Canada's Approach to Monetary Policy

The ultimate goal of Canadian monetary policy is maintaining a low, stable rate of inflation in order to foster efficient economic performance and a rising standard of living for Canadians. More specifically, the Bank of Canada[1] aims to keep inflation inside a target range of 1 to 3 percent. This range, established jointly with the federal government, was first announced in 1991 and has been extended through the end of 2006. Over the medium term, the target applies to total CPI. The Bank also uses a core CPI measure as a guide to future inflation developments over the shorter term. The Bank of Canada's operational target is the overnight rate, which is set at the midpoint of a 50 basis point operating band.[2]

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Central Bank Assets

At the end of 2000 the Bank of Canada had Can$40 billion in assets, the bulk (83 percent) of which were investments in securities issued or guaranteed by the Government of Canada, which are generally held to maturity. Other investments (4 percent) were largely composed of foreign currency investments acquired in short-term swap arrangements with the government's Exchange Fund Account. In addition, the Bank's assets included deposits in foreign currencies (2 percent), advances to members of the Canadian Payment Association (2 percent), and "other assets" (9 percent), the bulk of which were Government of Canada securities purchased under resale agreements.

Standing Facilities

The advent of the Large Value Transfer System (LVTS), the Canadian Payments Association's new electronic payments system, which became fully operational in February 1999, resulted in some changes in the Bank's operating procedures.[3] The Bank sets a target for the overnight interest rate at the midpoint of its 50 basis point operating band. LVTS participants needing an overdraft (fully collateralized, as discussed below) at the day's final settlement are charged the Bank rate, the upper limit of the operating band. The Bank pays an interest rate equal to the lower limit of the band on positive balances remaining after the LVTS settlement. The Bank typically sets the level of settlement balances in the financial system at a slight positive value.[4] Thus, LVTS participants with deficits know that potential counterparties with surplus funds exist. After the close of client business at 6 p.m., participants have one-half hour to trade with each other to reduce their LVTS positions through transactions made at market rates.[5]

Open Market Operations

The Bank announces any change in the target rate and operating band at 9 a.m. If necessary, the Bank will intervene in the open market at about 11:45 a.m. if the overnight rate is straying from its target in the midpoint of the band. It uses Special Purchase and Resale Agreements (SPRAs) with a term of one business day if the overnight rate is too high and Sale and Repurchase Agreements (SRAs) if the rate is too low.[6] These repo and reverse repo-type transactions are based on Government of Canada securities, which are marked to market and subject to haircuts that rise with the maturity of the security to as much as 2.5 percent. The counterparties in these operations are the primary dealers, each of which has a predetermined limit for both types of transactions. The primary dealers are a group of government securities distributors who maintain a minimum share of the activity in the market for Canadian government debt. (Prior to the start of the LVTS, SPRAs and SRAs were used to reinforce the upper and lower limits of the band.)

Auctions of Government Deposits

To keep the settlement balances in the financial system slightly positive, the Bank neutralizes the impact of any public sector flows between the Bank of Canada and the financial system. It does so by transferring government deposits to and from the government's account at the Bank of Canada. The transfer occurs through two daily auctions—at 9:15 a.m. and at 4:15 p.m. The daily amount auctioned is larger/smaller than the amount maturing by enough to offset the impact of the public sector flows and achieve the desired level of settlement balances. (Prior to the start of the LVTS, the transfer of government balances between the Bank of Canada and the direct clearers was one of the Bank's primary tools for implementing policy. This transfer was used to adjust the level of settlement balances as well as to neutralize the impact of public sector flows. The transfer involved directly drawing down or redepositing government balances with financial institutions.)

Criteria for Participation in the Large Value Transfer System

The participants in the LVTS must be members of the Canadian Payments Association (CPA)—that is, regulated, supervised, deposit-taking financial institutions—and they must be linked by the SWIFT telecom-

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[1] The Bank of Canada is a highly autonomous Crown corporation created through a special act of Parliament that sets its mandate, powers, and objectives in broad terms. Special provisions in the Bank of Canada Act safeguard the Bank's autonomy. For instance, the Governor and Senior Deputy Governor are appointed for a term of seven years by the Bank's Board of Directors (with the approval of the Cabinet), not by the government. The Deputy Minister of Finance, who sits on the Board of Directors, has no voting rights, and the Bank submits its budget to its own Board, not to the Treasury Board.

[2] For a time in the second half of the 1990s, the Bank used the monetary conditions index (MCI), which includes both the real short-term interest rate and the real exchange rate, as a guide. The MCI can be viewed as the percentage point change in real interest rates that is equivalent to the combined change in real interest rates and the real exchange rate since a base period. MCI = [real interest rate – real interest rate at base period] + (⅓)[real effective exchange rate index/real effective exchange rate index at base period) – 1] (100). See Freedman (1996).

[3] The last significant change occurred in 1992, with the beginning of the phase-out of reserve requirements, which ended in 1994.

[4] The next day's target balances are announced at 4:45 p.m. each day.

[5] A relatively small value of paper-based items still clears through the Automated Clearing Settlement System (ACSS) with retroactive settlement. In a change from previous practice, ACSS balances are now treated like LVTS balances with no averaging period. The interest rates on ACSS overdrafts and positive balances are 150 basis points above and below the limits of the operating band.

[6] The Bank of Canada held 8 percent of Government of Canada market debt in 1998. The Bank's investments, which are funded primarily by bank notes issued by the Bank, are largely Canadian government debt, which it usually holds until maturity.

munications network. The Bank of Canada must also confirm that each member has opened a settlement account at the Bank and that it has agreed to take loans from the Bank and to pledge appropriate collateral, as needed. Each transfer of funds is subject to a set of risk control tests performed at the central computer supporting LVTS at the CPA. If a given transaction would cause the sender's net settlements position to turn negative and exceed a specified cap (calculated as described below), the payment will be rejected or put in a queue. Otherwise, the payment is deemed final and irrevocable.

As part of the LVTS risk-control structure, each participant's net position is calculated payment by payment, in real time, at the central computer; the participants' net debit positions are subject to ceilings; and, before the start of each day, the participants jointly pledge to the Bank of Canada appropriate securities to cover the largest single permitted net debit position. For each transaction, participants can choose between two kinds of payment—tranche 1 (defaulter pays) and tranche 2 (survivors pay). In the case of a tranche 1 payment, the participant can record a net debit position no larger than the amount of collateral that the institution has pledged that day for tranche 1 activity. However, payments are more likely to be tranche 2 payments, because they economize on collateral. To support tranche 2 transactions, every morning each participant determines the largest net exposure it is willing to accept versus each other participant that day. Moreover, each participant has a tranche 2 debit cap, currently set at 24 percent of all of the bilateral credit lines extended to it. Should a participant default, the other participants might face a settlement obligation proportional to their credit line to the defaulter divided by the sum of all of credit lines to the defaulter. Thus, participants must pledge collateral equal to 24 percent of the largest credit line they are willing to extend.

Collateral Eligible for LVTS

The participants set their net debit caps and bilateral credit lines each morning and pledge the appropriate collateral to the Bank of Canada, which evaluates the collateral to make sure that it is sufficient. The Bank has developed a specialized computer system, the Collateral Valuation and Tracking System, to monitor and value this collateral each morning. The market value is subject to a haircut that depends on the type of security and the term to maturity.[7] The list of eligible collateral includes marketable securities denominated in Canadian dollars and issued by or guaranteed by the federal or provincial governments and National Housing Act mortgage-backed securities (NHA MBS) added to the list in February 1999.[8] The set of acceptable collateral will be expanded further in November 2001 to include bankers' acceptances, commercial paper, and corporate debt because the financial services industry has been pressing for such an increase, given the collateral demands of the LVTS and the reduced supply of Government of Canada debt. These securities all meet the Bank's criteria regarding risk, secondary-market liquidity, operational and legal issues, and ease of revaluation (based on uniformity across instrument class). In addition, LVTS participants can open a Special Deposit Account at the Bank of Canada, generally funded in the overnight market, to serve as collateral. The Bank pays interest at the published overnight rate less a margin (6.25 basis points on December 31, 2000) on these deposits.

In preparation for the century date change, the Bank of Canada announced that between November 1, 1999, and March 31, 2000, it would accept a wider range of collateral for LVTS or ACSS overdrafts, as well as for loans made through the Special Liquidity Facility set up to relieve possible liquidity problems at the turn of the year. The expanded range of collateral included asset-backed securities, commercial paper, corporate debt, and assignment of part of the loan portfolio of borrowing institutions. Loans through the Special Liquidity Facility were available at an interest rate 125 basis points above Bank rate and for a maturity of up to five months to solvent participants in the

[7] For federal government debt, the haircuts range from 1 percent (adjusted for days to maturity/365) for maturities up to 1 year to 2.5 percent for maturities of more than 10 years. At the other end of the spectrum, the haircuts for debt with a provincial government guarantee range from 3 percent to 5.5 percent depending on maturity. The haircuts for debt with a federal government guarantee (including the National Housing Act mortgage-backed securities) and for debt issued by the provincial governments lie in between.

[8] NHA MBS are pools of amortized residential mortgages insured by the Canada Mortgage and Housing Corporation (CMHC) on behalf of the Government of Canada. The issuers are approved by CMHC and must be a chartered bank, a trust company, an insurance company, a credit union, a loan company, or a *caisse populaire*. The CMHC guarantees timely payment of principal and interest, and insures the underlying mortgages. Unlike the deposit insurance provided by the Canada Deposit Insurance Corporation, which is limited to $60,000, the CMHC guarantee is unlimited. Four types of MBS pools are available (homeowner, multifamily, social housing, and mixed), and investments may be made in multiples of $5,000 for maturities ranging from 6 months to 25 years. The NHA MBS program was begun in 1987 to increase the availability of funds for housing finance. In the first ten years of the program, over 45,000 retail and institutional investors invested more than $27 billion in these securities.

LVTS—at their initiative—to the extent that they could offer acceptable collateral. In the event, the Bank received no requests for loans from the Special Liquidity Facility, although the primary dealers did make some use of the extra (term) Special Purchase and Resale Agreements that the Bank offered during this period. The Bank of Canada did not extend these special arrangements past the end of March 2000, but has recently indicated that it would expand the list of acceptable collateral once again, since the financial services industry has a growing demand for a dwindling supply of government securities.[9] The Bank is also working with the industry to find ways to satisfy collateral requirements efficiently. For instance, the ease with which the collateral pledged for the LVTS can be turned into collateral for the overdraft facility required the development of unique legal agreements.[10]

Fiscal Issues

As the fiscal agent for the federal government, the Bank of Canada also manages the government's borrowings. The Canadian government moved into fiscal surplus in 1997, a year before the United States. Thus, one recent focus has been maintaining and improving the liquidity of the markets for government debt. With recent and projected net financial accounts near balance or in surplus, despite government initiatives to cut taxes and increase spending, the debt-to-GDP ratio has fallen from a peak of 71 percent in 1995–96 to below 53 percent at fiscal yearend 2000–01. Marketable federal government securities outstanding have fallen from Can$441 billion in 1997 to Can$415 billion in March 2001, with Treasuries accounting for much of the decline. The supply of Treasury bills outstanding dropped by half, from Can$166 billion in 1996 to Can$89 billion in March 2001. Gross new issuance of Government of Canada direct and guaranteed bonds and notes is also down—from Can$67 billion in 1996 to Can$46 billion in 2000, with the net new issuance falling from Can$33 billion to negative Can$5 billion over the same period.

In this environment of declining issuance and relatively thin markets for 30-year securities, the government instituted a pilot buyback program in 1998–99. This program, which was designed to increase the supply of more actively traded benchmark issues by using new bond issuance to finance the buyback of older, less liquid bonds, was implemented on an ongoing basis in 2000–01. In addition, the government intends to focus its borrowing in the key 5-, 10-, and 30-year maturities in order to increase the target size, and thus the liquidity, of these key benchmark securities. Similarly, Treasury bills are now issued every second week, instead of weekly. Because the decline in the supply of government securities was seen to be fostering market "squeezes," the Bank and government have also taken steps to ensure that the auction process for government debt is free of manipulation.[11]

Interestingly, the turnover ratio in the bill and bond markets declined following the liquidity crisis in 1998 as trading volumes fell. Turnover ratios stabilized in 2000–01, however. Seemingly, "buy and hold" investors have increased their weight relative to the trading accounts. By contrast, the turnover rate in the markets for asset-backed securities, futures, and corporate debt has picked up, suggesting that these assets may be filling some of the roles often performed by government debt.[12]

Management of Foreign Exchange Reserves

As for the impact of a declining supply of U.S. Treasury securities on the Bank of Canada's management of its foreign exchange reserves, the Bank currently holds about two-thirds of its reserves in U.S. dollar-denominated assets with about 30 percent in U.S. Treasury securities.[13] It is in the process of reducing the share in U.S. Treasuries and moving into supranationals and agencies.

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[9] The financial services industry requires these government securities for repo and derivatives transactions, among others. The Bank is thus grappling with the issue of whether the liquidity of the financial markets is a public good that the Bank should support by accepting a wider set of collateral.

[10] By contrast, the Bank of Canada is also considering requiring collateral for the government deposits it auctions daily. Such a requirement could add to the pressures in the government securities market.

[11] These steps included redefining government securities distributors and primary dealers, setting new bidding limits for government securities dealers and their customers, and enhancing the Bank's surveillance of the securities market.

[12] See O'Regan (2000).

[13] Prior to late 1998, the Bank of Canada typically held about 80 percent of its reserves in U.S. dollars.

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