

# CANADIAN PAYMENTS ASSOCIATION

## LVTS RULES OVERVIEW

**LVTS Rules Overview, December 1998:** as amended July 30, 2001, November 19, 2001, March 31, 2003, September 25, 2003, October 6, 2003, January 27, 2004, October 7, 2004, upon implementation of LVTS v5.0 (December 12, 2005), January 26, 2009, August 16, 2010, December 13, 2010, April 8, 2013, and August 21, 2017.

## LARGE VALUE TRANSFER SYSTEM

### OVERVIEW

The Large Value Transfer System (LVTS) is the wire transfer system for Canadian dollar wire transfers in Canada between Participants. This overview provides a summary of the LVTS operations and certain of its principal features. This overview is for information purposes only. Should any of the provisions of this overview conflict with any provisions of the LVTS By-law or Rules, the provisions of the By-law and Rules shall take precedence.

#### **1. Benefits of the LVTS**

LVTS provides real-time validation for each payment, based on the credit limits and positions of the Participants involved. If a payment does not pass the risk control tests it will be rejected (or retried if it qualifies under the Payment Queue option in place) and a rejection notification will be sent to the Sending Participant. The LVTS procedures guarantee that there will be enough collateral available to generate the necessary liquidity to permit settlement on the books of the Bank of Canada of the payment obligation of any financial institution participating in the system that fails to meet its payment obligation. In addition, the Bank of Canada has provided an express guarantee to ensure settlement in all instances including the extremely unlikely event of the default of more than one participant. In essence, any payment confirmed by LVTS will never be unwound due to settlement problems, permitting the financial institutions who receive LVTS Payments to provide their customers with finality for each payment received.

LVTS is a real-time multilateral netting system. LVTS provides each Participant with two options for establishing credit for the exchange of payments with other Participants. Each payment is funded by the credit available in either one option or the other. Further detail on the types of LVTS Payments can be found in section 8.

#### **2. LVTS Information & Specification**

##### **The System**

LVTS is a custom application built for the CPA. All ownership rights in the central system software and the LVTS Application rest with the CPA. Participants are responsible for monitoring their positions and for their own payment processing. The CPA operates and supports the system, and administers it on a daily basis.

##### **Payment Network**

The payment network is the SWIFT network. LVTS will utilize the SWIFT Secure IP Network (SIPN) service and will connect to the SWIFT point of presence (POP) in both Toronto and Montreal.

SWIFT            SWIFT FIN Copy Service with Y-copy model is used.  
                      SWIFT Secure IP Network (SIPN) is used.  
                      SWIFT Alliance Access CBT at the central site and alternate site.  
                      SWIFT Closed User Group (Message User Group) is in place.

##### **Direct Network**

Private            From an LVTS perspective, a private Direct Network is used primarily for LVTS non-payment messaging. The Direct Network can be used to submit payments (financial institution transfers equivalent in purpose to the MT 205) to the LVTS central system in contingency situations.

**Board Approval Date: February 21, 2013**  
**Implementation Date: April 8, 2013**

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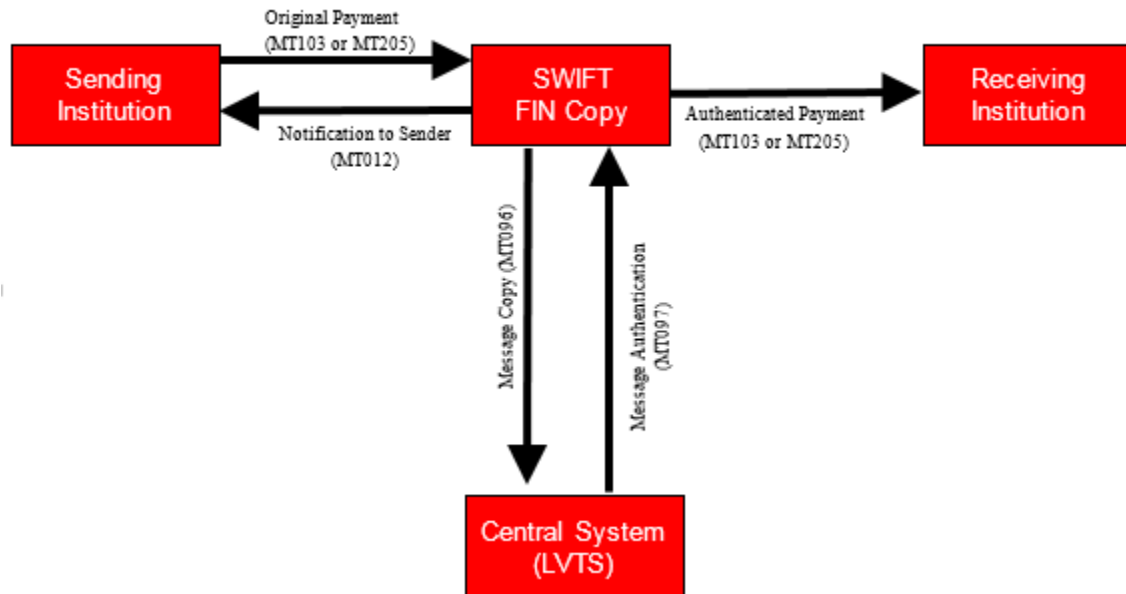
**Security**

Maximum Encryption at the network and applications levels including two factor authentication to the end user to provide maximum end point protection.

**Operations**

Administrator Canadian Payments Association  
Processor IBM mainframe  
Central Site CGI Group Inc.  
Alternate Site Hot back-up

### 3. How the Payments Flow



MT 103 Customer Payment

MT 205 Inter-Financial Institution Payment

MT 096 Partial Message sent to LVTS by SWIFT

MT 097 Message from LVTS to SWIFT containing results of payment disposition

MT 012 Acceptance Notification

MT 019 Rejection Notification

#### 4. LVTS Cycle

<u>Time</u>	<u>Phases of LVTS Cycle</u>
23:00	<u>Commencement and Start of Initialization Period</u> Participants wishing to exchange CLS-related or bilaterally agreed upon non-CLS related payments will sign-on, pledge collateral, apportion collateral, confirm Participant profile information and set bilateral limits. Bank of Canada will value Participant collateral.  CLS-related payments are those payments to/from Bank of Canada for the benefit of the CLS Bank, payments delivered between Participants to fund a Participant's position or a client's position for whom a Participant is acting as the client's Nostro agent.  Note: Bank of Canada will value all Participants' collateral prior to 00:30 hours regardless of when they become active.
00:30 - 18:00	<u>Start of Payment Message Exchange Period</u> LVTS is open for exchanging payments. <sup>1</sup> There must be bilateral agreement between Sending and Receiving Participants to send non-CLS related payments prior to 06:00 hours.
07:00-08:00	Participants not already active will sign-on, pledge collateral, apportion collateral, confirm Participant profile information, and set bilateral limits.
18:00	<u>End of Payment Message Exchange Period/Start of Pre-Settlement</u> (Start of Inter-Participant Payment Message Exchange Period) LVTS is open for bilaterally agreed upon inter-Participant payments (MT 205 only). This period is to be used by the Participants to bring their Multilateral Net Positions closer to zero.
18:30	<u>End of Pre-Settlement</u> No further payment messages may be exchanged through the LVTS.
By 19:30	<u>Settlement</u> The Bank of Canada will settle all Participants' Multilateral Net Positions. All Participants' Multilateral Positions are settled simultaneously.

<sup>1</sup> Participants sending CLS related payments must be active by 00:30 hours. All other Participants must be active by 08:00 hours.

## **5. Participants**

The Participants are those members of the CPA which provide an acceptable system interface to LVTS, and which have a settlement account at the Bank of Canada. All other financial institutions are customers of the Participants, as are all of the commercial, governmental and other account owners at the Participants. The Bank of Canada is also a Participant, as it handles several “customer” accounts for the government, the Participants (i.e. settlement accounts), special purpose clearing houses and foreign governments, agencies and central banks. The Bank of Canada, in addition, has the ability to monitor the effect of the flow of payments through LVTS, and has access to the potential settlement positions of the Participants at any time. All Collateral for LVTS is pledged to the Bank of Canada.

## **6. Types of Transactions**

Any Canadian dollar wire transaction between Participants (inter-bank or between third parties) may be sent over LVTS. It is expected that a Participant will not send a Canadian dollar wire payment to another Participant outside of LVTS.

## **7. Payment Confirmation Reference Number**

The Payment Confirmation Reference Number (PCRN) is a unique alpha-numeric identifier which is assigned by LVTS to each Payment Message which has passed the applicable risk control tests.

## **8. Payment Types**

Payments must be Canadian dollar payments sent ordinarily using only SWIFT message types MT 103 or MT 205. Any other message type for Canadian dollar payments (with CAD in field :103:) between Participants will be rejected by SWIFT. The Direct Network can also be used to submit payments (financial institution transfers equivalent in purpose to the MT 205) to the LVTS central system in contingency situations.

LVTS provides each Participant with two options (called Tranches) for establishing credit for the exchange of payments with other Participants. Each payment is funded by the credit available in one Tranche or the other. *Note: There is no difference in the finality and certainty of settlement which is provided by LVTS for the different Tranches.*

**(a) Tranche 1 (Defaulter Pay)** is entirely backed by Collateral pledged by the Sending Participant. The ending Participant pledges Collateral on a dollar for dollar basis to back payments which it wishes to make using Tranche 1 to any other LVTS Participant. In addition, any payments received as Tranche 1 Payments by a Participant replenish (or increase) the amount of Tranche 1 credit available to that Participant. *Note: there is no bilateral limit applied to Tranche 1 Payments.*

(Type R Payment)

Within the Tranche 1 Payment type there has been provision made for using collateral that is transferred to the Bank of Canada during the CDSX payment exchange period and that is designated by the Participant as Reserved Collateral. This Reserved Collateral may only be used to back a Type R Payment.

A Type R Payment is a payment supported by Reserved Collateral made by a Participant to the Bank of Canada with CDS (The Canadian Depository for Securities Ltd.) as the Payee solely for the purpose of paying a Participant's end of day CDSX obligation.

A Type R Payment is a Tranche 1 Payment. What differentiates a Type R Payment from other Tranche 1 Payments is that it is backed by collateral that is pledged and transferred to the Bank of Canada during the CDSX payment exchange period for the sole purpose of supporting Type R Payments.

**(b) Tranche 2 (Survivors Pay)** is backed by Collateral pledged by the Participants (the Bank of Canada does not pledge Collateral in LVTS) establishing the Bilateral Credit Limits for any single Participant in LVTS (including the Bank of Canada). *Note: the Bank of Canada's Bilateral Credit Limit established in favour of the other Participants is a fraction of the Bilateral Credit Limits granted to a Participant by the other Participants.* The Sending Participant can send Tranche 2 Payments only to those other Participants which have granted this Participant a Bilateral Credit Limit (or to which this Participant has granted a Bilateral Credit Limit if it has received Tranche 2 Payments from the other Participant), and is subject to those Bilateral Credit Limits and to a Multilateral Tranche 2 Net Debit Cap. The amount of Collateral required to be pledged by a Participant which establishes Bilateral Credit Limits is an amount equal to the product of the largest Bilateral Credit Limit established by it and the System Wide Percentage. This product is also the Maximum Additional Settlement Obligation (ASO) of the Participant (its maximum exposure in the event another Participant defaults). If a Participant does not grant a Bilateral Credit Limit to another Participant, it does not have any ASO in the event such other Participant cannot settle. *Note: there is no requirement to establish any Bilateral Credit Limit and the Bilateral Credit Limits established between Participants need not be symmetrical.*

**Routing Chart for SWIFT Payments**

The following sets out the routing chart for all SWIFT messages sent in Canada. This includes those Canadian dollar payments sent between Participants (through LVTS) and all other Canadian dollar payments sent by financial institutions in Canada through SWIFT.

Between Participants	MT 103 or MT 205 with CAD in field : 103 : of header	SWIFT will copy relevant fields from the message to LVTS
	MT 103 or MT 205 without CAD in field : 103 : of header	SWIFT will reject the message
	Any other message type with CAD in field : 103: of header.	SWIFT will reject the message
	Any other message type without CAD in field : 103 : of header.	SWIFT will forward the message to its destination
Between a Participant and a Non-Participant	Any message type without CAD in field : 103 : of header	SWIFT will forward the message to its destination
	Any message type with CAD in field : 103 : of header	SWIFT will reject the message
Between Non-Participants	Any message type without CAD in field : 103 : of header	SWIFT will forward the message to its destination
	Any message type with CAD in field : 103 : of header	SWIFT will reject the message
Intra-Participant Payment	Any message type where the first six characters of the SWIFT address for the sender and receiver are the same (whether CAD in field : 103 : of header or not)	SWIFT will forward the message to its destination – the message will not be copied to LVTS