

# Technical Note: Elimination of Retroactive Settlement in the ACSS

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In response to a request from the Canadian Payments Association (CPA), on 1 November 2003 the Bank of Canada abandoned its practice of backdating the results of the settlement of payments through the Automated Clearing Settlement System (ACSS). The adoption of “next-day settlement” means that the results of the settlement process will appear on the central Bank’s books on the day items actually settle in the ACSS rather than on the previous business day. Since July 1986, settlement of these items had occurred at noon the day after items were presented in the clearing process, but the results of the settlement process were recognized on the Bank’s books the previous day, through backdating or “retroactive” settlement (Dingle 1986).

The Bank of Canada has advocated this change for some time. Changing the settlement to the next day was first discussed before the introduction of the Large Value Transfer System (LVTS) (Bank of Canada 1995). The Bank saw it as a means to simplify the payment process and to improve the reporting of settlement risk, and at the same time to promote the cost-effectiveness of the payment systems. Direct clearers were initially reluctant to accept the change, mindful of reintroducing float issues for their customer base, as well as the associated costs and inefficiencies of monitoring account activity.<sup>1</sup> This concern, however,

has been addressed, as the ACSS participants agreed to an interest-compensation mechanism among themselves. As a result of the shift to next-day settlement with interest compensation, the most significant costs associated with the settlement of payments through the ACSS will be eliminated.

## Costs of Retroactive Settlement in an LVTS Environment

The LVTS was introduced in 1999 to electronically process large-value and time-sensitive items on a “real-time” basis (Dingle 1998). It provides finality of payment based on the well-developed risk controls in the system.<sup>2</sup> By comparison, the ACSS is the system through which other payment items, such as cheques, are cleared and settled. This system settles at noon the day after items are presented for clearing. While the LVTS is deemed to be systemically important, the ACSS is not.<sup>3</sup> Since the ACSS does not provide intraday finality to fund transfers, items exchanged via the ACSS are at risk until settlement occurs, hours after the clearing process begins.

When the LVTS was first introduced, the interest rate band in the ACSS was initially set so that direct clearers would incur the same level of costs as under the previous averaging period regime. Since the interest rate

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1. A direct clearer is a deposit-taking institution that has an ACSS settlement account at the Bank of Canada. For a complete description of the organization and workings of the ACSS, see the Bank of Canada Web site at <http://www.bankofcanada.ca/en/payments/systems.html#automated>. “Float” consists of cheques and other items relating to deposits that have not been cleared.

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2. These arrangements meet the standards for systemically important payment systems, which are required to have a built-in mechanism to protect participants against settlement risk (Goodlet 1997).

3. After a review in December 2002, the ACSS was declared not to be designated under the Payment Clearing and Settlement Act (Northcott 2002).

band for the LVTS was narrower, an overdraft or long position was less costly in this system compared with the ACSS. This encouraged the migration of large-value items to the LVTS from the ACSS. End-of-day positive or negative balances in the LVTS are subject to a 25-basis-point cost relative to the target overnight rate, while end-of-day net gains or losses in the ACSS were initially subject to a 250-basis-point cost. Over time, as certain migration milestones were met, the ACSS interest rate band was reduced, and before the introduction of next-day settlement, the cost stood at 150 basis points. Daily volumes in the ACSS, which were around \$40 billion immediately after the introduction of the LVTS, are down to \$16 billion today, in part because of the effect of the cost incentive on migration levels.

One of the specific ways in which ACSS participants encountered this cost under the backdated settlement arrangements was related to a payment transaction that involved both the LVTS and the ACSS. For example, a direct clearer could receive a cheque payable to the Government of Canada for clearing and settlement in the ACSS, but would be required to make that payment in the LVTS. In this simplified case, the direct clearer would end the day paying the target rate plus 25 basis points on its overdraft in the LVTS and would earn the target rate less 150 basis points on its positive ACSS balance. If these balances had been held in the LVTS, the direct clearer would have received significantly more in interest. This opportunity cost was known as a “dislocation” cost.<sup>4</sup>

## The Impact of Next-Day Settlement on Costs

The introduction of next-day settlement eliminates many of the costs for the financial institutions that participate in the ACSS, although it will result in a small capital charge being imposed. To understand how the introduction of the new regime eliminated

4. In fact, direct clearers actively attempt to reduce dislocation costs through interbank transactions and the late-day execution of Settlement Exchange Transactions (SETs), in which a direct clearer “swaps” LVTS funds for ACSS funds with one or more counterparties. In the above example, the direct clearer would search out other direct clearers who hold positive LVTS balances and are projected to have negative balances in the ACSS, although they will not know their ACSS positions with certainty until the next morning. If the other counterparty(ies) agreed, the direct clearer would “receive” an LVTS payment of a specified amount from them (in the best-case scenario taking the LVTS balance to zero) and would allow its ACSS balances to be debited by the same amount as the amount received.

most of the costs, a brief review of ACSS procedures under the old system will be helpful.

Over the course of a business day, direct clearers receive on deposit numerous paper items and instruments from various electronic payment streams. These deposits are normally credited to the clients’ accounts on the same day. The items are sorted, processed, and cleared that evening in the ACSS. The calculation by the ACSS of the net amount of claims, or obligations, of the participating financial institutions is made in most regions at 9:30 the next morning (EST), with adjustments allowed up to 11 a.m. Previously, the Bank of Canada determined from the ACSS the aggregate amounts due to and from direct clearers, and settlement took place at noon through credits and debits in the direct clearer’s ACSS settlement accounts at the Bank. By allowing the books of the Bank to remain open into the following business day, until the clearing process was completed and settlement occurred, the effective date for the settlement was the same day that most payment items were credited to the customers’ accounts.

With next-day settlement, the direct clearer sees its final ACSS multilateral net clearing position by mid-to late morning the day after the items are entered into the clearing process. The net gains and losses arising from the ACSS clearing process appear on the direct clearers’ balance sheets as a component of “items in transit” rather than as positive balances in the ACSS held as deposits or as central Bank advances on the Bank of Canada’s balance sheet.<sup>5</sup> The items settle, and the direct clearers’ positions with the Bank of Canada will be changed on the business day after the payment items are credited to the customers’ accounts.

The interest-compensation mechanism agreed to by the ACSS members allows direct clearers to give value to the customer’s funds on the day the item is deposited and avoids the imposition of a float charge on their customer base. The CPA determines the interest compensation due to or from each direct clearer. (This is the only new infrastructure required for the implementation of this project.) Direct clearers with a net

5. Bank of Canada advances are secured loans made to a bank or other member of the CPA. As a result of the changes described above, the balance sheet of the Bank of Canada will contract. In 2002, the average size of the positive and negative balances held at the Bank by CPA members active in the ACSS was approximately \$500 million. Given the 300-basis-point band in this payment system, this represents annual cost savings to the industry of \$15 million at the expense of Bank of Canada profits, which are ultimately remitted to the Government of Canada.

credit position in the ACSS receive an interest payment to cover their cost of giving credit to depositors on the business day before receiving funds in settlement. Conversely, direct clearers with net debit positions make payments to offset their net benefit of debiting their customers' accounts on the business day before paying funds in settlement. Interest compensation is calculated daily by the CPA at the target overnight rate (i.e., the Bank Rate less 25 basis points) and is included in the clearing balances settled at the Bank of Canada, using LVTS funds.

An institution that finds itself with a negative clearing balance does not take an ACSS advance (an overdraft loan), but makes an LVTS payment to its ACSS sub-account at the Bank of Canada. When all payments have been credited to the subaccounts of the direct clearers with negative clearing balances, the Bank debits these accounts and credits the accounts of direct clearers that are to receive funds to settle their settlement account. There are no ACSS balances or overdrafts carried on the Bank of Canada's balance sheet overnight, reducing the cost to participants.

In the unlikely event that a direct clearer does not pay the amount of its negative clearing balance through the LVTS, it may still apply for an ACSS advance from the Bank to obtain the liquidity needed to settle its position. This may be required where the LVTS system is unavailable, or where a direct clearer is unable to connect to the system. It is unlikely that this facility will be used for borrowing overnight, as negative balances will be settled by an LVTS payment at some point during the remainder of the day. Following its practice with the continuous linked settlement (CLS) system for settling foreign exchange transactions, the Bank of Canada will not impose a charge based on interest rates on these overdrafts that are repaid later the same day. In the future, a levy or a fee for this service could be introduced.

It is important to note that the new settlement arrangements for the ACSS do not alter the settlement risk borne by ACSS participants. By including in the financial statements, in the items in transit category, the "settlement" risk that each ACSS participant bears, the ownership and extent of this exposure is clarified.

Including ACSS net claims under items in transit on the balance sheet will increase the capital charge incurred by ACSS participants following the applica-

tion of a risk weighting to the additional amount of net receivables as a result of the ACSS clearings.<sup>6</sup>

## Impact on ACSS Stakeholders

### ACSS participants

The recent move to next-day settlement accounting and the subsequent change to the cost structure of the ACSS payment system will have an impact on industry behaviour. Risk mitigation rather than cost is likely to be the main driver for future migration of payments from the ACSS to the LVTS. As well, a number of migration initiatives and projects have recently been completed or are currently underway to move more payment value from the ACSS to the LVTS. Among them are the inclusion of equity trading in the CDSX<sup>7</sup> and increased settlement of entitlements in the LVTS. In addition, to promote the settlement of large-value payments in the LVTS, a cap of \$25 million has been set for paper items eligible for the ACSS. To prevent slippage of large payment items back to the ACSS, the Bank of Canada will continue to monitor the values processed in both payment systems.

The desire to minimize capital costs associated with items in transit means that direct clearers will continue to use Settlement Exchange Transactions (SETs). Direct clearers will attempt to reduce the items in transit on their balance sheet by limiting, when possible, their pending position in the ACSS. As the migration of payment items and payment streams to the LVTS continues, the dollar amount of SETs will diminish.

The change in the cost structure of the payment system has other potential effects. Pricing of large deposits and overdrafts, particularly those transacted late in the business day, may be reviewed. Before next-day settlement was introduced, if a direct clearer held positive or negative balances at the end of the day in the

6. As an example, if a bank had "net receivables" of \$100 million in the ACSS, this would be posted as a \$100 million asset captured in items in transit on its balance sheet. The Office of the Superintendent of Financial Institutions states that "cheques and other items in transit" attract a risk weighting of 20 per cent, creating a risk-adjusted asset of \$20 million. Bank for International Settlement guidelines set out that this must be supported by at least 8 per cent in capital. As a result, \$1.6 million in capital is set aside. The actual capital charge depends on what the direct clearer targets for a return on capital. If 12 per cent is targeted, then the capital charge amounts to \$192,000, or approximately 20 basis points. This compares to the 300-basis-point ACSS band that is being eliminated.

7. CDSX is the new clearing and settlement system for debt and equity securities in Canada.

ACSS as a result of an unexpected late-day customer transaction, the direct clearer would receive the lower limit of the ACSS interest rate band or be required to pay the upper limit. Now the direct clearer will receive or pay the target overnight rate. The competitive forces of the industry will ultimately determine the level of benefit passed on to the customer base.

### **Bank of Canada**

The movement to next-day settlement with interest compensation has no impact on the implementation of monetary policy by the Bank of Canada, which currently involves adjusting, on a day-to-day basis, the level of Receiver General deposits held at the Bank versus those held by participants in the LVTS. As already noted, however, the move has reduced the size of the Bank's balance sheet, resulting in an estimated annual loss of revenue of some \$15 million for the federal government.

The elimination of positions in the ACSS of members of the Canadian Payments Association with the Bank of Canada will result in changes to the table that

currently reports these data in two Bank publications: the *Weekly Financial Statistics* and the *Bank of Canada Banking and Financial Statistics*.

### **Conclusion**

The change to next-day settlement with interest compensation has eliminated many of the costs associated with being a participant in the ACSS. It has done so without affecting the implementation of monetary policy and without reintroducing float charges for customers of financial institutions, and it has avoided major programming changes at the financial institutions. As well, the bookkeeping conforms to Generally Accepted Accounting Principles (GAAP) and is consistent with international best practices for settlement of non-real-time payment systems. Finally, and importantly, the change to next-day settlement properly accounts for settlement risk taken by ACSS participants by posting this exposure on the balance sheets of those who bear it.

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### **Literature Cited**

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