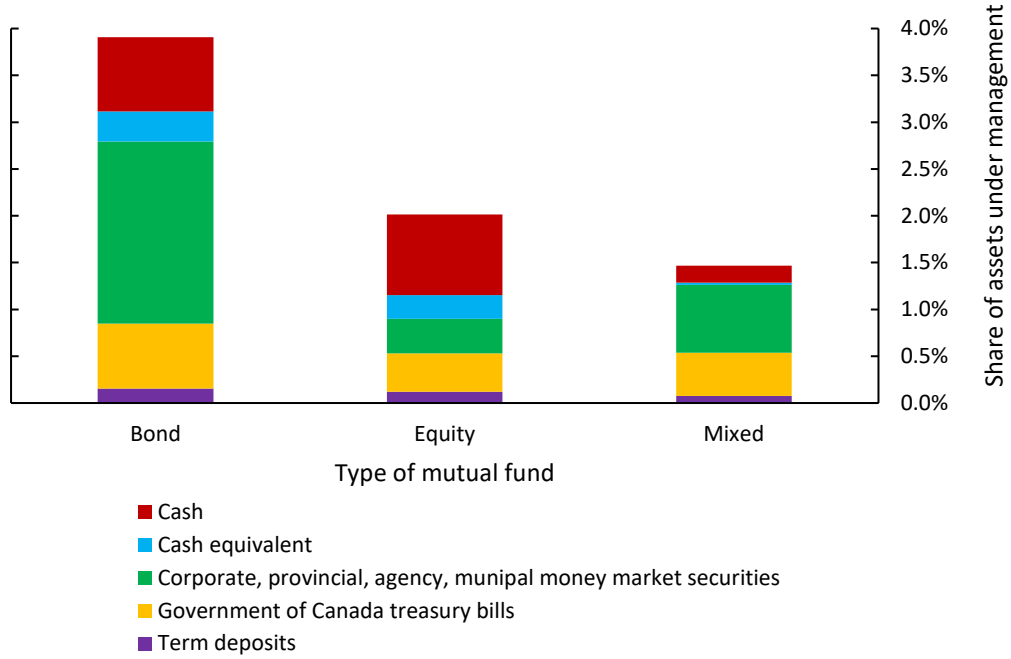
[1] See Bédard-Pagé (2019) for details about non-bank financial intermediation in Canada.

- **Pension funds and insurance companies**: Some of these asset managers use derivatives and can therefore be exposed to the risk of margin calls. Both also take on leverage and are therefore exposed to the risk of deleveraging.[2]

Asset managers prepare to meet their liquidity risks by holding a liquidity buffer. They typically keep these buffers in their portfolios either in cash or in securities that they believe can be converted easily to cash. They hold their cash through deposits at commercial banks. However, given the strict regulatory requirements banks face, these deposits may offer rates that asset managers find less attractive than the yield offered by other securities.

Chart 2 shows the average composition of the Canadian mutual funds' portfolios of typical liquidity buffer assets. It shows that the average size of these buffers ranges between 1.4% and 2.2% of total assets, depending on the type of mutual fund, and that most of these buffers are securities.[3]

Chart 2 : Mutual funds' liquid asset holdings range from cash to short-term securities



Note: *Corporate, provincial, agency and municipal money market securities* contains bankers acceptances', commercial paper, discount notes and certificates of deposit with maturity of less than one year. Share of assets under management is the average between January 2022 and December 2023.
Sources: Refinitiv Lipper and Bank of Canada calculations

[2] Staff at the Bank of Canada have conducted a range of analytical projects to inform on liquidity risks faced by different types of asset managers. See Sandhu and Vala (2023) to learn more about hedge funds, Bédard-Pagé et al. (2021) for more information on pension funds, Ouellet Leblanc and Shotlander (2020) for information on mutual funds, and Aldridge et al. (2024) for information on life insurance companies.

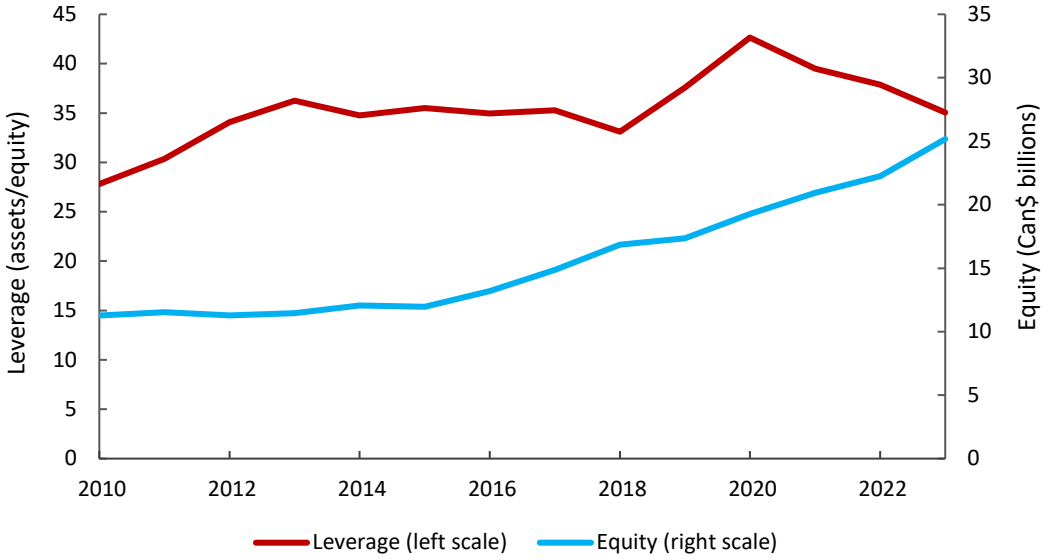
[3] During the COVID-19 crisis, asset managers also relied on bankers' acceptances (BAs) for liquidity. See Bédard-Pagé et al. (2021) for a discussion of pension funds' use of BAs.

Traditionally liquid assets can become illiquid in times of market stress

When they face liquidity needs, asset managers may have to raise additional cash to meet their payments obligations. One way asset managers raise cash is by selling the securities held in their liquidity buffers to dealers. In normal times, these dealers typically pass the securities onto other clients by intermediating between their clients who have a need for cash and those who are looking to invest cash. As intermediaries, dealers may need to warehouse securities on their own balance sheets for some time while they seek out opportunities to offset transactions across their broad set of clients.

When many of their clients face simultaneous cash needs, dealers face a larger volume of trades that they cannot match between their different clients and would need to increasingly use their own balance sheets to absorb the imbalance. In such a scenario, market liquidity relies increasingly on dealers' willingness to warehouse excess sales of securities onto their own balance sheets, potentially for a longer period. This can lead to a rapid deterioration of market liquidity and a quick increase in volatility, lowering the security's market value.

Chart 3: Dealers' risk-adjusted leverage is around 35 times their equity



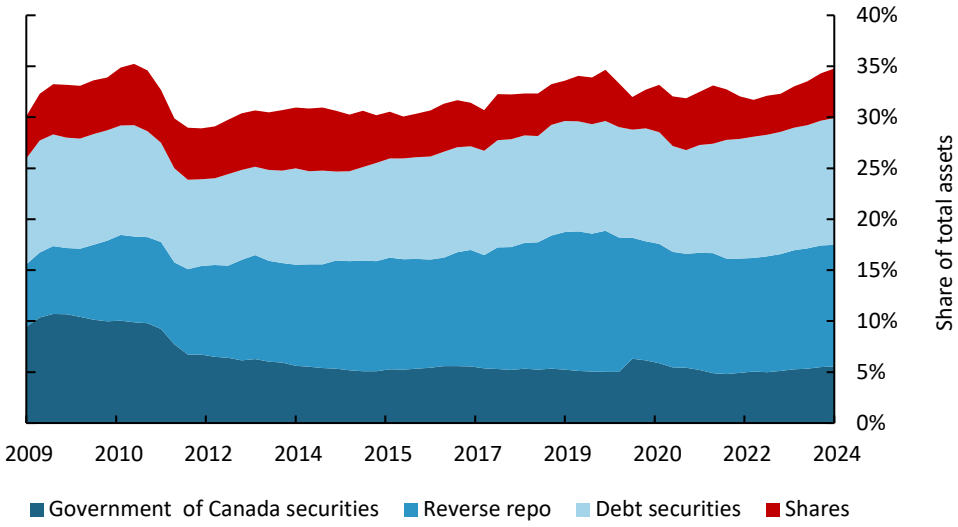
Note: Dealers are firms registered with the Canadian Investment Regulatory Organization (CIRO) that engage in proprietary trading, retail and institutional business, or corporate finance. Equity is measured by risk-adjusted capital. Leverage is the ratio of average annual total assets to risk-adjusted capital.
Sources: CIRO and Securities, Industry Regulatory Financial Filing System Last observation: 2023Q4

In practice, Canadian dealers hold nearly matched books—in other words, they generally try to ensure that their exposures to different risks are at similar levels across their assets and liabilities. This matching allows them to operate with a low level of equity, which results in a corresponding high leverage (**Chart 3**). This financial efficiency ultimately lowers the costs of providing intermediation services between clients in normal times. However, this low level of equity also implies that dealers have limited financial resources to absorb large securities sales by asset managers. Increasing dealers' leverage further would lead it into a range beyond what is considered prudent from either a business or regulatory perspective.

Dealers have limited capacity to absorb asset sales on their balance sheets, but Canadian banks may have relatively greater capacity for intermediation. However, banks' capacity supports several businesses. **Chart 4** reports the share of banks' total assets represented by different activities related to capital markets. Government of Canada (GoC) securities are a core component of asset managers' liquidity buffers but represent around 5% of banks' total assets—a similar level to that of equity shares. GoC securities and holdings related to fixed-income intermediation, such as

other debt securities and reverse repo agreements, constitute around 30% of banks' total assets. This suggests that most of banks' assets are related to other non-market banking activities, including lending to households and firms. Therefore, banks may be unwilling or unable to absorb a significant flow of additional securities from asset managers on their balance sheet, especially if fixed-income intermediation services compete with other banking activities for banks' limited balance sheet capacity.

Chart 4: Banks' capital markets-related activities represent 35% of their total assets



Note: *Debt securities* include corporate notes, commercial paper and securities not reported elsewhere. *Shares* include common and preferred shares of mutual or investment funds.
Source: Office of the Superintendent of Financial Institutions' regulatory returns Last observation: 2024Q2

When they are faced with greater illiquidity and volatility in markets in periods of severe stress, other market participants may anticipate the potential limits that dealers and banks could face, and they may sell assets for precautionary purposes as a result. This would exacerbate liquidity pressures in the fixed-income market. In extreme cases, this may lead to a dash for cash and overwhelm dealers' limited balance sheet capacity. If this happens, even traditionally liquid assets, such as treasury bills and government bonds, can become illiquid, warranting central bank interventions.[4]

These types of scenarios have played out in recent years in a range of markets globally: the GoC and US Treasury bond markets in March 2020 after the onset of the COVID-19 crisis and the UK gilt market in September 2022. For example, the net sales of GoC bonds to dealers by their clients, including asset managers, at the onset of the COVID-19 crisis peaked at $5.4 billion between March 9 and March 20 (**Chart 5**).[5] At the same time, gross trading volume tripled and illiquidity quadrupled (as measured by the bid-ask proxy). Conditions started to normalize only after the Bank of Canada announced its Government of Canada Bond Purchase Program.[6]

The deterioration in market liquidity during the COVID-19 crisis appears disproportionate to the relatively small net flow of assets from clients to dealers. One reason for this was that capital market activities were allocated a relatively small share of the banks' balance sheet growth during the crisis. This was because banks also had to expand their balance sheets to meet demands for funds in other business lines, such as draws on lines of credit from corporate

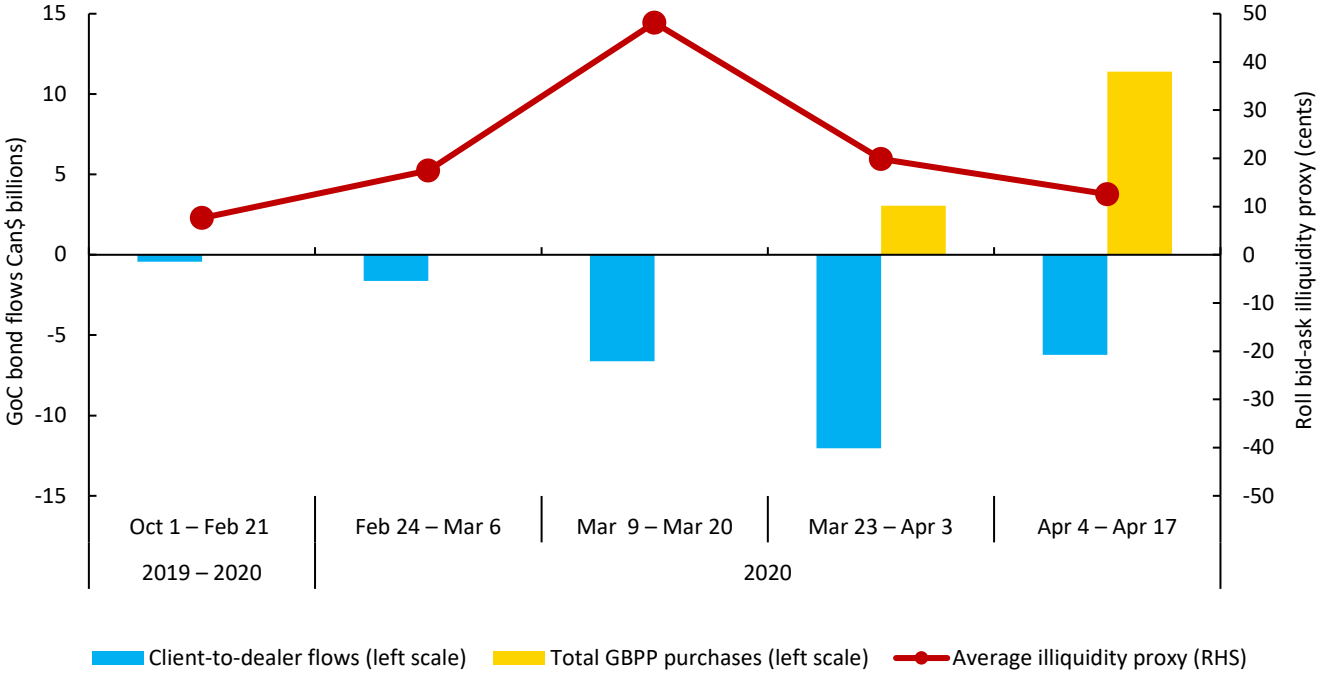
[4] See Fontaine et al. (2021) for a discussion of conditions in different markets during the onset of the COVID-19 crisis.

[5] See Sandhu and Vala (2023) for details on how hedge funds behaved during the onset of the COVID-19 crisis. See Ouellet Leblanc and Shotlander (2020) for details on bond mutual funds.

[6] Some market participants contend that measures of liquidity should be measured on a volatility-adjusted basis; when adjusted for volatility, some recent episodes of worsened liquidity would appear less severe.

clients, in addition to demands for fixed-income intermediation.[7] Indeed, signs that dealers were less willing to absorb asset sales on their balance sheets started to appear in March 2020. For instance, even the spread of GoC bills and the one-month overnight index swap (OIS) rate turned positive during this dash for cash.

Chart 5: Deterioration of market liquidity was disproprtionate to the quantity of assets sold to bank dealers during the COVID crisis



Sources: Market Trade Reporting System (MTRS) 2.0 and Bank of Canada calculations Last observation: April 17, 2020
Note: *Client-to-dealer flows* are measured as the sum of purchases and sales of Government of Canada bonds across all maturities for asset managers and other clients in the secondary market. This measure excludes transactions from banks, provinces and municipalities as well as interdealer transactions. The phases of the COVID-19 shock follow those defined in J.-S. Fontaine, H. Ford and A. Walton, "COVID-19 and bond market liquidity: alert, isolation and recovery," Bank of Canada Staff Analytical Note No. 2020-14 (July 2020): Phase 1 indicates when dealers met rising demand for liquidity; Phase 2 indicates significantly worsened trading conditions; Phase 3 indicates a period of relative calm following several Bank interventions. GBBP is the Government of Canada Bond Purchase Program. For more information about Roll's bid-ask proxy, see S. Gungor and J. Yang, "Has Liquidity in Canadian Bond Markets Deteriorated?" Bank of Canada Staff Analytical Note No. 2017-10 (August 2017).

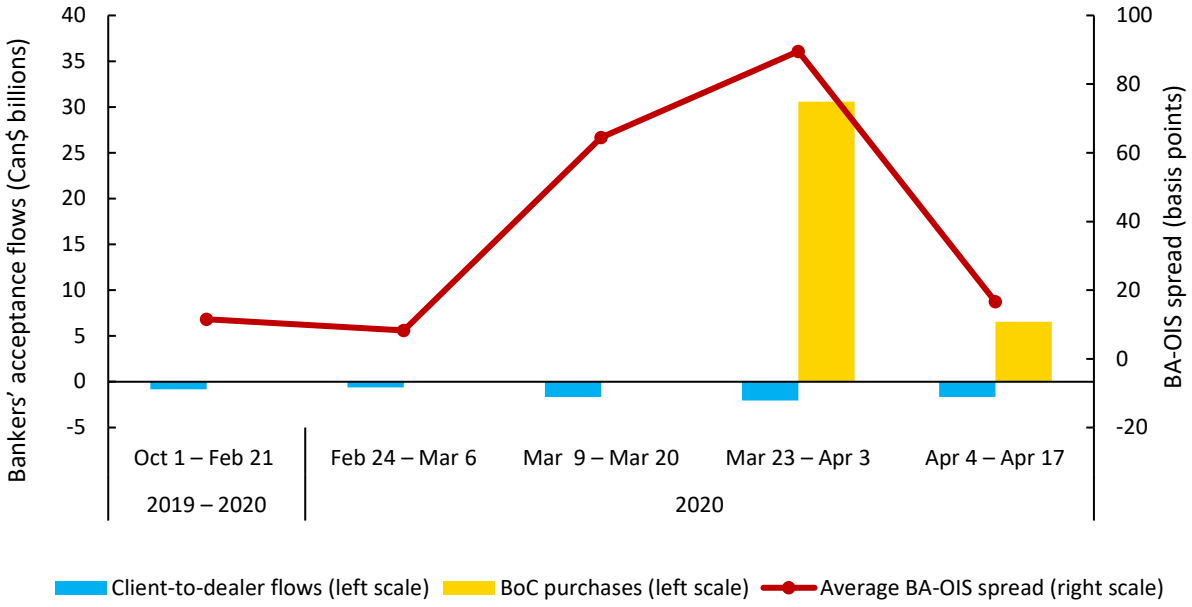
Circumstances in the BA market illustrate the trade-offs faced at the time by dealers and banks. By selling BAs back to banks, investors essentially converted their investments in the banking sector from BAs to deposits. However, deposits can be withdrawn by investors more quickly, and banks therefore needed to reserve more cash and liquid assets in case these withdrawals occurred. The larger reserves also have a higher opportunity cost, and banks sought price discounts for buying BAs back from investors.

Investors' net sales of BAs to dealers reached $2 billion per day in March 2020 (**Chart 6**), contributing to the $227 billion (11%) increase in overall bank deposits during that period. We also report the average spread between the yield on BAs and the OIS rate, where we focus on securities with less than one month left before maturity. This BA–OIS spread proxies for the price discount during that period. It also measures the additional yield a bank required for tying up their funds or, conversely, for how much banks valued the convenience of keeping their liquid reserve

[7] Fontaine et al. (2021) show that only 12% of the growth in banks' balance sheets went toward fixed-income securities, illustrating the limited pass-through of repo interventions from dealers to financial markets during the COVID-19 crisis.

for other purposes.[8] Despite the relatively small net flow from clients, the spike in **Chart 6** shows that this convenience had become highly valued in March 2020. The central bank eventually intervened, absorbing investors' sales to meet the demand for cash in this market.[9]

Chart 6: The Bank of Canada stepped in to meet the additional demands for cash in the bankers' acceptance market



Note: *Client-to-dealer flows* are measured as the sum of purchases and sales of one-month bankers ' acceptances (BA) for all asset managers in the secondary market. Flows in the first period from October 1 (2019) to February 21 have been standardized as a two-week average over that period. BoC is Bank of Canada. OIS is overnight index swap.
Sources: Market Trade Reporting Sytem 2.0 and Bank of Canada calculations Last observation: April 17, 2020

Central bank liquidity tool kits can help resolve liquidity crises, but have consequences

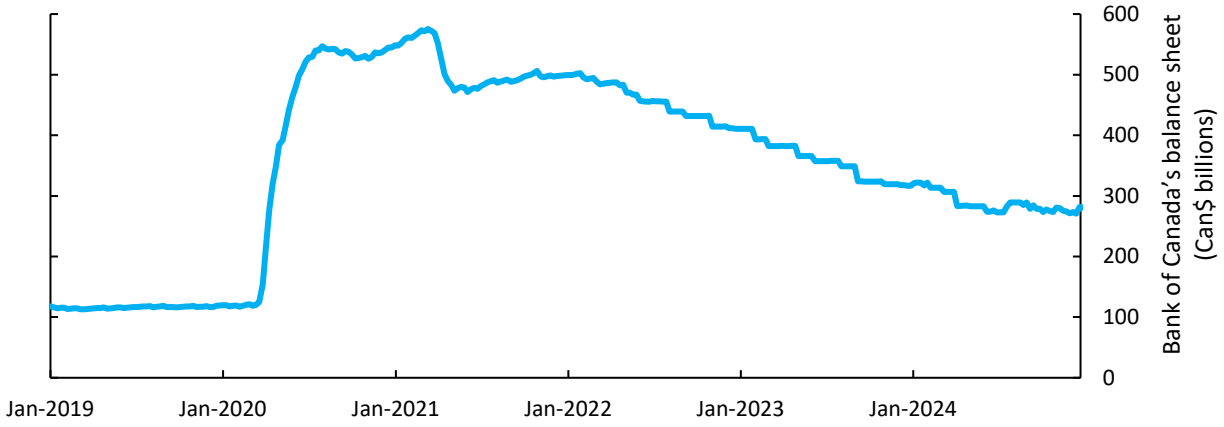
The Bank of Canada's current tool kit is designed for contingencies ranging from emergency lending to individual financial institutions facing idiosyncratic liquidity issues to resolving severe market-wide liquidity crises, as was done in the 2020 dash for cash. In 2023, Deputy Governor Toni Gravelle outlined the possible sequencing of interventions in a speech that drew lessons from activating extraordinary liquidity provisions and asset purchase facilities across several markets during the COVID-19 crisis. He indicated that standard emergency lending operations should resolve market stresses in most cases. However, in extreme cases, facilities such as the Contingent Term Repo Facility (CTRF), which target asset managers, and large-scale asset purchases may both be required (Gravelle 2023).

[8] The spread measures the earnings from holding a one-month BA to maturity compared with the earnings from the expected overnight rate over one month by, for example, rolling over an overnight loan in the repo market or depositing the funds at the central bank from entering a one-month OIS contract.

[9] See Fontaine et al. (2021) for details on the stresses observed in the GoC securities and BA markets during the COVID-19 crisis and the central bank interventions that followed. See Arora et al. (2020) for an assessment of the impact of the announcement of the Bankers' Acceptance Purchase Facility on BA yields in the secondary market.

In 2020, the Bank quickly launched 10 extraordinary programs and facilities to provide liquidity and support financial markets. A recent review found that these programs were generally designed well, executed effectively and significantly improved market functioning across a range of markets.[10] Through the different programs and facilities, total assets held on the Bank's balance sheet grew from less than $120 billion before the onset of the COVID-19 crisis to well over $500 billion by June 2020 (**Chart 7**).

Chart 7: The Bank of Canada's balance sheet grew significantly after its interventions in 2020



Source: Bank of Canada calculations

Last observation: December 20, 2024

While effective, central bank interventions involve trade-offs to be considered when deciding on an intervention framework in financial markets.[11] Four broad types of considerations are as follows:

- **Moral hazard**: Central bank interventions can increase market participants' expectations central bank support in future crises. This could lead to market participants underestimating the difficulty of selling their assets and, as a result, they may hold less cash or larger quantities of less-liquid assets in their liquidity buffers, making the financial system more vulnerable.
- **Conflicts with monetary policy objectives**: Interventions for financial stability may interfere with monetary policy objectives, especially during a cycle of monetary policy tightening. A recent example is the turmoil in the UK gilt market in September 2022, when the Bank of England intervened in markets with a temporary asset purchase program. While this intervention effectively restored market functioning, the Bank of England had been increasing interest rates and had planned to begin quantitative tightening; however, this plan had to be delayed given the new purchases of gilts.[12]
- **Stigma**: Market participants may be unwilling to access central bank facilities due to concerns that this would be interpreted by others as a sign of financial weakness.
- **Financial risks**: The design of the interventions can reduce or mitigate the degree of operational complexity and financial risks that arise for central banks from market interventions, including counterparty, credit and interest rate risks.

[10] See Gravelle (2023), Johnson (2023) and Fernandes and Mueller (2023) for a full review of the Bank of Canada's interventions related to the COVID-19 crisis.

[11] See Aldridge, Cimon and Vala (2023) for a review of the recent literature on the costs and consequences of central bank interventions.

[12] See Cunliffe (2022) for details.

These trade-offs can lead to different designs for central bank tool kits depending on whether interventions are considered rare or whether dashes for cash are perceived as more likely to be more common. If some structural changes in the financial system have increased the likelihood of a dash for cash, then central bank tool kits could be adapted to further mitigate, reduce or offset this higher risk.

Improving asset managers' access to cash can reduce the likelihood of a dash for cash

There are several ways to reduce the likelihood of a dash for cash. Broadly, these options include:

- **Strengthening the regulation of asset managers' liquidity risk management**: Changes to the regulation of asset managers could reduce their exposures to liquidity risks. For instance, the Financial Stability Board has made recommendations to address structural vulnerabilities in open-ended funds, including ensuring that a broad set of liquidity management tools, such as swing pricing, are available to fund managers.[13] Such tools could reduce the first-mover advantage for redemptions of investors, potentially decreasing the likelihood of large redemption runs.
- **Reinforcing the resilience of market structure:** Canadian fixed-income assets are generally intermediated through dealers instead of being traded directly between asset managers and other market participants. Broader central clearing and more flexible infrastructure for managing collateral could foster the resilience of markets, where greater netting opportunities for dealers can free up intermediation capacity and support intermediation in periods of market turmoil.[14, 15] Broader all-to-all trading is another potential change to the market structure, where a broader pool of investors trade directly with each other, reducing their dependence on dealers for intermediation.[16]
- **Expanding the central bank tool kit**: Traditionally, central bank interventions provide liquidity to banks and dealers, who can then pass on the liquidity to the broader financial system, including other financial institutions and asset managers. Asset managers could have more certainty about their access to liquidity during a crisis if central banks modify their tool kits to target asset managers directly. This could reduce the likelihood of a dash for cash but may increase the footprint of the central bank in new dimensions that must be carefully considered.

Overall, changes to regulation, market structure and the central bank tool kit could play an important part in reducing the likelihood of a dash for cash. The central bank has a unique role as lender of last resort. It is also poised to select existing assets or provide a new asset that asset managers can allocate in their portfolios and reliably convert to cash when needed, regardless of dealers' intermediation capacity. The goal of selecting or providing this cash-like asset is to address the increasing vulnerability of fixed-income market liquidity as asset managers grow. As well, it complements the traditional *ex post* central bank approach of intervening in times of crisis. For the remainder of the paper, we focus on changes to the central bank tool kit.

---

[13] Swing pricing is a mechanism by which a mutual fund can charge a fee to investors who redeem their funds. This fee is based on the actual cost incurred by the mutual fund when it liquidates the underlying securities in their position. See Financial Stability Board (2023) for recommendations on enhancing the resilience of open-ended funds.

[14] Bank staff estimate that full central clearing in the Canadian repo market could increase dealers' balance sheet netting opportunities by 24 percentage points. See Chen et al. (2022) for details.

[15] In the United States in 2023, the Securities and Exchange Commission adopted rules to facilitate additional clearing of Treasury securities transactions to reduce counterparty, operational and liquidity risks and enhance market efficiency and increase regulatory visibility into the market. See US Department of the Treasury et al. (2024) for details.

[16] Staff estimate that about half of the transactions of clients of dealers can potentially be offset with other clients, rather than dealers. See Canadian Fixed-Income Forum (2023) for details. See also Sandhu and Vala (2024).

Enhancing the central bank tool kit

Changes to the Bank of Canada's tool kit

Once activated during periods of severe market-wide liquidity stress, the Bank of Canada's CTRF already targets asset managers directly. It reduces the likelihood of a dash for cash by providing an assured means for entities to fund high-quality securities through repos instead of asset sales. Certain changes since the COVID-19 crisis enhance the facility's ability to resolve liquidity stresses in the future. Chen, Chu and Kinnear (2025) discuss in more detail these changes to the CTRF and how they are being operationalized.

- **Clarity around terms and conditions**: The Bank of Canada has provided clarity around what collateral would be eligible for the CTRF if it were to be activated again. Eligible collateral would consist of securities issued or guaranteed by the federal or a provincial government as well as *National Housing Act* mortgage-backed securities.[17] This clarity would improve the CTRF's effectiveness because asset managers will be able incorporate eligible assets in their liquidity buffers *ex ante* to ensure that they are able to access the CTRF when it is activated.
- **Onboarding counterparties before activation**: The Bank of Canada intends to allow eligible counterparties to onboard to the CTRF before it is activated, rather than only after its activation has been announced, as was done in 2020. By onboarding ahead of time, eligible counterparties will be able to access liquidity as soon as the CTRF has been activated, rather than facing any potential onboarding delays. Delays could lead asset managers to sell securities as a precaution, thereby adding stress to markets.
- **Periodically testing the CTRF**: The Bank of Canada periodically conducts small test transactions with onboarded counterparties, even when the CTRF is not active, to ensure that onboarded counterparties are familiar with the system and the steps involved in accessing the CTRF. This is intended to further improve their ability to access liquidity immediately after activation in a crisis should the CTRF be required again in the future.

Ideas for the central bank tool kit of the future.

These changes can improve the effectiveness of the CTRF, but some limitations remain.

First, some types of asset managers may not be able to access the CTRF. In fact, some asset managers, like investment funds, may even face regulatory constraints or not find it beneficial to use the CTRF. Such limited access could mean that some asset managers may sell fixed-income assets to meet payments obligations or to raise precautionary liquidity, further exacerbating liquidity stresses, despite the potential activation of the CTRF.

Second, the Bank of Canada is unlikely to accept all asset managers.[18]

Third, the CTRF is activated, along with other market-wide liquidity tools, at the Bank of Canada's discretion only when severe liquidity stresses emerge. This naturally creates some uncertainty around the likelihood and timing of activation, which is known as strategic ambiguity. Strategic ambiguity can help control the moral hazard associated with explicit central bank support for fixed-income assets. It can also provide the Bank with flexibility to set the CTRF's terms and conditions commensurate with the nature and severity of the crisis.

During the COVID-19 crisis, precautionary asset sales occurred before the CTRF could be activated. Many asset managers were unaware of its existence or unsure of their eligibility and the terms and conditions. These asset managers were therefore unable to gauge the degree of support available from this facility. Finally, the Bank's actions during the COVID-19 crisis—including the announcement before the CTRF to purchase GoC bonds and other debt securities—likely reduced the benefits of strategic ambiguity around the CTRF. Instead, asset managers may have come to believe that the Bank's interventions in future crises will be more like its actions in 2020. The Bank

[17] See Bank of Canada (2020) for details.

[18] Broad access to the CTRF can be limited to asset managers depending on their credit risk, regulatory framework and operational complexities.

has since outlined a preference to first rely on the deployment of the enhanced term repo program to alleviate market stresses before activating the CTRF.[19] Even though the CTRF offers asset managers greater certainty around the terms of their access and eligible collateral, its activation remains contingent on the Bank's discretion, so some uncertainty remains for asset managers.

As a result, new tools for asset managers that aim to reduce the likelihood of liquidity stresses by lowering the likelihood of asset sales may become desirable in a future state where dashes for cash become more frequent. The new facilities can also be designed to lower the likelihood that a central bank finds itself required to proceed with sudden, large and widespread asset purchases. Central banks could target asset managers using *ex ante* facilities through two broad approaches:

- **Standing tools that allow asset managers to reliably convert their existing assets to cash**: Central banks could introduce standing facilities to guarantee the liquidity of existing assets even under stressed market conditions.
- **New assets that provide "all-weather" liquidity**: Central banks could introduce new assets and guarantee their liquidity.

The intent of *ex ante* facilities is to increase the central bank's credibility in its decision to postpone any subsequent large-scale *ex post* asset purchases. This would allow for organic market adjustments and improved liquidity risk management practices. Providing asset managers with reliable access to cash *ex ante* that does not depend on dealers for intermediation should reduce the likelihood of a dash for cash. This is because these facilities would provide asset managers with a reliable way to insure against some of their liquidity risk. As a result, asset managers would be more confident in their ability to meet liquidity risks, which could reduce the likelihood of asset sales to raise liquidity as a precaution for future liquidity risks.

While new *ex ante* facilities raise additional considerations around trade-offs of central bank interventions, they offer the potential benefit of reducing the perceived likelihood of *ex post* interventions. Some of the different considerations around trade-offs associated with *ex ante* versus *ex post* tools include the following:

- **Moral hazard**: The speed, size and broad scope of central bank interventions during the COVID-19 crisis were unprecedented and have likely affected asset managers' beliefs about interventions in future crises. This creates an expectation that central banks will intervene in this way again, thus reducing the central bank's strategic ambiguity. To manage these expectations of *ex post* interventions, *ex ante* tools provide central banks with an opportunity to clarify a narrower range of assets and conditions under which asset managers could reasonably expect support, reducing incentives for risk taking with marginal assets. Indeed, in the Bank of Canada's recent financial system surveys, some market participants associated their high confidence in the resilience of the Canadian financial system to expectations of central bank support in future crises, among other reasons.[20]
- **Conflicts with monetary policy objectives**: With *ex ante* facilities, conflicts with monetary policy objectives may occur more regularly, unlike with *ex post* facilities, where conflicts may occur only in a crisis.
- **Financial risks**: An *ex ante* facility aims to weigh managing a larger balance sheet on an ongoing basis against expanding the central bank balance sheet temporarily during a crisis. *Ex ante* facilities expand the central bank's balance sheet on an ongoing basis; however, during periods of market stress, *ex post* facilities rapidly expand the central bank's balance sheet once they are activated.
- **Stigma**: Punitive terms on *ex ante* facilities to manage moral hazard may present further stigma and potentially discourage their use outside of severe market-wide stress.

Different from *ex post* facilities, *ex ante* facilities introduce a new consideration:

[19] See Gravelle (2023).

[20] See Bank of Canada (2023) for details.

- **Disintermediating the existing financial system:** Because *ex ante* facilities can be accessed at any time, the central bank may form a larger portion of the financial sector, which represents a form of disintermediation. When considering whether to introduce *ex ante* facilities that increase its footprint relative to private participants, central banks should assess the potential unintended effects on:
    - the informativeness and efficiency of market prices
    - the availability and liquidity of financial assets
    - the overall gains from trade in the economy
    - the potential for rent seeking by private market participants
    - the potential spillover between international jurisdictions[21]

Futurecasting new assets or new tools is an inherently uncertain process because the financial system evolves continuously. Policy-makers should consider whether such tools are desirable and how they should be designed. With that in mind, we present some broad ideas for possible tools that could reliably convert existing assets to cash and for new all-weather liquid assets. We also discuss the potential consequences for both types of tools.

Ideas for standing facilities to convert existing assets to cash

As previously discussed, during the onset of a crisis, asset managers may feel the need to sell assets as a precaution to be ready for future potential liquidity needs before asset prices decline further. One way to prevent this precautionary selling could be to provide a floor on the price of assets held in liquidity buffers. In other words, central banks could guarantee that asset managers would be able to convert certain assets to cash subject to predefined terms. Unlike the CTRF, standing facilities do not require activation and would not involve the associated uncertainty around the timing of activation. Standing facilities would therefore reduce incentives for asset managers to sell liquidity buffer assets, such as GoC bonds, for precautionary liquidity.

Standing term repo facility for asset managers

Mechanics and benefits

A standing facility could enable asset managers to convert eligible assets to cash through a term repo at a backstop rate. Many central banks, including the Bank of Canada, already offer standing repo facilities to certain dealers and other financial institutions to support the provision of liquidity.[22] A standing overnight or term repo facility for asset managers could operate similarly. Such a facility could be like a standing version of the CTRF, for example.

Risks and concerns

The primary concern is that asset managers face varying levels of regulation, unlike domestic banks, which fall under strict prudential regulatory regimes. In terms of moral hazard, such a facility could increase incentives for asset managers who are not subject to strict leverage limits to further raise their leverage, increasing risks in the broader financial system. As a result, repos with asset managers would require careful management of the associated counterparty credit risk, with appropriate haircutting and limits so the facility could only accept high-quality collateral to mitigate, perhaps only partially, moral hazard and financial risks.[23] While haircuts and backstop pricing may limit risk, overly punitive terms could introduce additional stigma and make the facility less effective at preventing precautionary sales because only asset managers with severe liquidity needs would be willing to incur the costs.

---

[21] Aldridge, Cimon and Vala (2023) provide a more thorough explanation of the distortions created by central bank intervention.

[22] Primary dealers have access to liquidity through the Bank of Canada's Overnight Standing Repo Facility, which reinforces the Bank of Canada's operating band for overnight interest rates. See the Bank of Canada's "Market operations, programs and facilities" page for details.

[23] A haircut represents the difference between the market value of the collateral and the actual price paid for it in the repo agreement. A haircut helps to protect the cash lender against the risk of default.

A repo facility is also likely useful only for sophisticated asset managers who can engage in secured, short-term borrowing through the repo market. Some asset managers, like mutual funds, may simply be unable to access such a facility because of regulatory limits or strict mandates and would therefore derive little benefit from a repo facility if they faced liquidity needs. Conversely, not all central banks have the mandate or authority to lend directly to asset managers.

Market maker of last resort for government securities markets

Mechanics and benefits

A central bank could act as a market maker for government securities. Some central banks, such as the Bank of England, have purchased and then resold government bonds to correct market turmoil, a set of operations sometimes referred to as a market maker of last resort. An alternative version of such a facility could always be in place, with the central bank standing ready to purchase and sell securities. Such a facility would ensure that liquidity for those securities is always available at predictable prices and would guarantee that investors could buy and sell them without relying on dealers for intermediation.

Risks and concerns

The primary concern with acting as a standing market maker is how such a facility would be priced. If the facility were to be priced based on stress-induced market prices at the time of the turmoil, it may not be effective at providing liquidity. Alternatively, if the central bank were to provide its own independent prices, it would require a direct stance on the fair price of securities across the yield curve—a form of yield curve control—which could conflict with the objectives of monetary policy. Unlike with *ex post* interventions, where such conflicts would only occur in a crisis, conflicts with monetary policy objectives could occur more regularly outside of crises with a standing market maker facility.

A secondary concern is that the central bank could end up with holdings that are too concentrated in some securities. This would reduce the quantity of those securities available for trading in secondary markets, increasing the costs of intermediation and potentially leading to mispricing. Additional central bank operations, like lending securities held by the central bank back into private markets, could be used to help mitigate this problem.

Ideas for new all-weather liquid assets

One issue with guaranteeing the liquidity of existing assets—either by accepting them as collateral in repo transactions or by purchasing them outright—is the potential for rapid expansion of the central bank's balance sheet during times of crisis. These rapid expansions can create market distortions and encourage excessive risk taking (i.e., moral hazard).

Instead of guaranteeing the liquidity of existing assets, central banks could create and issue new assets that could be held as self-insurance in asset managers' liquidity buffers. These assets would be similar to existing money market instruments, with the difference being that their liquidity would be guaranteed by the central bank and not rely on the capacity of dealers to intermediate. In a crisis, asset managers could use these assets created by the central bank because the central bank would fully guarantee their liquidity.

The cost of issuing these assets would be the expansion of the central bank's balance sheet during normal times, which can also create market distortions or encourage risk taking. The impact of the central bank's footprint in normal times should be compared with the impact of the central bank's activities during a crisis, such as asset purchase interventions or lender-of-last resort market maker operations. For instance, asset purchases during a crisis could result in more financial risk if they are larger, with broader scope and are accumulated quickly when interest rates are low.

However, issuing these assets may help support the policy interest rate from below. When asset managers have a large demand for safe, liquid assets, the market rates for these assets can fall below the central bank target. By issuing its own safe, liquid assets, the central bank can satisfy the private demand for safe, liquid assets and support the market rates back toward the target rate.

Standing deposit or reverse repo facility for asset managers

Mechanics and benefits

Central banks could choose to offer either a standing cash deposit facility or a standing reverse repo facility for asset managers. Through a standing cash deposit facility, asset managers would be able to deposit cash directly at the central bank. In the case of a term reverse repo facility, they would receive collateral in return, likely in the form of government bonds or treasury bills. In times of stress, asset managers could access this cash buffer to meet their liquidity needs without having to sell other assets. These central bank deposits or reverse repos could bear interest, potentially based on policy rates.

Withdrawing funds from a deposit or reverse repo facility has less stigma than borrowing funds—maybe even none—especially if a central bank makes it easy to withdraw and transaction costs low. The moral hazard is likely also low because deposits and reverse repo transactions would provide a way of self-insuring potential needs for cash without supporting leverage.

Risks and concerns

A key concern with a deposit or reverse repo facility is that the central bank would have a larger footprint in financial markets in normal times. The central bank would offset the growth of new liabilities in financial markets (i.e., central bank deposits and reverse repos) for securities such as government bills and bonds that it would buy and add to its balance sheet holdings, effectively substituting out debt securities with new deposits or reverse repos.[24]

A reverse repo facility would reintroduce assets from the central bank balance sheet to financial markets, which could alleviate the scarcity of high-quality collateral and could reduce the burden on other facilities that lend securities.[25] However, the central bank may have to manage a potentially high volume of collateral, rolled over regularly, with a wider range of counterparties.

Finally, the central bank may not have the authority to pay asset managers interest on uncollateralized deposits.[26]

Issuing central bank bills

Mechanics and benefits

The central bank could choose to issue its own discount bills at market rates in normal times. Private market participants could trade these bills like treasury bills. The central bank would then openly stand ready to support the market for these bills in times of crisis, independent of dealers.

---

[24] Asset managers would reduce their demand deposits at commercial banks, who in turn would sell securities like treasury bills. Basel III liquidity standards require banks to hold high-quality liquid assets (HQLA) to meet cash outflows in a 30-day stress scenario. Under Basel III, deposits from asset managers at banks must be, at least, exactly matched by HQLA by holding, for example, 100% central bank reserves or government securities, which face no regulatory haircut. See Office of the Superintendent of Financial Institutions (2024) for details. For details about unsecured wholesale funding provided by other legal entity customers, see Basel Committee on Banking Supervision (2013).

[25] During periods of low interest rates, the financial system can face a shortage of high-quality, interest-paying assets. These assets can become very expensive and difficult for market participants to source. When the value of the collateral is high, lenders must reduce the rate they demand on loans, possibly below the central bank's policy interest rate. For details on factors that can contribute to such a "leaky floor," see Gravelle, Morrow and Witmer (2023).

[26] As a statutory corporation without the powers of a natural person, the Bank of Canada is limited to exercising only those powers that are expressly or implicitly conferred on it by statute. Currently no applicable statutory authority grants the Bank the power to accept and pay interest on deposits from asset managers.

By issuing its own bills, the central bank could better control the supply of the assets it supports and better shield perception of its independence from the fiscal authority because it may not have to buy treasury bills. Like a deposit or reverse repo facility, central bank bills likely bear lower stigma and lower moral hazard than *ex ante* lending facilities because they offer market participants a way to self-insure without supporting leverage.

Risks and concerns

By issuing bills, the central bank would have a larger footprint in financial markets in normal times. Like a deposit or reverse repo facility, the central bank would be substituting in new central bank liabilities (the central bank bills) into financial markets and buying and holding other short-term debt securities on its balance sheet.

The key distinct concern is that if a central bank stands ready to support the market for these bills in times of crisis, then it would need to determine a price. This may be seen as a form of yield curve control and could therefore interfere with the conduct of monetary policy during that period.

In addition, unlike the other facilities we discuss, central bank bills have a limited ability to directly target market participants like asset managers that would use them in their liquidity buffers. If central bank bills are bought and held by other market participants that use bills for other purposes, then asset managers could still need to sell securities from their liquidity buffers during a crisis.

Finally, a central bank may not have the authority to issue debt securities such as discount bills.

Conclusion

In this paper, we discuss the possibility that potential demand for liquidity from asset managers could exceed the capacity of dealers to supply it. These scenarios could lead to a dash for cash, sharp deteriorations in liquidity in the markets for fixed-income securities and other core markets. They may also require extraordinary central bank interventions. We present possible changes to a central bank's tool kit aimed at reducing the likelihood of these scenarios *ex ante* by improving asset managers' access to cash before and during crises and by managing their expectations of central bank support.

While these new facility ideas bring potential benefits, they each come with considerations around their effectiveness and their risks. Whether any combination of these facilities may be desirable in the future depends on the balance between the potential demand for liquidity by asset managers and dealers' ability to provide it.

References

Aldridge, P., D. Cimon and R. Vala. 2023. "Central Bank Crisis Interventions: A Review of the Recent Literature on Potential Costs." Bank of Canada Staff Discussion Paper No. 2023-30.

Aldridge, P., S. Gignac, R. Vala and A. Walton. 2024. "Liquidity Risks at Canadian Life Insurance Companies." Bank of Canada Staff Analytical Note No. 2024-7.

Arora, R., S. Gungor, K. McRae and J. Witmer. 2020. "Announcing the Bankers' Acceptance Purchase Facility: A COVID-19 Event Study." Bank of Canada Staff Analytical Note No. 2020-23.

Bank of Canada. 2020. "Contingent Term Repo Facility: Terms and Conditions." April 3.

Bank of Canada. 2023. "Financial System Survey Highlights—2023."

Basel Committee on Banking Supervision. 2013. "Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools."

Bédard-Pagé, G. 2019. "Non-Bank Financial Intermediation in Canada: An Update." Bank of Canada Staff Discussion Paper No. 2019-2.

Bédard-Pagé, G., D. Bolduc-Zuluaga, A. Demers, J.-P. Dion, M. Pandey, L. Berger-Soucy and A. Walton. 2021 "COVID-19 Crisis: Liquidity Management at Canada's Largest Public Pension Funds." Bank of Canada Staff Analytical Note No. 2021-11.

Canadian Fixed-Income Forum. 2023. "Summary of the Discussion." Minutes from meeting held in Toronto, Ontario, November 21.

Chen, J. Z., J. Chen, S. Ghosh, M. Pandey and A. Walton. 2022. "Potential Netting Benefits from Expanded Central Clearing in Canada's Fixed-Income Market." Bank of Canada Staff Analytical Note No. 2022-8.

Chen, J. Z., P. Chu and S. Kinnear. 2025. "The Contingent Term Repo Facility: An Update." Bank of Canada Staff Analytical Note No. 2025-12.

Cunliffe, J. 2022. Letter to Right Honourable Mel Stride, Member of Parliament. Bank of England, October 5.

Fernandes, J. and M. Mueller. 2023. "A Review of the Bank of Canada's Support of Key Financial Markets During the COVID-19 Crisis." Bank of Canada Staff Discussion Paper No. 2023-9.

Financial Stability Board. 2023. "Revised Policy Recommendations to Address Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds."

Fontaine, J.-S., C. Garriott, J. Johal, J. Lee and A. Uthemann. 2021. "COVID-19 Crisis: Lessons Learned for Future Policy Research." Bank of Canada, Staff Discussion Paper No. 2021-2.

Gravelle, T. 2023. "The Bank of Canada's Market Liquidity Programs: Lessons from a Pandemic." Remarks at the National Bank Financial Services Conference, Montréal, Quebec, March 29.

Gravelle, T., R. Morrow and J. Witmer. 2023. "Reviewing Canada's Monetary Policy Implementation System: Does the Evolving Environment Support Maintaining a Floor System?" Bank of Canada Staff Discussion Paper No. 2023-10.

Gungor, S. and J. Yang. 2017. "Has Liquidity in Canadian Bond Markets Deteriorated?" Bank of Canada Staff Analytical Note No. 2017-10.

Johnson, G. 2023. "A Review of the Bank of Canada's Market Operations Related to COVID-19." Bank of Canada Staff Discussion Paper No. 2023-6.

Office of the Superintendent of Financial Institutions. 2024. "Liquidity Adequacy Requirements (LAR) (2025) Chapter 2—Liquidity Coverage Ratio."

Ouellet Leblanc, G. and R. Shotlander. 2020. "What COVID-19 Revealed About the Resilience of Bond Funds." Bank of Canada Staff Analytical Note No. 2020-18.

Sandhu, J. and R. Vala. 2023. **"**Do Hedge Funds Support Liquidity in the Government of Canada Bond Market?" Bank of Canada Staff Analytical Note No. 2023-11.

Sandhu, J. and R. Vala. 2024. "Could All-to-All Trading Improve Liquidity in the Government of Canada Bond Market?" Bank of Canada Staff Analytical Note No. 2024-17.

US Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, US Securities and Exchange Commission, and US Commodity Futures Trading Commission. 2024. "Enhancing the Resilience of the U.S. Treasury Market: 2024 Staff Progress Report."