

CANADIAN PAYMENTS ASSOCIATION

LVTS RULE 8

MANAGEMENT OF RISK CONTROLS

LVTS Rule 8, December 1998: as amended July 30, 2001, November 19, 2001 and November 25, 2002, June 29, 2004, December 6, 2004, March 29, 2007, March 1, 2010, August 16, 2010, February 3, 2014, and August 21, 2017.

MANAGEMENT OF RISK CONTROLS

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- CHANGE OF TRANCHE 1 NET DEBIT CAP**
- 8.1 All requests by a Participant for an immediate increase or decrease in a Participant's Tranche 1 Net Debit Cap shall be effected by a Participant through its Participant Workstation. Such requests shall be made using the *Collateral Request* query on the Direct Network.
- INCREASE IN TRANCHE 1 NET DEBIT CAP**
- 8.2 An increase in a Participant's Tranche 1 Net Debit Cap shall be effected by:
- a. apportioning Excess Value in support of the Participant's Tranche 1 Net Debit Cap in an amount at least equal to the desired increase in the Participant's Tranche 1 Net Debit Cap;
 - b. pledging additional Collateral to the Bank of Canada for LVTS purposes in an amount which after valuation by the Bank of Canada is at least equal to the desired increase in the Participant's Tranche 1 Net Debit Cap and apportioning value equal to the desired increase in the Tranche 1 Net Debit Cap;
 - c. apportioning an amount of Reserved Collateral pursuant to section 8.9 below; or
 - d. due to revaluation it is possible for a Tranche 1 Net Debit Cap to be reduced past zero. In such a case, if the Participant then pledges Collateral, after valuation there is an automatic apportionment of value which, if sufficient, eliminates this shortfall with any remaining value being automatically apportioned to the Tranche 1 Net Debit Cap.
- DECREASE IN TRANCHE 1 NET DEBIT CAP**
- 8.3 A decrease in a Participant's Tranche 1 Net Debit Cap by a Participant shall be effected by reducing the value apportioned in support of the Tranche 1 Net Debit Cap to reflect the desired decrease in the Participant's Tranche 1 Net Debit Cap. If the Participant's Multilateral Net Tranche 1 Position is negative at the time, the value apportioned by a Participant in support of its Tranche 1 Net Debit Cap may not be reduced below the absolute value of that negative Multilateral Net Tranche 1 Position.

Example: *If at the time a Participant wants to reduce its Tranche 1 Net Debit Cap it has sent \$300 million in Tranche 1 payments and received \$200 million in Tranche 1 payments during the current LVTS Cycle, the Participant will not be able to reduce its Tranche 1 Net Debit Cap below \$100 million (i.e., its current negative exposure).*

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AUTOMATIC PROCEDURE

8.4 A decrease in a Participant's Tranche 1 Net Debit Cap shall be effected automatically by LVTS if, and to the extent that, upon a revaluation of the Participant's LVTS Collateral by the Bank of Canada pursuant to section 32 of the LVTS By-law, the new aggregate value of the Participant's Collateral is less than the sum of the Participant's Maximum ASO plus the absolute value of the Participant's Tranche 1 Net Debit Cap.

DEVALUATION OF COLLATERAL

8.5 A devaluation of LVTS Collateral pursuant to section 32 of the LVTS By-law will proceed in the following manner:

- a. When the Bank of Canada determines that the market value of some or all securities pledged as Collateral has fallen by an amount greater than the amount of reduction in market value which the Bank has previously advised Participants will result in a devaluation of those securities as Collateral, the Bank of Canada will notify the President that a revaluation of Collateral will take place and will indicate the time of revaluation.
- b. The President will in turn notify all Participants that a revaluation of Collateral will take place and will indicate the time of the revaluation. The amount by which each security pledged as Collateral will be revalued will equal the amount by which the market value of the security has changed during the period beginning with the last valuation by the Bank of Canada of all Collateral (either during the initialization phase of the LVTS Cycle or at the time of any prior revaluation during the LVTS Cycle pursuant to section 32 of the LVTS By-law) and ending at the time of the revaluation as described in 8.6e.
- c. In accordance with section 32 of the LVTS By-law, a Participant whose Collateral would, as a result of the revaluation, be reduced in value below the sum of its Maximum ASO and the absolute value of its Tranche 1 Net Debit Cap, shall pledge to the Bank of Canada prior to the time of revaluation such additional Collateral as is necessary to make the aggregate value of LVTS Collateral pledged by it at the time of revaluation at least equal to the sum of its Maximum ASO and the absolute value of its Tranche 1 Net Debit Cap.

MANAGEMENT OF RISK CONTROLS**DEVALUATION
OF
COLLATERAL
(continued)**

- d. Any Collateral valuation that takes place prior to the time of revaluation will continue to be based on the market value used by the Bank of Canada in the last valuation of LVTS Collateral as indicated in paragraph 8.6(b) above (i.e., either during the initialization phase of the LVTS Cycle or at the time of any prior revaluation during the LVTS Cycle pursuant to section 32 of the LVTS By-law).
- e. At the time of revaluation, the Bank of Canada will revalue all Collateral based on the market value of the securities at that time and the resulting new aggregate Collateral value assigned by the Bank of Canada will be transmitted to LVTS.
- f. The Tranche 1 Net Debit Cap of any Participant for whom the sum of its Maximum ASO and the absolute value of its Tranche 1 Net Debit Cap at the time of the revaluation is greater than the value of its Collateral resulting from revaluation, shall be automatically reduced by the LVTS in accordance with section 32 of the LVTS By-law.
- g. Each Participant will receive a Collateral change notice from LVTS.

**RESERVED
COLLATERAL**

- 8.6 Within the Tranche 1 Payment Message type there has been provision made for using Collateral that is transferred to the Bank of Canada through the CDSX and that is designated by the Participant as Reserved Collateral to support a Type R Payment Message. A Type R Payment Message is a payment supported by Reserved Collateral made by a Participant to the Bank of Canada with CDS as the Payee solely for the purpose of paying the Participant's end of day CDSX obligation to CDS during CDSX Payment Exchange.

CHARACTERISTICS

- 8.7 A Type R Payment Message is a Tranche 1 Payment Message. What differentiates it from other Tranche 1 Payment Messages is that it is backed by Collateral that is pledged and transferred to the Bank of Canada through the CDSX for the sole purpose of supporting Type R Payment Messages. These securities are pledged to the Bank of Canada and the value of the pledged securities shall be held in reserve within LVTS (meaning that value is not apportioned to increase the Participant's Tranche 1 Net Debit Cap) until passage of the pre-credit described below. The Participant will then be able to send a Type R Payment Message to pay its CDSX obligation to CDS using this Reserved Collateral. Upon a Type R Payment Message being sent, and prior to the Type R Payment Message being received by the Bank of Canada, LVTS will verify if sufficient Reserved Collateral has been pledged to cover the amount of the intended Payment Message. This verification is a pre-credit which precedes the Risk Control Test applicable to Tranche 1 Payment Messages (LVTS will be able to differentiate this Type R Payment Message from other types as the Sending Participant will be required to place the letter "R" in field :108: of Block 3 of the header in the SWIFT message).

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- PROCESS** 8.8 Once a Type R Payment Message is sent, and prior to the Type R Payment Message being received by the Bank of Canada, LVTS will check to see if the value of the Reserved Collateral (as assigned by the Bank of Canada) is at least equal to the value of the Type R Payment Message. If yes, then (before permitting any further payments) the following shall occur in sequence:
- (i) an amount equal to the amount of the Payment Message is apportioned to the Tranche 1 Net Debit Cap and total collateral value of the Sending Participant (i.e., the Tranche 1 New Debit Cap and total collateral value is increased) and the Collateral value held in reserve decreased by the same amount;
 - (ii) the Type R Payment Message passes the required Risk Control Test for Tranche 1 Payment Messages;
 - (iii) the Multilateral Tranche 1 position of the Sending Participant is decreased by the amount of the Payment Message; and
 - (iv) the Multilateral Tranche 1 position of the Bank of Canada as Receiving Participant is increased by the amount of the Payment Message.
- INSUFFICIENT COLLATERAL** 8.9 If there is insufficient Reserved Collateral to support the Type R Payment Message then the Payment Message shall be rejected. There is no queuing for Type R Payment Messages irrespective of what queuing may be in place for other Payment Messages. The Collateral value held in reserve shall remain the same.
- EXCESS COLLATERAL** 8.10 In the event that the value of some Reserved Collateral remains held in reserve by the LVTS after CDS has been paid in full by the Participant, the Bank of Canada will notify LVTS and such value will then be automatically converted to Excess Value.

MANAGEMENT OF RISK CONTROLS

- RESERVED COLLATERAL/ FAILURE OF A PARTICIPANT TO PAY CDS** 8.11 In the event that a Participant pledges Reserved Collateral but fails to send Payment Messages for the full amount owing to CDS during CDSX Payment Exchange, the Bank of Canada shall, on behalf of the Participant, reduce the value of Reserved Collateral held in reserve in LVTS in an amount equal to the difference between the value assigned by the Bank of Canada to all of the Reserved Collateral and the aggregate amount of any Type R Payment Messages made by the Participant to CDS. The Bank of Canada is authorized to reduce the Collateral value held in reserve in this situation, upon notification to the Bank of Canada from CDS that the Participant has failed to pay CDS the full amount during CDSX Payment Exchange.
- AUTHORIZATION TO RETURN COLLATERAL** 8.12 In the event that the value of Reserved Collateral held in reserve in LVTS is reduced as a result of the Participant's failure to pay CDS in full, the Bank of Canada is authorized to return to the CDSX upon the instructions of CDS, Reserved Collateral having a value (as assigned by the Bank) equal to the difference between the value assigned by the Bank to all of the Reserved Collateral and the aggregate amount of any Type R Payment Messages made by the Participant to CDS.

BILATERAL CREDIT LIMITS

- BILATERAL CREDIT LIMIT NOT PERMITTED** 8.13 Notwithstanding the following sections with respect to changes to Bilateral Credit Limits, in the event that two or more Participants become affiliated as set out in LVTS Rule 3, the affiliated Participants shall not extend Bilateral Credit Limits to one another.
- CHANGE OF STANDING BILATERAL CREDIT LIMIT** 8.14 A Participant may at any time during an LVTS Cycle change any Standing Bilateral Credit Limits established by it in favour of any other Participant by using the *Standing Bilateral Limit Request* query on the Direct Network. Any such increase or decrease in any Standing Bilateral Credit Limit shall take effect at the beginning of the next LVTS Cycle and will become part of the beginning LVTS Cycle parameters which a Participant may confirm during the initialization phase of each LVTS Cycle. Similarly, if a change is made to the Standing Bilateral Credit Limit after the settlement of one LVTS Cycle but prior to initialization of the next LVTS Cycle (i.e., normally between 19:30 and 23:00) the change shall also take effect at the beginning of the next LVTS Cycle.
- NOTICE** 8.15 The Association will give notice to each Participant of any change in any Standing Bilateral Credit Limit established for such Participant in the form of an unsolicited message distributed via the Direct Network.

MANAGEMENT OF RISK CONTROLS

DECREASE IN
BILATERAL
CREDIT
LIMIT

8.16 A Participant may at any time during an LVTS cycle lower any Bilateral Credit Limit it has established in favour of another Participant by using the *Bilateral Limit Request* query on the Direct Network. (Note: Notwithstanding the fact that a Participant may lower any Bilateral Credit Limit it has established at any time, the Participant's ASO and Maximum ASO are not reduced by such reduction in Bilateral Credit Limit.)

Example: Assume that Participant A has established a Bilateral Credit Limit of \$500 million to Participant B at the start of the LVTS Cycle and that Participant A has a Maximum ASO equal to \$200 million. If A lowers its Bilateral Credit Limit established in favour of B it will not affect A's ASO towards B should B default, nor would it affect A's Maximum ASO. This is because:

- (a) A's ASO towards B is A's proportionate share of any shortfall and is based on the largest Bilateral Credit Limit A has granted to B **at any time** during the current LVTS Cycle (ref. By-law section 27); and
- (b) A's Maximum ASO is equal to a percentage (System Wide Percentage) of the largest Bilateral Credit Limit A has established in favour of any other Participant **at any time** during the current LVTS Cycle. As in (a), A can cause its Maximum ASO to go up but not down (ref. By-law section 28).

It should also be noted that the lowering by a Participant of a bilateral limit established in favour of another Participant will result in the Bank of Canada's bilateral limit to that other Participant also being lowered. This is because the Bank of Canada's bilateral limit established for a Participant is a fraction of all other bilateral limits granted to that Participant.

INCREASE IN
BILATERAL
CREDIT
LIMIT

8.17 Subject to the conditions listed in section 8.20 a Participant may at any time during an LVTS Cycle increase any Bilateral Credit Limit it has established in favour of another Participant by using the *Bilateral Limit Request* query on the Direct Network.

NO EFFECT ON
STANDING
BILATERAL
CREDIT LIMIT

8.18 Any such increase or decrease by a Participant in a Bilateral Credit Limit established by the Participant will not change any Standing Bilateral Credit Limit which has been established by that Participant.

INTERPRETATIONS

LARGEST
BILATERAL
CREDIT LIMIT

- 8.19 If by reason of an increase in any Bilateral Credit Limit such new Bilateral Credit Limit now becomes the largest Bilateral Credit Limit established by the Participant in the current LVTS Cycle there will be an increase in the Participant's Maximum ASO. If this occurs the requested increase in the Bilateral Credit Limit will only be authorized if:
- a. LVTS automatically apportions sufficient Excess Value;
 - b. the Participant reapportions Tranche 1 to create sufficient Excess Value which is then automatically apportioned by LVTS to support the Participant's new Maximum ASO; or
 - c. the Participant Pledges additional Collateral to the Bank of Canada for LVTS purposes in an amount which after valuation by the Bank of Canada is at least equal to the increase in the Participant's Maximum ASO and LVTS apportions sufficient value to support the Participant's new Maximum ASO.

In the event that the Participant does not have an amount of collateral at least equal to the increase in the Participant's Maximum ASO, LVTS will raise the bilateral limit as much as possible and the remainder of the increase will be pending. The amount of the increase that is pending will only be approved by LVTS once additional collateral is available to support the Participant's new Maximum ASO.

Example: *If a Participant's largest Bilateral Credit Limit established by it is \$100 million and a Participant wants to increase a Bilateral Credit Limit established by it to \$200 million, then the Maximum ASO of the Participant will increase by an amount equal to the increase in the largest Bilateral Credit Limit established (\$200 M - \$100 M) multiplied by the System Wide Percentage (for purposes of this example use 24%).*

$$\$100 \text{ million} \times 24\% = \$24 \text{ million}$$

As a result in this example, the Participant wanting to increase a Bilateral Credit Limit established by it by \$100 million will have to have sufficient Excess Value or Pledge additional Collateral with a value of \$24 million to increase its Maximum ASO by \$24 million.

NOTICE

- 8.20 The Association will give notice to each Participant of any change in any Bilateral Credit Limit established for such Participant and of any effect such change has on that Participant's Tranche 2 Net Debit Cap and of the resulting change in the Bilateral Credit Limit established in favour of the Participant by the Bank of Canada. This notification will be distributed over the Direct Network in the form of an unsolicited message.

MANAGEMENT OF RISK CONTROLS

REQUEST FOR CHANGE IN BILATERAL CREDIT LIMIT

- 8.21 All requests for an immediate increase or decrease in any Bilateral Credit Limit established in favour of another Participant shall be effected by a Participant through its Participant Workstation. Such requests shall be made by using the *Bilateral Limit Request* query on the Direct Network. There is no limit on the number of requests a Participant may make for changes to any Bilateral Credit Limit established by it during any given LVTS Cycle.