An Initial Assessment of Changes to the Bank of Canada's Framework for Market Operations

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- In 2015, the Bank of Canada completed a comprehensive review of its framework for market operations and liquidity provision to take into account lessons learned from the global financial crisis and the evolving market environment.
- Although the overall framework was found to be generally effective, changes were made to several of its tools to help the Bank better achieve its objectives of reinforcing the target for the overnight rate and supporting the well-functioning of Canadian financial markets under normal market conditions.
- A preliminary review suggests that these changes have helped the Bank to better achieve its monetary policy and financial stability objectives.

Central to the Bank of Canada achieving its monetary policy and financial stability objectives is its framework for market operations and liquidity provision (the operational framework). The operational framework is designed to reinforce the target for the overnight rate, support well-functioning financial markets and provide liquidity to the financial system. This article provides a preliminary assessment of the changes made to the operational framework under normal market conditions. It also updates the Autumn 2016 Review article describing those changes (De Guzman 2016).

The article consists of two sections. The first gives an overview of the Bank's operational framework and its associated objectives. The second provides a preliminary assessment of the changes made to the existing operational tools and the new tools that were introduced following a comprehensive review conducted in 2015. The assessment covers changes made to the Bank's method of acquiring assets for its balance sheet, the intervention threshold for the Securities-Lending Program and modifications to the process for distributing funds in overnight open market operations.

Objectives of the Operational Framework

As part of its mandate "to promote the economic and financial welfare of Canada," the Bank is responsible for conducting monetary policy to maintain a low and stable rate of inflation and, in co-operation with other agencies, promoting the stability and resilience of Canada's financial system.[1]

In the course of executing its monetary policy and financial system responsibilities, the Bank undertakes a range of financial market operations. Each of the tools in the Bank's operational framework is designed to achieve one or both of the specific objectives listed below:

- Implement monetary policy by reinforcing the target for the overnight rate
- Support financial stability by facilitating the efficient functioning of Canadian financial markets and by providing backstop liquidity under extraordinary circumstances

Under normal conditions, the Bank prefers to intervene as little as possible in financial markets to minimize the effects of its activities on the market. It uses its tools only when necessary and relies on its counterparties, the primary dealers for Government of Canada securities, to redistribute central bank liquidity to the broader financial system.[2]

Reviewing the Bank's operational framework

In response to the changes in market functioning observed since the global financial crisis, as well as the lessons learned from the extraordinary monetary policy measures it implemented between 2008 and 2010, the Bank conducted a comprehensive review of its operational framework, which was completed in 2015.[3] Although the overall framework was found to be generally effective in achieving its objectives, changes were made to several of the tools.[4] These changes took effect on October 1, 2015. The following section provides a brief overview of the Bank's operational tools used under normal market conditions and is geared toward readers who already have a general understanding of the Bank's operating framework. More information on these tools and the framework are available on the Bank of Canada's website or in De Guzman (2016).

Supporting the well-functioning of Canadian financial markets

The Bank uses the assets on its balance sheet to facilitate the implementation of its tools within the operational framework. The amount of the Bank's holdings of financial assets is driven by the value of bank notes in circulation. To offset liabilities created by bank notes and other operations, the Bank acquires assets denominated in Canadian dollars. Before the regular term repo program was introduced in 2015, these assets had typically been acquired through the purchase of Government of Canada securities in the primary market.[5]

1 As defined in the *Bank of Canada Act*.

2 A list of current primary dealers can be found on the Bank's website.

3 For further details on the lessons learned and changing market dynamics, see Lavoie, Sebastien and Traclet (2011).

4 For more information on the changes, see the Bank's website.

5 The Bank primarily acquires Government of Canada nominal bonds and treasury bills for its balance sheet outright through non-competitive bids at government securities auctions; it may also acquire them in the secondary market. These holdings are structured to broadly reflect the composition of the federal government's stock of nominal domestic marketable debt. A small amount of the assets consists of foreign assets, primarily shares in the Bank for International Settlements.

A liquid and transparent market for Government of Canada securities is important for the efficient functioning of Canadian financial markets because it helps the government and other borrowers in their financing activities and supports the Bank's objectives in the transmission of monetary policy. However, because the Bank's balance sheet will continue to grow in line with the value of bank notes in circulation, there were concerns that this would further increase the Bank's presence in the market for Government of Canada securities over time, affecting the tradeable float of securities and, potentially, the well-functioning of this market.

To facilitate the well-functioning of Canadian financial markets, including the market for Government of Canada securities, the Bank made the following changes:

- ***It introduced regular term repo operations, allowing the Bank to reduce its purchases of Government of Canada bonds at auction.*** The Bank competitively auctions cash in exchange for marketable securities denominated in Canadian dollars for terms of approximately one and three months. These operations were included as part of the Bank's routine operations beginning on October 1, 2015, to help manage the Bank's balance sheet.[6] They allow the Bank to reduce the amount of Government of Canada bonds (benchmark or soon-to-be benchmark) it needs to purchase in the primary market, helping bolster the bond's liquidity. It is important that benchmark bonds remain liquid, given their vital role in the functioning of domestic fixed-income markets as key pricing and hedging references for a variety of cash and derivative instruments. In addition to supporting the liquidity of Government of Canada bonds, the term repo program also allows the Bank to more directly monitor liquidity conditions in term funding markets.[7]
- ***It lowered its intervention threshold for lending Government of Canada securities at low interest rates.*** Created in 2002, the Securities-Lending Program supports the liquidity of Government of Canada securities by providing a temporary secondary source of securities to the market. Under this program, the Bank can lend a portion of its holdings of Government of Canada securities to primary dealers when it judges that a specific bond or treasury bill is trading below a set threshold or is unavailable in the repo market. In those situations, the securities are loaned through a tender process for a term of one business day. The threshold was lowered to the target rate minus 50 basis points when the overnight rate is at or below 1 per cent to provide participants with greater incentives to trade competitively before triggering the Bank's program. It had previously been set at half of the overnight target rate.

Further information on the Bank's regular term repo operations and Securities-Lending Program, including their terms and conditions, is available on the Bank's website.

6 In the past, ad hoc term repo operations were used to manage the Bank's balance sheet during periods of high seasonal demand for bank notes. These operations were short term (generally under a month), and the eligible collateral was limited to Government of Canada securities.

7 When similar term repo operations were conducted during the financial crisis, the rates provided a useful gauge of funding conditions and a warning of upcoming stresses. To date, the operations have cleared at rates relatively close to the minimum bidding rate set by the Bank, demonstrating the lack of significant stress in Canadian funding markets since the program was introduced.

Reinforcing the target for the overnight rate

The Bank conducts monetary policy by setting and reinforcing the target for the overnight rate through its market operations. This directly influences the interest rates at which banks and other financial system participants borrow and lend funds for one business day. The level of the overnight rate and expectations about its future path also influence other longer-term interest rates and a broader range of asset prices. The Bank can reinforce the target overnight rate by adjusting the level of overnight settlement balances and conducting overnight open market operations.

To help reinforce the target for the overnight rate, the Bank made the following change:

- ***It now conducts overnight repo and reverse repo open market operations through a competitive auction process.*** When transactions in the general collateral overnight market are taking place at rates above the Bank's target rate, the Bank can inject intraday liquidity through overnight repos (ORs) by purchasing Government of Canada securities from primary dealers for one business day.[8] Conversely, if transactions are taking place at rates below the Bank's target rate, the Bank may withdraw liquidity through overnight reverse repos (ORRs) by selling some of its holdings of Government of Canada securities (typically treasury bills) to primary dealers for a term of one business day. Following the changes made in October 2015, these operations are now conducted through a competitive auction process with larger participant limits, which helps to chanel more funds directly to those who need them. Further information on the Bank's OR and ORR operations, including the terms and conditions, can be found on the Bank's website.

The Bank's operating band also provides incentives for market participants with direct access to the Bank's balance sheet (the direct participants in the Large Value Transfer System) to settle surplus and deficit cash positions with each other over the course of the day near the Bank's target rate (the midpoint of the operating band).[9]

Assessing the Impact of the Changes

Assessing the impact of changes to market operations is never straightforward. Market conditions are dynamic and depend on many factors that may not be closely linked to the Bank's operations, such as regulatory changes, changes in investor demand for Government of Canada securities and other supply and demand dynamics in fixed-income markets. Such factors are outside the Bank's direct control and may reduce the comparability of the two frameworks across the time periods examined in this article. As well, the changes to the framework have been in place for a relatively short period. For that reason, the results discussed below are considered preliminary.

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Nevertheless, we have found some evidence that the fine-tuning of operational parameters has improved the effectiveness of the Bank's operational framework. A summary of these changes and their expected effects, as well as the objectives they support, is provided in **Table 1**.

8 A repo is a financial contract that resembles a collateralized loan in which one party lends cash and earns interest on it and the other party borrows the cash and pays interest. The repo market is a core funding market because it is important for supporting the funding needs of financial institutions and is a source of liquidity for cash markets. For further details on the Canadian repo market, see Garriott and Gray (2016).

9 See the Bank's website to learn more about Canada's major payment systems.

Table 1: Summary of the 2015 changes to the Bank's operational framework

Supporting the well-functioning of Canadian financial markets		
Operational tool	**New features**	**Expected impact**
Regular term repo operations	▪ high-quality assets from dealers acquired by the Bank for cash ▪ 1- and 3-month terms ▪ competitive auction (multiple price)	▪ allow the Bank to reduce its purchase of Government of Canada securities at auction, increasing their tradeable float ▪ greater insight into conditions in the term funding market
Securities-Lending Program	▪ lower the intervention threshold to target less 50 basis points for when the target overnight rate is 1 per cent or less from 50 per cent of the target rate	▪ increase the incentive for market participants to trade Government of Canada securities competitively in the repo market without the Bank's intervention
Reinforcing the target for the overnight rate		
Operational tool	**New features**	**Expected impact**

Overnight repos
Overnight reverse repos
	▪ competitive auction (uniform price)
	▪ increase in individual participant limits
		▪ enhanced efficiency in distributing funds to market participants by
		  ▪ allowing competitive bidding to better ensure that funds are channelled to participants who need them most; and
		  ▪ ensuring that more funds are available to those who need them the most by increasing participant limits
		▪ greater transparency on the level of settlement balances for market participants

The impact of reducing Government of Canada purchases in the primary market

The introduction of the term repo program has enabled the Bank to purchase a smaller share of Government of Canada bonds at auction for its balance sheet. Specifically, a fixed share of 20 per cent of each nominal bond at auction has been reduced to its current level of 14 per cent. To date, this change has resulted in approximately $12 billion of additional bonds being made available to the market, increasing the tradeable float of benchmark bonds for market participants and thereby supporting their liquidity.

Since the Bank reduced its purchases of Government of Canada bonds, Canadian bond trading volumes—75 to 80 per cent of which are Government of Canada bonds—have increased by approximately 34 per cent compared with the year before the Bank reduced its purchases.[10] Further, the number of settlement fails in Government of Canada benchmark securities has decreased, with monthly benchmark fails declining by around 43 per cent over the past two years.[11]

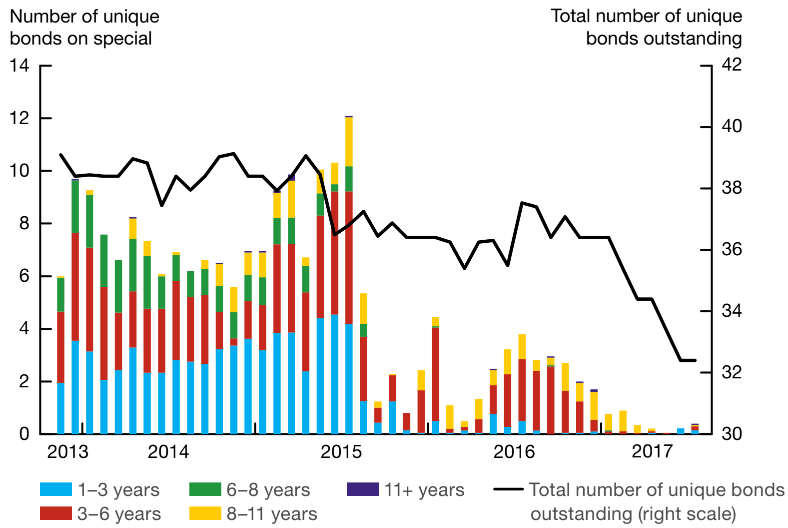
Moreover, the number of daily specials of Government of Canada bonds in the repo market, defined in this example as bonds trading 25 basis points below target, has also declined significantly since October 2015 (**Chart 1**). As such, the number of securities-lending operations conducted by the

10 Based on *Bank of Canada Banking and Financial Statistics* and staff calculations.

11 A settlement fail occurs on the settlement date of the trade when either the seller does not deliver the securities in due time or the buyer does not deliver the funds in the appropriate form. A certain number of settlement fails is normal in any market because of operational difficulties (e.g., the borrower may be experiencing operational difficulties with its systems and is physically unable to transfer possession of the security). However, the frequency has tended to increase as the tradeable float decreases. A bond market with many and persistent fails might be less effective in supporting liquidity because it can discourage security holders from participating (see Fleming and Garbade 2005). For further discussion on fails, see Fontaine, Pinnington and Walton (forthcoming).

Chart 1: Daily number of unique Government of Canada bonds on special

Monthly average, daily data



Sources: Canadian Depository for Securities (2009–15), Market Trade Reporting System 2.0 (2016) and Bank of Canada calculations (Bulusu and Gungor 2017)

Last observation: July 31, 2017

Table 2: Number of securities-lending operations and bids placed since 2010

	Number of securities-lending operations	Number of bids for securities-lending operations
2017[a]	0	0
2016	11	16
2015	135	319
2014	122	225
2013	108	193
2012	9	11
2011	12	17
2010	5	10

a. As at August 31, 2017

Bank (which are triggered by lower repo rates) also declined, with only 15 operations occurring since October 2015. This represents a significant decrease from 2013 to 2015 when the number of operations averaged 122 per year and the number of bids placed in these operations averaged 246 per year (**Table 2**).

As part of the operational review, changes were also made to the Bank's Securities-Lending Program. The intervention threshold for triggering an operation under the program was lowered for interest rates at or below 1 per cent to provide holders of Government of Canada securities with a greater financial incentive, at lower interest rates, to lend their securities. The addition of the term repo program as well as changes made to the Securities-Lending thresholds appear to have helped support the liquidity in Government of Canada securities and may also have contributed to the noted reduction in fails and the decline in the number of securities-lending operations. However, they are likely only two of many contributing factors that have led to the improved conditions in the Government of Canada securities market. For example, cyclical factors, such as changes in foreign ownership of Government of Canada bonds, changes in the activities of financial institutions in the repo and securities-lending markets and changes in demand for high-quality assets may have also played a role.

While the reduction from 20 to 14 per cent in Government of Canada bond purchases has contributed to the improved well-functioning of the market for Government of Canada bonds, as discussed above, the reduction cannot be looked at in isolation and needs to take into account changes made to the government's debt strategy. For example, in Budget 2016, the government increased its target benchmark bond ranges for 2-, 5- and 10-year bonds and reintroduced the 3-year bond, which now matures on the same date as the 5-year bond. The target benchmark ranges for these bonds were also increased and are now anywhere from $2 billion to $6 billion higher, which has also helped support the liquidity and well-functioning of these bonds. As well, over this period, the government increased its bond issuance, resulting in a 10 per cent rise in the outstanding amount of Government of Canada bonds and making more bonds available for market participants to trade.

Impact of the term repo program on the term funding market

The Bank's term repo program, which has grown to around $7 billion outstanding, represents only a small portion of the overall term repo market. To date, the effect of the program on the market's development and liquidity has been mixed. Data from the Canadian Depository for Securities (CDS) indicate that there was a noticeable increase in term repo volumes shortly after the program was introduced, but this change appears to have been short-lived because activity has since slowed to around the levels before the term repos were introduced.

Numerous factors can influence repo activity, however, making it more difficult to directly link any changes to the Bank's term repo program. For example, because market participants have more recently attached higher probabilities of changes in the policy rate on the Bank's fixed-announcement dates, they may have become more reluctant to conduct trades around them. Alternatively, market participants may also have gained greater access to other forms of term funding in order to diversify funding sources at potentially more competitive rates. Finally, current and upcoming changes to prudential liquidity requirements may have contributed to firms seeking funding at longer terms than those available in term repo markets, capping the potential observable increase in market activity.[12]

As outlined in **Box 1**, the main type of securities pledged by primary dealers against term repo operations has been securities issued by provincial governments. According to CDS data, term repo trading activity for provincial securities has generally increased since the introduction of the program. Some of the rise may be attributed to the Bank's new term repo operations, but activity may also have increased because of higher outstanding provincial debt or other factors. In contrast, term repo trading activity for Government of Canada securities declined over this two-year period.

12 See the website of the Office of the Superintendent of Financial Institutions or of the Basel Committee on Banking Supervision for additional information on the Liquidity Coverage Ratio and the Net Stable Funding Ratio.

Box 1

Term Repo Operations: Summary Statistics

The regular term repo program has generated strong demand by primary dealers, based on robust bidding behaviour and broad participation. As at August 31, 2017, the Bank had conducted 74 regular term repo operations—50 in the 1-month term and 24 in the 3-month term. Auction sizes ranged between $500 million, when the program was first introduced in October 2015, and $2 billion and $1 billion in the 1- and 3-month tranches, respectively, in August 2017. Currently, the program stands at its minimum target size of $7 billion outstanding, which was reached at the end of March 2016. Cumulatively to date, the Bank has auctioned almost $115 billion across both maturity tranches.

Participation across the 1- and 3-month tranches has been robust, with all of the government's 11 primary dealers participating in at least one operation and 10 primary dealers regularly winning an allotment. The bid-to-cover ratio, which is the number of times the dollar value of bids received at auction is greater than the amount issued, has also been strong for both terms, averaging 1.97 and 2.20 for the 1- and 3-month terms, respectively. As well, the rate received at auction as a weighted average spread to the minimum bid rate set by the Bank averaged 3.72 and 4.63 basis points for the 1- and 3-month terms, respectively, and ranged between 2 and 8 basis points.[1] The higher bid-to-cover ratio and the relatively wide spread of the minimum bid rate indicate good demand for this type of term liquidity.

The securities pledged by primary dealers through the term repo operations have primarily been dominated by bonds issued by provincial governments, at around 85 per cent for both terms. Bonds that are federally or provincially guaranteed account for the majority of the remaining collateral pledged, at close to 15 per cent. Overall, the majority of the securities pledged by primary dealers through the term repo program are rated A+ or higher by Standard & Poor's.

1 The Bank sets a minimum bid rate at each operation to ensure that funds are loaned at market rates. The minimum bid rate is derived from rates from overnight index swaps (OIS) with durations similar to those of the term repo operations. An OIS is an over-the-counter derivative in which two parties agree to exchange, or swap, for a specified period, a fixed interest rate (determined at the time of the trade) for a floating rate that will vary over time. The distinguishing feature of the OIS is that the floating rate is the Canadian Overnight Repo Rate Average (CORRA) over the period.

A competitive basis for overnight open market operations

Before October 1, 2015, participants in OR (ORR) operations received cash (securities) at the Bank's target rate, subject to their individual limits.[13] These limits accounted for a relatively small portion of each participant's overall daily funding requirement, around 13 per cent on average.[14]

During the 2015 review, the effectiveness of these open market operations in reinforcing the target rate was found to have declined. The decline was attributed to both the small participant limits relative to the daily funding requirements and changes in market functioning arising from regulations and reduced risk appetite, which together resulted in less liquidity redistribution between primary dealers and the broader financial market.[15] As a result, these operations were moved to a competitive auction format with larger individual participant limits, which helped to chanel more funds directly to those who need them. **Table 3** compares the outcomes for the two formats, which are described in greater detail below.

13 Before October 1, 2015, ORRs were called sale and repurchase agreements (SRAs) and ORs were called special purchase and resale agreements (SPRAs).

14 Funding requirements for large financial institutions are collected daily through a survey conducted by the Bank. These figures generally represent the bank's overnight funding requirements, which may be met several ways, including overnight repos, foreign exchange swaps and deposits. This represents only a subset of a bank's overall funding needs, which are typically met through retail and commercial deposits and wholesale funding instruments (Truno et al. 2016)

15 The changing market structure has affected the market's capacity to channel funds to entities that are in need of liquidity since direct counterparties of the Bank seem to have become less willing to borrow extra liquidity and redistribute it to other counterparties. Rather, decisions by institutions on whether to participate in these transactions when the Bank offers them seem to be based mostly on whether they themselves need the liquidity.

Table 3: Comparison of the old and new frameworks for overnight open market operations[a, b]

	Special purchase and resale agreements (old)	Overnight repos (new)
Number of operations	48	59
Number of multiple-round days	6	4
As a percentage of total operations	13 per cent	7 per cent
Average operation size	$992 million	$1,400 million
As a percentage of maximum operation size	66 per cent	93 per cent
Average number of participants	6	4
Individual bidding limits	$35 million to $225 million	$150 million or $500 million
Average winnings per participant	$150 million	$360 million
Average clearing rate as a spread to target	0 basis points	3 basis points (1–6 basis-point range)
Average spread above LVTS target setting on days with operations	$490 million	$690 million

a. The data used here are based on the two-year period before and after October 1, 2015.

b. OR/ORR operations are conducted on a "cash basis," meaning that the maximum operation size and participant limits are based on the cash value of the proceeds exchanged. Each counterparty now has a fixed cash limit. This contrasts with SPRAs/SRAs, where the limits were based on a "par" or "nominal" value of the securities pledged, with the par value representing the securities' value at maturity. In the case of SPRAs/SRAs, participants had a fixed par limit but could pledge securities that had a cash or market value at a premium to their par value and thus receive more cash than their par limit. For comparison purposes, all SPRA/SRA figures have been converted to their approximate cash value. Since participants generally pledged higher-coupon longer-dated securities as collateral in SPRA operations, the cash value of the operations tended to be around 50 per cent higher, on average, than the par value over the sample period.

Under the new auction format, the Bank has conducted 59 OR and 3 ORR operations as at August 31, 2017. This is in contrast to the 45 SPRA operations and 2 SRA operations conducted over the two years before October 1, 2015. Because intervention in the overnight market is dependent on overall money market funding conditions, **Chart 2** provides a perspective on overnight money market funding conditions over the assessment period, as indicated by the Canadian Overnight Repo Rate Average (CORRA). Since the new framework was introduced, CORRA has averaged 0.6 basis points above target, compared with 0.4 basis points for the two previous years. However, because overnight funding conditions are dynamic and are affected by numerous factors that may not be closely linked to the format of the Bank's operations (e.g., regulatory changes and balance-sheet requirements), it is difficult to draw any conclusions on the effectiveness of the Bank's operations by comparing CORRA over the two time periods.[16]

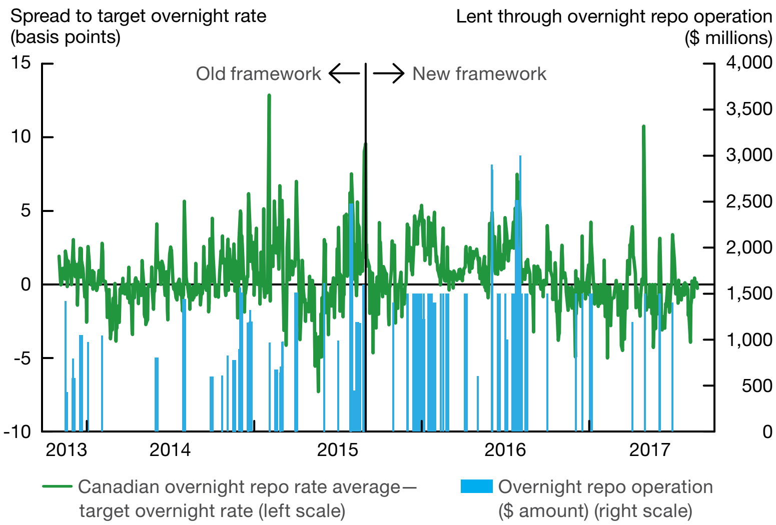
Implications of the revised open market operational framework

To enhance distributional efficiency, the new framework injects (removes) liquidity through a competitive auction process in which primary dealers bid for the amount of cash (securities) they wish to borrow at a rate at or above target for a term of one business day.[17] When the bidding is for cash (OR operations), where the highest bids are accepted and allocated first, the competitive nature of the auction format allows participants to bid aggressively (i.e., above target) if they have greater funding needs. The improved distributional efficiency is evident by the number of times OR operations have cleared above target (56 per cent of the time).

16 Overnight money market funding conditions can be affected by a broad array of factors, including market participants' funding requirements and practices, increased flows in the payment system and uncertainty around funding forecasts.

17 The Bank has conducted only three ORR operations since October 2015, which does not provide enough data for a clear assessment of these operations. As such, this section will focus on OR operations.

Chart 2: Overnight funding market conditions since November 2013[a]



a. CORRA is a weighted average of rates on overnight general collateral (non-specific Government of Canada securities) repo transactions conducted through designated interdealer brokers between 6:00 and 16:00. CORRA is one of the measures of the collateralized overnight rate that the Bank of Canada uses as a proxy for the overall average cost of overnight collaterized funding.

Source: Bank of Canada and staff calculations

Last observation: August 2017

Furthermore, since the distribution of these funds is more targeted, typically only a single round of intervention on any given day is required to ease the temporary funding pressure. For example, of the 59 OR operations conducted, only 4 were multiple rounds, compared with the previous framework, when 6 dual rounds were conducted in 48 operations. A longer time frame shows periods where occurrences of two and three rounds of liquidity injections were used to significantly ease funding pressures.

The notional amount made available by the Bank at each operation is subject to pre-specified limits for each eligible participant. Depending on the counterparty, individual limits were raised by anywhere from 100 to 450 per cent under the new framework, which increased the average winnings per participant by 150 per cent. These higher limits also represent a greater proportion of the daily funding needs of each participant (around 36 per cent).

Given the higher individual limits and the revised allocation format, the amount allocated has also increased, to $1,400 million on average at OR operations, compared with only around $990 million under the old framework. This represents a 40 per cent increase in funds distributed. These funds have also been distributed to a more targeted number of participants, with an average of four participants receiving funds compared with six under the old framework.

With higher participant limits increasing the amount of funds distributed by the Bank, settlement balances have also grown, by about $200 million on average on days when an OR operation has taken place. These additional balances provide further incentive to participants who have extra cash to conduct transactions in the overnight market at or very close to the overnight rate target because any cash balances at the end of the day must be left at the Bank, with participants receiving the target rate less 25 basis points on these deposits.

One of the additional benefits of these changes is the system-wide efficiency gains arising from the greater transparency of settlement balances. Since the total cash value of the operation is published on the Bank's website following the operation (compared with only the par value under the old framework), LVTS participants are better able to assess the potential impact of the operation on the cash setting at the end of the day and can therefore manage their cash balances more effectively.

A preliminary examination of the rates on overnight repo trades using Government of Canada securities as collateral in the Market Trade Reporting System 2.0 (MTRS 2.0)[18] has shown a decline in these rates on a weighted average basis for trades conducted after an OR operation has taken place.[19] This implies that these operations have been effective at reinforcing the target for the overnight rate, steering overnight repo rates downward following an operation. In the future it may be possible to provide a more in-depth analysis of the impact of these new operations on the overnight market as the MTRS 2.0 becomes fully operational and has a longer sample period.

Conclusion

Enhancements to the Bank's framework for market operations and liquidity provision were generally found to help the Bank better achieve its objectives of reinforcing the target for the overnight rate and supporting the well-functioning of Canadian financial markets under normal market conditions. That said, the Bank will continue to regularly monitor the effectiveness of its operations, as well as any developments within the broader financial market environment, and will prudently consider appropriate enhancements to its framework as required.

18 MTRS 2.0 is a database of all over-the-counter debt market transactions executed by Investment Industry Regulatory Organization of Canada dealer members.

19 These results were found to be statistically significant at a 99 per cent confidence interval.

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