

Background Paper

Fiscal Surplus and Fiscal Deficit: Everything's Quiet on the Monetary Front

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Fiscal Surplus and Fiscal Deficit: Everything's Quiet on the Monetary Front (Background Paper)

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FISCAL SURPLUS AND FISCAL DEFICIT: EVERYTHING'S QUIET ON THE MONETARY FRONT

1 INTRODUCTION

The global financial crisis of 2008–2009 has brought to the limelight the often overlooked relationship between fiscal and monetary operations in several countries. In Canada, as in other countries, a combination of fiscal and monetary measures was introduced to mitigate the impact of the financial crisis and subsequent economic recession. The implications of a fiscal surplus or deficit for a central bank's monetary operations are seldom scrutinized, however. This is because, from a government institution standpoint, monetary and fiscal policies are carried out in a strictly segregated fashion in most developed countries.

In Canada, monetary policy operations are conducted by the Bank of Canada ("the Bank"), a government-owned Crown corporation that functions with considerable independence from the federal government but is nonetheless accountable to Parliament.¹ Monetary policy in Canada is therefore set by non-elected officials at the Bank of Canada. Decisions regarding the targeted level of government revenues and expenses – part of fiscal policy – are made by the Government of Canada with the approval of the Parliament of Canada. As a result of this strict institutional separation, monetary policy and fiscal policy are governed independent of each other.

The objective of this paper is to explain, in non-technical terms, the implications that a fiscal surplus or deficit has for Bank of Canada operations on a daily basis. This paper first provides an overview of how monetary policy operations are conducted by the Bank. It then shows how interventions by the Bank ensure that all remains quiet on the monetary front in spite of liquidity shocks generated by a federal fiscal surplus or deficit.

2 BANK OF CANADA'S ROLE AS CHIEF OPERATING OFFICER OF MONETARY POLICY OPERATIONS IN CANADA

The Bank of Canada implements monetary policy by influencing short-term interest rates. It does so by raising and lowering the target for the overnight rate.² This target is the average interest rate that the Bank wants to see in the marketplace for one-day (overnight) loans among financial institutions (hereafter referred to as the "interbank market"). Changes in this rate influence other variable interest rates, such as those for consumer loans and mortgages.³ The Bank does not decide on the amount of cash in circulation in the economy,⁴ but rather on the *short-term price* of money in circulation (i.e., short-term interest rates). To ensure that the overnight rate does not depart significantly from the target that it has set, the Bank either adds or withdraws cash from the private economy on a daily basis. It does so through the large value transfer system (LVTS), which is the interbank market cash exchange system.⁵

The Bank of Canada has three main tools for injecting liquidity into or withdrawing it from the private economy.

2.1 THE "FISCAL AGENT" TOOL: THE BANK OF CANADA AS THE CASH MANAGER OF THE FEDERAL GOVERNMENT

On any given day, the federal government's Canadian dollar fiscal receipts and disbursements, including flows related to debt issuance, servicing, and maturities as well as other transactions, settle through the Receiver General Consolidated Revenue Fund (or Receiver General account, for short). This is the federal government's deposit account at the Bank of Canada.⁶ The day-to-day management of the Receiver General account cash balance is performed by the Bank itself.⁷ The Bank of Canada, then, is the government's fiscal agent as well as its depository institution.

An easy way to picture the Bank of Canada in such a dual role is to imagine a bank that offers its depositors a cash-management service. The bank would make sure that a given cash balance in the depositor's account is maintained day after day. This would mean that for days when there is a cash shortage in the account, the financial institution would borrow funds in the name of the depositor to make sure the targeted cash threshold in the account is reached. Conversely, for days when there is a cash surplus, the financial institution would lend the surplus cash.

The Canadian institutional arrangement whereby the central bank takes an active role in managing cash balances appears to be unique, based on a survey of cash management in 22 OECD countries.8 Ultimately, however, authority for the management policy of funds rests with the minister of Finance.9

Discussions about the fiscal agent role of the Bank of Canada can get highly technical. What is important to note is that as fiscal agent for the Government of Canada, the Bank has the ability, on a daily basis, to inject liquidity into the private economy (e.g., by lending the Receiver General cash balance) or to withdraw liquidity from the private economy (e.g., by issuing treasury bills). As explained in the previous section, it is through this liquidity balancing act that the Bank ensures that the target for the overnight rate does not depart significantly from the target rate. From this perspective, the Bank's fiscal agent role could very much be seen as an integral part of monetary policy implementation.¹⁰

2.2 THE "TRADITIONAL" TOOL: THE BANK OF CANADA'S OPEN MARKET OPERATIONS

Open market operations consist of withdrawing cash from the economy by selling government securities to financial institutions, or injecting cash into the economy by buying government securities from financial institutions. The target for the overnight rate dictates the interest rate at which the Bank buys or sells these securities. If the overnight rate is trading above the target – a sign that there is not enough cash available to lend in the interbank market – the Bank will intervene by adding liquidity to the private economy through the purchase of government securities. Conversely, if the overnight rate is trading below the target rate – a sign that there is too much cash available to lend in the interbank market – the Bank will intervene by

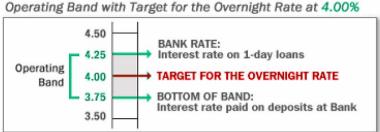
withdrawing liquidity from the private economy through the sale of government securities.11

Open market operations constitute the traditional tool that a central bank uses to add or withdraw cash from the private economy. In Canada, however, this tool has been very much supplanted in importance by the Bank of Canada's fiscal agent tool as a means to neutralize cash imbalances.

THE "LAST RESORT" TOOL: THE BANK OF CANADA'S ROLE AS 2.3 LENDER OF LAST RESORT OR DEPOSITORY INSTITUTION OF LAST RESORT FOR PRIVATE FINANCIAL INSTITUTIONS

To ensure that the overnight rate in the interbank market does not depart significantly from the target it has set, the Bank of Canada also has at its disposal what could be referred to as a "last resort" tool. The Bank stands ready, on a daily basis, to withdraw cash from the interbank market by accepting deposits at the target rate minus 0.25%.¹² The Bank is also prepared, on a daily basis, to inject cash into the interbank market by lending on a short-term basis to financial institutions at the target rate plus 0.25%. In technical terms, this is called the operating band and is illustrated in Figure 1. Therefore, when financial institutions lend or borrow among themselves on a daily basis, they have no incentive to significantly depart from the target for the overnight rate. A bank that needs cash and wants to borrow from other financial institutions knows that it could always get the necessary liquidity by borrowing directly from the Bank of Canada at the target rate plus 0.25%, provided it is able to post eligible collaterals. Conversely, an institution with surplus cash to lend to other financial institutions knows that it could always deposit its liquidity with the Bank at the target rate minus 0.25%.13

Figure 1 – Example of the Operating Band with the Target for the Overnight Rate





Interest rate on 1-day loans Operating 4.25 TARGET FOR THE OVERNIGHT RATE Band 4.00 BOTTOM OF BAND: Interest rate paid on deposits at Bank 3.75 3.50

Operating Band with Target for the Overnight Rate at 4.25%

Bank of Canada, "Frequently Asked Questions," Federal Departments Source: and Agencies.

3 THE IMPLICATIONS OF A FISCAL SURPLUS OR DEFICIT FOR THE BANK OF CANADA'S OPERATIONS

Knowing that the Bank of Canada has three main tools at its disposal to add or withdraw cash from the private economy in order to make sure the target for the overnight rate is achieved, a logical follow-up question would be this: "What could cause a cash imbalance in the private economy and result in the overnight rate moving away from the target rate?"

In a fluid and efficient interbank credit market in Canada, there would appear to be little necessity for the Bank of Canada to intervene to supply or withdraw liquidity. After all, cash does not normally disappear from the interbank market. For example, a loan provided to Person A in order to buy a car from Person B would create a corresponding amount deposited in Person B's bank account, once the transaction has been completed. In a fluid and efficient interbank market, Person A's private bank should be able to borrow the funds from Person B's private bank at the end of the day. The system would be balanced without the need for any intervention from the Bank of Canada. However, events may occur in which withdrawing cash from or injecting cash into the private economy would result in an imbalance in the interbank market, forcing the Bank to intervene to make sure that the target rate is achieved. An important and daily source of such a potential imbalance is the fiscal cash surplus or deficit.

Fiscal policy could be defined as the process by which a government targets a level of revenue (generated by income tax, sales tax, corporate tax, etc.) as well as a level of expenses (allotted to transfer payments, infrastructure spending, military spending, etc.). Actual government revenue and expenses result in a fiscal surplus if the government's revenue is higher than its expenses, or a fiscal deficit if the government's revenue is lower than its expenses. As pointed out earlier, fiscal policy, in contrast to monetary policy, is decided by the Government of Canada and approved in Parliament.

3.1 CASH IMBALANCE CREATED BY A FISCAL SURPLUS

A federal government surplus results in the withdrawal of cash from the economy since the government collects more money in taxes than it injects in spending.

A government surplus constitutes a "net tax" on the private economy. This money is absent from the economy since it sits in the Receiver General account at the Bank of Canada. If the central bank does not intervene, and the federal government does not use this extra cash to repurchase its own debt,

for this money disappears from the private economy. This cash cannot be used by banks to lend to each other. This "disappearing money" would obviously create an imbalance in the interbank market that would push the overnight rate above the target rate.

In such a situation, the central bank would intervene to neutralize the effect of the fiscal surplus by injecting cash into the private economy. Of the three main tools at its disposal, the Bank of Canada's fiscal agent role is perhaps the most practical and adaptable instrument to accomplish this task.¹⁷ By lending an amount equal to the

increase in the Receiver General cash balance to financial institutions, the Bank is putting funds from the fiscal surplus back into circulation, thereby correcting the liquidity imbalance generated by the government's fiscal policy.¹⁸

What should be remembered here is that it is the central bank's duty to make sure that the net outflow of liquidity from the private economy generated by the government fiscal surplus does not affect the overnight rate. Once it has set the target for the overnight rate, the central bank must neutralize the withdrawal of liquidity that a fiscal surplus creates through a corresponding injection of liquidity.

The Government of Canada surplus in the late 1990s and early 2000s presents an interesting case study in this regard. The Appendix shows how the Bank of Canada neutralized the withdrawal of liquidity that resulted from the fiscal surplus in those years.

3.2 Cash Imbalance Created by a Fiscal Deficit

In contrast to a fiscal surplus, a fiscal deficit results in an influx of cash into the private economy¹⁹ since the government injects more money through its spending than it collects in taxes. This added liquidity – in the absence of any intervention by the Bank of Canada or the Government of Canada – would create an imbalance in the form of surplus liquidity in the private economy *that would drive the overnight rate lower*. It is the Bank's role to neutralize, on a daily basis, this injection of liquidity with a corresponding withdrawal of cash from the private economy. The Bank could accomplish this using one of the three tools described in Part 2 of this document. The fiscal agent tool represents a practical neutralization instrument. By issuing treasury bills, decreasing the size of its daily auctions of federal government deposits and/or letting loans to financial institutions from the Receiver General surplus cash lapse, the Bank can ensure that liquidity is withdrawn. ²⁰

For example, if in a given day, an unexpected fiscal deficit is generated, then the Bank would have to neutralize this unexpected injection of liquidity into the private economy with a corresponding cash withdrawal. To accomplish this, the Bank could decrease the size of its planned auction of government deposits or let previously granted loans to financial institutions lapse. An additional way to withdraw this surplus liquidity and achieve the target rate is via an open-market operation in which the central bank conducts sale and repurchase agreements.²¹

What should be remembered here is that it is the central bank's duty to make sure that any shock to liquidity balance in the private economy resulting from the government's fiscal deficit does not affect the overnight rate. Once it has set the target for the overnight rate, the Bank must neutralize the injection of liquidity that a fiscal deficit creates through a corresponding withdrawal of liquidity.

4 CONCLUSION

Every day, the Bank of Canada neutralizes the liquidity imbalance that a federal fiscal surplus or deficit creates in the private economy. This means making sure that the

liquidity balance is restored, and the target for the overnight rate is achieved. In doing so, the Bank ensures that, on any given day, everything remains quiet on the monetary policy front in spite of the sometimes substantial liquidity shock generated by the government's fiscal policy.

In the case of a deficit, a related question to address would be this: what would happen if the Bank of Canada decided not to act in its capacity as a fiscal agent or use the more traditional tool of open market operations to withdraw liquidity from the economy? Paradoxically, the short response to this is... not much!

Through its last resort tool, the Bank pays interest on private banks' deposits to the central bank at the target overnight rate minus 0.25%. The surplus liquidity resulting from the deficit would make its way to the Bank in the form of higher deposits from private financial institutions. The target for the overnight rate could never fall by more than 0.25%. The same logic would apply in the case of a fiscal surplus except that, here, the Bank would have to lend at the target rate plus 0.25% to financial institutions. This move would neutralize the withdrawal of liquidity from the economy prompted by the government surplus. As a result, the overnight rate can never increase by more than 0.25%. Of course, in order to largely eliminate these variations of plus or minus 0.25% in the overnight rate, the Bank can decide to reward deposits from financial institutions or lend to financial institutions at the target for the overnight rate, thereby eliminating the operating band. It should be noted that the absence of sales of government bonds or treasury bills in the context of a prolonged fiscal deficit would cause the Receiver General account cash balance to go into overdraft. The central bank may object to this approach, however, because it might give the public the perception that the federal government is financing its spending using a "line of credit." Nonetheless, the approach is sensible from an operations standpoint.

This analysis has provided an overview of the interaction between monetary and fiscal operations in Canada. It is worth mentioning that the principle of balancing liquidity in the private economy in order to achieve a target interest rate would be similar for any country with its own floating currency that is non-convertible to commodities.

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NOTES

- 1. Christopher Ragan, *Why Monetary Policy Matters: A Canadian Perspective*, Department of Economics, McGill University, 2005.
- 2. For information on the target for the overnight rate, see Bank of Canada, *Monetary Policy*, "Key interest rate: target for the overnight rate." The policy objective of adjusting the target for the overnight rate is to maintain low and stable inflation in Canada. This paper, however, deals strictly with the operational aspect of monetary policy, not with the policy objective per se.
- 3. Bank of Canada, About the Bank, "Frequently Asked Questions."
- 4. The term "cash" is used here, although the Bank of Canada would typically use the term "liquidity." From an accounting standpoint, "cash" is perhaps more precise as it directly refers to a balance sheet item on the asset side (whether it is a government or private sector balance sheet). Cash should be interpreted here as cash deposited in a bank account only, not as paper money in circulation. Money, cash, or liquidity should be considered synonymous in the context of the current analysis.

- 5. Bank of Canada, "Payments and other clearing and settlement systems" and "The Bank in Brief." The LVTS is subject to the Bank of Canada's oversight. Fourteen private financial institutions participate directly in the LVTS. A condition of participation is having a settlement account at the Bank of Canada. Throughout the day, LVTS members send payments back and forth to each other. When the transactions are added up at the end of the day, some financial institutions may be short of funds, while others may have surplus funds. To settle these differences, LVTS members borrow from and lend money to each other every day, on a one-day (overnight) basis. The interest rate paid on these and other overnight loans is called the "overnight rate."
- 6. KPMG LLP, <u>Report on the Evaluation of the Receiver General Cash Management</u> *Program*, 14 June 2006, p. 6.
- 7. Ibid.
- 8. Ibid., p. 8.
- Department of Finance, Bank of Canada, <u>Funds Management Governance Framework</u>, October 2007.
- Department of Finance, <u>Debt Management Report 2008–2009</u>, December 2009. In this
 report, the Government of Canada describes the management of Receiver General cash
 balances (emphasis added):

Receiver General (RG) cash balances, the Government of Canada's Canadian-dollar balances, are invested in a prudent cost-effective manner through auctions with private sector financial institutions. Since February 1999, when Canada's electronic funds transfer system—the Large Value Transfer System—was implemented, RG cash balances have been allocated to bidders twice daily through an auction process administered by the Bank of Canada. These auctions serve two main purposes: first, as a treasury management tool, they are the means by which the Government invests its short-term Canadian-dollar cash balances; second, the auctions are used by the Bank of Canada in its monetary policy implementation to neutralize the impact of public sector flows on the financial system.

- 11. The securities that the Bank of Canada is permitted to purchase or sell are described in the Bank of Canada Act.
- 12. In the context of the financial crisis, the Bank of Canada changed this policy on a temporary basis and set the rate at which it is ready to accept deposits from institutions at exactly the target rate.
- 13. Todd Keister and James McAndrews, <u>Why Are Banks Holding So Many Excess Reserves?</u>, Staff Report No. 380, Federal Reserve Bank of New York, July 2009. This paper explains the effect in the United States of rewarding deposits from financial institutions at the Central Bank at the target for the overnight rate (deposits are called "reserves" in the United States): "When banks earn interest on their reserves, they have no incentive to lend at interest rates lower than the rate paid by the central bank. The central bank can, therefore, adjust the interest rate it pays on reserves to steer the market interest rate toward its target level."
- 14. Cash reclaimed in paper form and not deposited in a private bank account is an example of liquidity "disappearing" from the interbank market.

- 15. "Fiscal surplus" is used here to mean the net cash inflow from the private economy to the government, excluding government financing operations such as debt issuance and debt buy-back. Although the concept of net cash inflow is related to the accounting definition of a fiscal surplus, the two are not the same. Accounting surplus encompasses non-cash items, while net cash inflow only reflects cash movements. Despite this difference, the term "fiscal surplus" is used here to simplify the terminology.
- 16. If the government uses the increase in cash reserves to buy back government bonds from the private sector, this would neutralize its withdrawal of liquidity (the buy-back of government bonds constitutes an injection of money into the economy that offsets the withdrawal of liquidity resulting from the budget surplus). While this neutralizing move could take place over a period of time, the Government of Canada does not manage its debt repurchase to match exactly the level of government surplus each day. This fact automatically means that the Government of Canada, through its fiscal cash surplus, is a constant source of liquidity imbalance in the interbank lending market.
- 17. Using the three monetary policy tools in combination is common practice. This being said, the fiscal agent instrument is by far the dominant one. Using the lender of last resort tool extensively would likely increase the overnight rate by 0.25% (top of the operating band). Using the traditional tool (i.e., open market operations) as the main instrument, especially if the fiscal surplus is substantial, could result in a massive purchase of Government of Canada securities in a single day by the central bank.
- 18. As explained, an alternative way to correct this liquidity imbalance would be for the Bank of Canada to inject liquidity into the private economy through traditional open-market operations. As described by KPMG in its 2006 report, <u>Report on the Evaluation of the Receiver General Cash Management Program</u>, these two approaches are very closely related (p. 6):

The day-to-day management of the RG account balances is performed by the Bank, as fiscal agent. There are also interactions with the Bank's other major responsibility – the conduct of monetary policy. (...) the open market interventions of the Bank, employing domestic Special Purchase and Resale Agreements ("SPRAS," "specials," or "reverse repos") and Sale and Repurchase Agreements ("SRAS" or "repos") with the objective of reinforcing its target overnight rate, have a direct impact on the size of government cash balances, as the Bank's intervention in the overnight market results in a shift in terms of where balances are held between market participants and the RG. This shift in where balances are held results in no overall impact on costs to the government, as any Bank net profits are ultimately transferred to the government by the end of the year.

- 19. The term "fiscal deficit" is used here to mean the net cash outflow from the government to the private economy, excluding government financing operations such as debt issuance and debt buy-back.
- 20. In practice, if the Central Bank in its role as the fiscal agent of the federal government forecasts an increase in the fiscal deficit, it would typically issue bonds before a fiscal deficit occurs in order to build up its cash reserves. This would be a pre-emptive withdrawal of liquidity from the private economy that the Bank of Canada would need to neutralize the same day with a corresponding injection of liquidity through short-term loans to private financial institutions. When the forecasted increase in fiscal deficit effectively occurs, Bank of Canada need only let these loans lapse to ensure that the injection of liquidity generated by the fiscal deficit is withdrawn.

21. In its publications, the Bank of Canada tends to present open market operations as actions to achieve the target rate while it presents its actions as the Government of Canada's fiscal agent as operations to achieve a given level of settlement balance in the LVTS. It should be made clear here that, from a technical standpoint, adjusting the level of settlement balance has direct implications on the overnight rate. Both open market operations and fiscal agent actions are therefore aimed at correcting liquidity imbalances in the private economy in order to achieve the target rate. The Bank of Canada recognized this in its April 2009 Operating Framework for the Implementation of Monetary Policy at the Effective Lower Bound for the Overnight Interest Rate by stating unequivocally the implications that raising the targeted level of settlement balance in the LVTS would have on the overnight rate:

In addition, the Bank will provide excess settlement balances to create the incentives for the overnight rate to trade at the bottom of the operating band, i.e., the target rate. By providing significantly more aggregate balances than required by participants in the Large Value Transfer System (LVTS participants), overnight funds are expected to trade at $\frac{1}{4}$ per cent – the rate that the Bank of Canada pays on deposits.

APPENDIX - FISCAL SURPLUS IN CANADA: WHERE DID THE CASH GO?

For 11 consecutive years, beginning with the 1997–1998 fiscal year, the Government of Canada generated a fiscal surplus. One question naturally arises: how did the Government of Canada or the Bank of Canada neutralize the withdrawal of liquidity from the economy that resulted from the fiscal surplus? Marc-André Pigeon,¹ in an analysis of the Government of Canada's balance sheet between 1997–1998 and 2003–2004, showed that a significant portion of the budgetary surplus ended up as government cash reserves rather than being used to pay down debt. Assets in the form of "cash and cash equivalents" on the Government of Canada's balance sheet actually increased from \$10.2 billion in fiscal year 1996–1997 to \$22.7 billion in fiscal year 2006–2007. If all this extra cash had been left sitting in the Receiver General account without any intervention from the Bank of Canada in the form of a cash injection into the interbank market, a liquidity shortage would have been created in the private economy that would have pushed up the overnight rate. Of course, the Bank of Canada did not stand still.

The approach employed by the Bank to neutralize the withdrawal of liquidity generated by the fiscal surplus – more precisely, the portion of the fiscal surplus not used to repurchase government debt – was to re-inject the increased cash reserves from the Receiver General account into the private economy through an auction with financial institutions in the LVTS. This approach is explained by the Bank in its publication *The Implementation of Monetary Policy in Canada*:²

Unlike many other countries that predominantly use repos to add (or withdraw) liquidity to (from the system), the Bank of Canada uses the transfer of government deposits to affect level of settlement balances. (...)

This neutralization (and any change in the level of settlement balances) is effected through the transfer of government deposits from/to the government's account at the Bank of Canada to/from LVTS participants and other selected market participants through the LVTS (...)

For example, if the government were to receive \$100 million net in taxes into its account at the Bank of Canada, in the absence of any neutralizing action, settlement balances in the system would decline by this amount. The Bank would therefore arrange a net increase of \$100 million in the government deposit auction to leave the system unchanged.

The portion of the federal government fiscal surplus that ended up as excess cash reserves in the Receiver General account was used to provide short-term loans – through an auction process – to financial institutions. In fact, the so-called "cash equivalents" item on the Government of Canada's balance sheet in the Public Accounts at the end of fiscal year 2006–2007 consisted mainly of term deposits resulting from this auction process.

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- 1. Marc-André Pigeon, *Balance Sheets and Budget Surpluses: An Analysis,* 1997–1998 2003–2004, Publication No. 05-38-E, Parliamentary Information and Research Service, Library of Parliament, Ottawa, 16 September 2005.
- 2. Walter Engert, Toni Gravelle, and Donna Howard. *The Implementation of Monetary Policy in Canada*, Discussion Paper 2008–9, Bank of Canada, Ottawa, 2008, p. 89.