

Assessment of Canada's STP/T+1 Readiness And a Comparison of Canada's vs. the United States' T+1 Readiness

Summary Report
Canadian STP/T+1 Assessment Results

**** Final ****

July 12, 2004

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Executive Summary

Executive Summary

- **This year, Canadian and U.S. financial services industries reached turning points in their respective Straight-through Processing (STP) programs**
 - Both markets have had action plans in place for several years--but, in some instances the activities and timelines were different
 - In spring 2004, Canadian and U.S. securities regulators issued requests for industry comments on proposed clearing and settlement changes
 - These **regulatory requests are viewed as catalysts** that are renewing the focus in both markets on the status of STP and T+1 readiness
 - The U.S. responded via a Securities Industry Association (SIA) Securities and Exchange Commission (SEC) Concept Release Task Force to address the U.S. regulator's request
 - In Canada, the Canadian Depository for Securities Limited, on behalf of the Canadian Capital Markets Association, commissioned Capco to **assess the readiness** of the Canadian marketplace in terms of STP and T+1 and recommend the critical path **for Canada to align its efforts with the U.S.**

Executive Summary (cont'd)

Overview of Project Objectives

- To **establish a baseline critical path** for achieving STP and T+1 readiness.
- To **benchmark the Canadian market's state of readiness** for T+1 vs. the U.S., determine what, if any, gap exists between the two markets, and identify the potential means of closing such a gap.

Some STP elements are preconditions for the move to shortened settlement cycles. In fact, T+1 was used as a delimiter to determine the extent of progress that has been made in regard to STP efforts.

Executive Summary (cont'd)

There is generally broad agreement that Canada and U.S. must move to T+1 at the same time, if such a decision is made by the U.S. In fact, the settlement cycles in both markets were reduced from T+5 to T+3 on the same date in 1995 for the same reasoning.

Establishing a **Baseline Critical Path for STP and T+1 Readiness** in Canada

- Analysis was based primarily on more than 40 interviews with over 100 key Canadian market participants and data provided by major infrastructure providers
- The **institutional marketplace is the key area** on the critical path – it is the market most subject to global competitive forces, with multiple dispersed market participants and, without three days before settlement, time pressure to agree on trade details on the day of the transaction
- Retail trade processing, securities lending, dematerialization/immobilization to eliminate certificated trades and payments, and the need for a centralized entitlements hub were not deemed to be on the critical path to T+1 readiness in Canada

Executive Summary (cont'd)

- **Results suggest that the Canadian marketplace would be ready to move to T+1 settlement in approximately 4 years at its current pace**
- In contrast, the U.S. market could be ready to move to T+1 settlement in approximately 3 years, once the goal of trade date matching of institutional trades is achieved, and a period of testing and parallel operation in a T+1-like environment is concluded
 - The goal is to reach matching between 9 AM and 12 PM (Eastern time) on T+1 within 24 to 30 months, at which time it will be feasible to move to matching on Trade date soon thereafter
- **This does not suggest that a definitive timeframe for U.S. achievement of T+1 readiness has been developed or agreed**
 - There are mixed views within the U.S. financial services industry of the need to move to T+1 once STP goals are achieved

The Canadian marketplace must now assess its willingness to advance its own trade matching and STP efforts to remain in sync with U.S. STP/T+1 readiness program.

Executive Summary (cont'd)

- The 9-week Assessment resulted in identifying **10 Critical Path elements for achieving STP and/or T+1 readiness in Canada**

Seven elements are Critical for STP and T+1 readiness:

1. Need for Industry-wide Commitment, Leadership, Mobilization and Resourcing
2. Enact Regulation, Measurement and Enforcement
3. Need to Effectively Engage the Buy Side Investment Management Community
4. Communicate and Implement Standards and Market/Business Practices
5. Modify Internal Systems/Processes
 - A. Modify Internal Firm Processes and Systems
 - B. Achieve Connectivity Among Market Participants
 - C. Process Trades in Real-time/Near Real-time

Executive Summary (cont'd)

6. Identify and Comply with Accelerated Clearing Corporation Deadlines
 - A. Intra-Day Processing by Depository/Clearing Corporation
 - B. Trade Date Submission of Dealer Institutional Client Trades to Depository/Clearing Corporation
7. Accomplish Trade Matching/Affirmation on Trade Date
 - A. Same Day Affirmation/Matching
 - B. Electronic Allocations
 - C. Development of Standing Settlement Instructions Database

These critical path activities have been identified by the Canadian marketplace as key to the accomplishment of further progress toward STP and the eventual shortening of the settlement cycle (if agreed to). In addition, several enablers of T+1 and key enhancements to further STP are listed on the following slide.

Executive Summary (cont'd)

Three elements are Critical for STP only:

8. Accomplish Cross-border Implementation
9. Achieve Electronic Delivery of Corporate Actions Announcements
10. Modify Investment Funds Processing and Regulation

Given the size and complexity of the challenge to move to greater levels of STP and be positioned for the possibility of T+1 settlement, the Canadian market is encouraged to move in an accelerated manner toward greater levels of coordinated, street-wide activity.

Executive Summary (cont'd)

At the present time, there is little support for T+1 settlement, in addition to varying views of its necessity, within the U.S. securities industry once STP goals are achieved.

- **Interview participants expressed interest in a phased-in approach to enable matching on T, similar to U.S. views**
 - The goal is to reach matching between 9 AM and 12 PM on T+1 within 24 to 30 months, at which time it will be feasible to move to matching on T soon thereafter
- **A difference of opinion among market participants that the CSA target date of July 2005 for matching is achievable--Mixed results on industry readiness**
- **There was a consistent view that block settlement at the dealer should continue to be promoted**
- **Securities Lending and Dematerialization issues were not viewed as impediments to T+1 readiness**

Executive Summary (cont'd)

- **We believe that the current gap toward STP and T+1 versus the U.S. can be closed, given close cooperation and proactive movements by the Canadian securities market.**
- **It is now necessary for the Canadian securities industry to select a governance structure that allows for addressing and monitoring certain institutional, regulatory and behavioral issues that will be critical to the success of the initiative.**

The improvements that are required involve technology, behavioral/process, and regulatory changes.

Project Scope, Assumptions and Timeline

Canadian STP/T+1 Assessment Project

Scope Summary

- ✓ **■ Identification of the elements that are critical, important or “nice-to-have” to achieve T+1 readiness. These elements were identified regardless of whether or not they were within the existing CCMA project plan.**
 - Critical = must be achieved for T+1
 - Important = aspects that reduce risk and errors but are not essential to achieving T+1
 - Nice to have = aspects that optimize T+1 benefits.
- ✓ **■ Focus on STP elements that are critical for STP/T+1, with the goals of:**
 - Identifying a reasonable critical path/maximum elapsed time for achieving STP/T+1 readiness
 - Identifying the status of related activities within the U.S. and Canadian capital markets
 - Ascertaining the overall time lag between the CCMA and Securities Industry Association (SIA) STP programs as regards to each market’s ability to achieve T+1 readiness by comparing each market’s status against each critical path/maximum elapsed time for achieving T+1 readiness
 - Explaining the reason for differences, identifying areas of concern (where Canada falls behind the U.S.), areas where Canada is ahead of the U.S. and areas of no concern
 - Commenting on the likelihood of the U.S. moving to a T+1 settlement cycle and when
- ✓ **■ Completion of a table in the format requested of the Ontario Securities Commission—critical path items in Canada and U.S.**
- ✓ **■ Preparation and delivery of a CCMA Core Group presentation on June 1, 2004.**

Canadian STP/T+1 Assessment Project

Project Assumptions

- **The goals of STP/T+1 readiness are similar for both markets**
 - Market differences between two countries affect the means to achieving these goals
- **Canada's date of conversion to T+1 must be the same as U.S.'s**
- **T+1 is used to set limits on overall work required for STP**
 - The critical path for STP and T+1 readiness are generally the same except where noted
- **The Capco STP/T+1 Assessment is *not* a business case**
 - Available objective statistical data was collected to allow for the most rigorous comparison possible
 - The Summary and Detailed Reports represent the feedback and views of the individuals interviewed for their respective market segments, and must be interpreted in that context
 - The comparative statistics that are presented throughout each report are representative of the market segment group that was interviewed, and Capco was not engaged to independently validate the data presented by those individuals
- **Cross-border was excluded by the CSA--but is included here due to its importance to the market**

Canadian STP/T+1 Assessment Project

Gap Analysis Assumptions

- **Comparison highlights the largest potential gap**
 - **U.S. efforts and projects are well under way**
 - **Although it is recognized that much work has been done to date, Canada needs to transition from its focus on “planning” to “action”** in order to begin to close the gap with the U.S.
 - CDSX is already in place
 - FundSERV has moved to XML
- **Earliest possible U.S. T+1 readiness is used as the benchmark-- the date is based on current views of the SIA, and may change as efforts progress**
 - There is **no date yet established for the U.S. to move to T+1**; benchmark date used is based on the earliest the U.S. could be considered T+1 ready, as per U.S. industry leaders
 - There is **a range of views within the U.S. financial services industry regarding the likely timeframe for a move to T+1**
 - **At this time, the U.S. is not likely to move to T+1 by the end of 2007, however, that date is used as a possible U.S. T+1 readiness date**

Canadian STP/T+1 Assessment Project

Gap Analysis Assumptions (cont'd)

- **The gap in Canada's current program**
 - Assumes key mobilization actions would not be likely to formally start until Q1 2005 at the CCMA's current pace and level of activity and focus
 - CSA rule decision likely in Q3 2004, after which the CCMA would be forced to reinvigorate its program with additional funding, resources, and an enhanced Program Management Office
 - CCMA mobilization after CSA ruling decision is estimated to take 4 to 6 months (thereby resulting in Q1 2005 formal mobilization)
- **Time estimates for critical path items are in terms of duration**
 - Example: An effort may span 3 years, with 2 years of actual work that starts 1 year into the program due to prior dependencies, etc.

Canadian STP/T+1 Assessment Project

Project Timeline

- **Canadian Depository for Securities Limited (CDS) on behalf of the Canadian Capital Markets Association (CCMA) engaged Capco for a 9-week Canadian STP/T+1 Assessment:**
 - Commenced April 12, 2004
 - Ended June 11, 2004
 - Final Report presented June 23, 2004
- **Assessment results based on interviews, meetings, existing documentation by market segment, and quantitative data when available**
 - Resulted in more than 40 interviews/meetings with over 100 industry experts participating and providing invaluable input

Timeline and Gap: Canada and U.S.



Canada and U.S. Timeline and Gap

Final

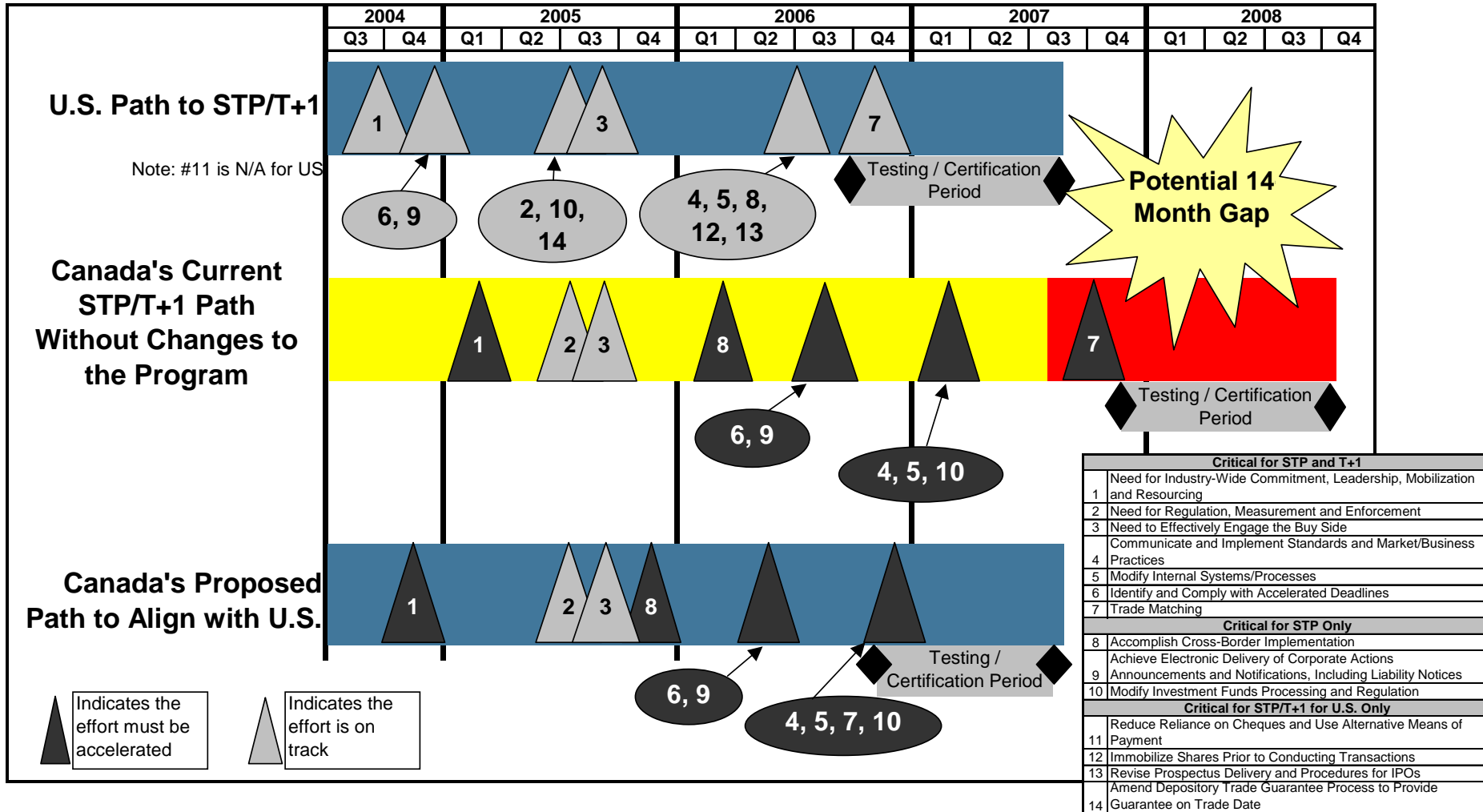
July 12, 2004



Earliest possible U.S. T+1 readiness = Q3 2007

Canada's likely T+1 readiness at current pace = Q3 2008

CANADA MUST ACCOMPLISH 4 YEARS WORK IN 3 YEARS



Canada and U.S. Timeline and Gap

Closing the Gap

Immediate focus is needed for:

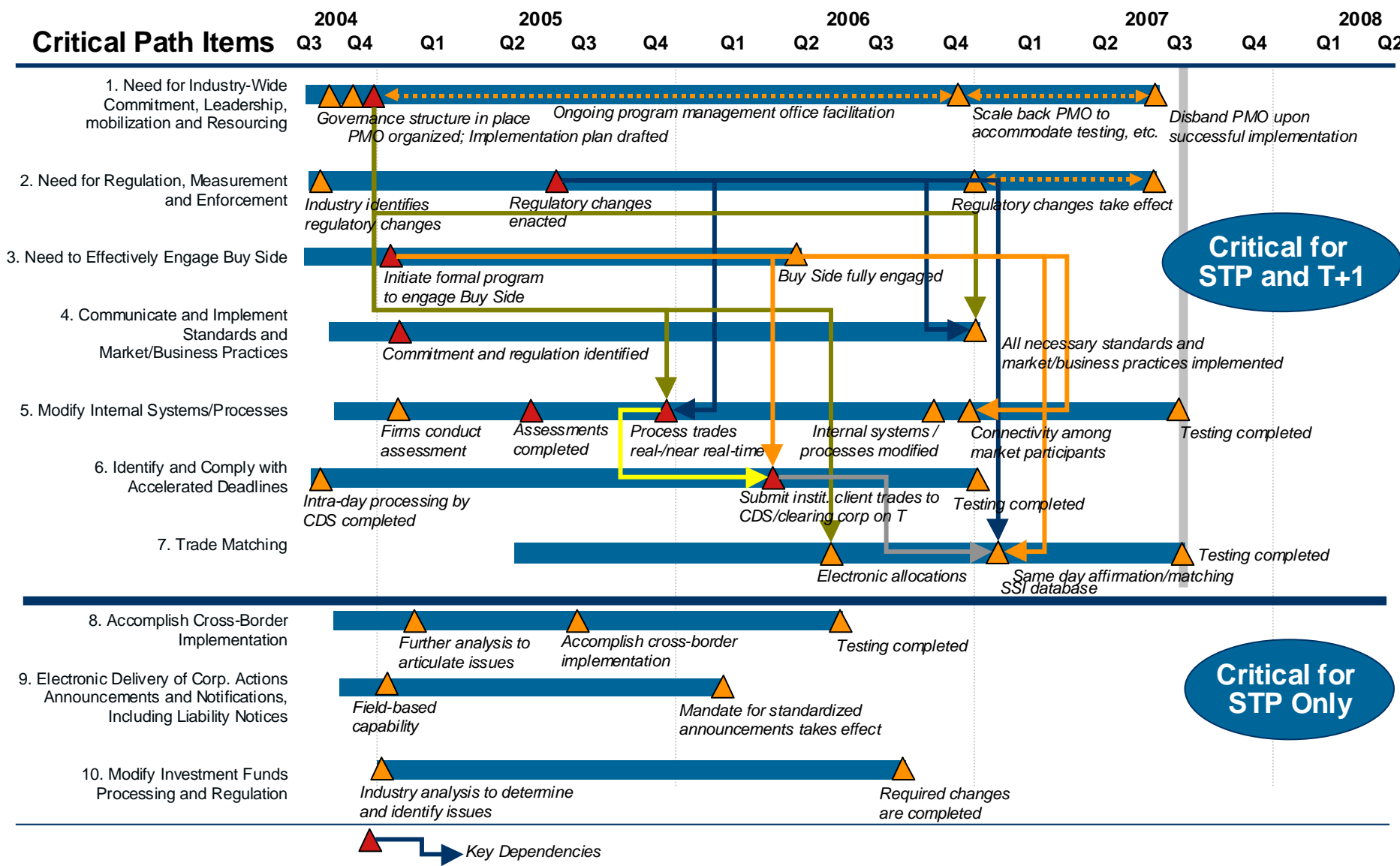
- 1. Industry mobilization and leadership**
- 2. Development of a detailed implementation plan**
- 3. Ongoing oversight of the program**

- **Canadian financial services industry needs to determine the needed Canadian regulatory actions required to act as catalyst for achieving STP/T+1 goals**
- **An acceleration of key critical path items is essential**
 - Specifically trade matching
- **Canada must leverage the unique features of the Canadian marketplace**
 - Ability to increase block settlements of institutional trades
 - Agility and responsiveness of Canadian market
 - Relatively low trading volumes compared to the U.S. market, with no perceived capacity constraints

Canada's Critical Path Timeline for STP and T+1

Canada's Critical Path Timeline STP and T+1 Readiness

**Final
for**
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**Critical for
STP and T+1**

**Critical for
STP Only**

Key Dependencies

Summary Assessment Overviews By Market Segment

Summary Assessment Overviews by Market Segment

Sell Side Assessment Overview

There are many changes/challenges required of the Sell Side in order to become STP enabled and T+1 ready:

- **Dealers need to focus on automating links to/from internal systems with the IMs for trade allocations and trade confirmations**
- **For firms that still complete and track trades in a front office system, and writing trade tickets and keypunching trades into the back office systems, there should be a migration strategy to capture the trades electronically, format those trades to service bureau standards and electronically submit for processing**



Summary Assessment Overviews by Market Segment

Sell Side Assessment Overview (Cont'd)

- **Key Sell Side Issues require analysis and consensus to proceed:**
 - **Same Day Matching:** Sell side needs to move toward proactive steps to matching on T
 - **Block settlements by the Dealer to the Custodian:** The practice of block settlements needs to be increased, as they reduce trade processing and settlement volumes which in turn reduce settlement risk
 - **Street side trade reconciliation on trade date for TSX, DTCC/NSCC/other:** The current end-of-day service bureau to CDS trade reconciliation may need to be accelerated in a T+1 environment
 - A determination of the requirements and the cost to proceed must be undertaken
 - **Automated matching of Inter-dealer trades for debt trading needs to occur**
 - **Retail DAP processing and settlement changes may be required**



Summary Assessment Overviews by Market Segment

Buy Side Investment Manager Assessment Overview

- The buy side community has no single industry association to help broadly coordinate action
- Investment Manager firms currently connect to custodians or can easily connect via existing vendors
- In order to handle matching in an STP environment, connectivity with the Broker/Dealers is critical
- The large Mutual Fund companies and Pension Funds are focused on operational efficiencies and welcome any mandate that pushes their counter parties into STP compliance
- The insurance industry is not focused on STP but these firms would likely engage in order to comply and avoid reputation risk
- Buy Side participants view Corporate Actions standards around information, processing and timing of payments to be on **the critical path for STP**



Summary Assessment Overviews by Market Segment

Custodians Assessment Overview

- **Custodians view inter-participant connectivity and business/market practices and standards as the critical drivers for Institutional Trade STP and subsequent T+1 readiness**
- **Corporate Actions information and standards and business/market practices are critical path items for STP**
- **The Canadian market is viewed as being relatively agile and has a history of being a “fast-follower” and would close any gaps between itself and the U.S. to achieve the same end result**
- **Improved connectivity to the U.S. market would be important for STP/T+1 readiness as well as standardization and equalization of processes and rules**



Summary Assessment Overviews by Market Segment

Regulatory Assessment Overview

- **There is clear consensus within the regulatory bodies that the lack of engagement of the Buy Side is a critical risk issue for STP**
 - This risk has a spillover effect to the Sell Side as the resultant trade processing challenges may hinder their adoption of STP
- **The level of adoption of standards and business/market practices are key issues holding back inter-participant STP**
- **Canada may be behind the U.S. due to the absence of key building blocks such as utilities, standards and commercial law**
 - Institutional trade matching is seen as the predominant critical path item for achieving STP/T+1 readiness and maintaining the competitiveness of Canada's capital markets
- **The CCMA is under funded and needs to evolve into an action-orientated organization that can mobilize all market sectors and participants**



Summary Assessment Overviews by Market Segment

Transfer Agents Assessment Overview

- **The infrastructure exists for the significant Transfer Agents to achieve STP through connectivity to other market participants**
- **The ongoing existence of physical certificates will generate a certain amount of manual intervention with deposit/withdrawal transactions although this may be reduced with the adoption by issuers of a Direct Registration System (DRS) model**
- **The completion of the legal/regulatory changes for certificate issuance and book entry ownership/transfer is important to further support STP**



Summary Assessment Overviews by Market Segment

Infrastructure Assessment Overview

- **There is other STP/T+1 readiness work in progress that will be completed by June 2005, such as:**
 - Re-writing all batch programs to be real-time/intra-day capable
- **Customers need to initiate and prioritize what needs to be done for STP/T+1 readiness for Service Providers**
- **Service Providers need clients to fully use new systems that are developed to support STP/T+1 readiness**



**Likelihood of a U.S. Move to T+1 and the
Feasibility of Canada Moving to T+1 if the
U.S. Shortens the Settlement Cycle**

Summary U.S. STP/T+1 Review

Likelihood of U.S. Shortening the Settlement Cycle

- **The SIA is advocating continued implementation of STP initiatives before considering shortening the settlement cycle to T+1**
- **While street side processing should be capable of a T+1 settlement by year-end 2004, institutional processing continues to be a major challenge**
- **The key obstacles to a shortened settlement cycle from the institutional processing perspective are**
 - Affirming or matching trades on trade date
 - Coordinating FX settlements (while pre-funding and same day FX are viable, they are not optimal)
 - Working with cross-border participants to obtain trade level details (allocations) in a timely manner
- **It is believed that it will be at least a 24 to 30 month effort before the levels of same day affirmation / matching make T+1 a viable consideration in the U.S.**
- **Since same day affirmation is on the critical path, it is estimated that the U.S. would not be capable of a shortened settlement cycle before late 2007**



Summary U.S. STP/T+1 Review

SIA's SEC Concept Release Task Force

- **The SIA Task Force is leaning toward supporting a phased-in approach to matching on T**
 - The goal is to reach matching between 9 AM and 12 PM (Eastern time) on T+1 within 24 to 30 months, at which time it will be feasible to move to matching on Trade date soon thereafter
- **The Task Force does not support mandating the means for matching, i.e., how trades are matched or agreed**
- **Rule changes/enforcement for confirm/affirm on T are likely to be supported**
 - SEC seen as preferred regulatory body
- **Dematerialization is supported, with immobilization as an interim step**
- **Achieving 100% U.S.-domestic confirm/affirm rate on T is viewed as prerequisite to shortening the settlement cycle**
- **SIA is not considering a possible move to T+2 as an interim step**



Feasibility of Canada Moving to T+1 with the U.S.

- **Canada can achieve T+1 readiness in sync with the U.S. timeline, if:**
 - **Action is initiated IMMEDIATELY on the first three critical path items:**
 1. Need for Industry-wide Commitment, Leadership, Mobilization and Resourcing
 2. Need for Regulation, Measurement and Enforcement
 3. Need to Effectively Engage the Buy Side
 - **Action is taken to compress the remaining critical path items:**
 4. Communicate and Implement Standards and Market/Business Practices
 5. Modify Internal Systems/Processes
 6. Identify and Comply with Accelerated Deadlines
 7. Accomplish Trade Matching/Affirmation on Trade Date

If Canada delays initiating actions on these critical path items, there will be direct negative impact on Canada's ability to align with the U.S. program over a three year period.

Getting There: Recommendations

Getting There

Mobilization, Structure, Implementation Plan, Leadership

The following efforts **MUST** occur in order for the Canadian program to get in sync with the U.S. program

- **BY August 31, 2004:** Reinvigorate the governance structure that identifies which entity will provide leadership, mobilization, and oversight of the program
 - Includes funding and resourcing requirements
 - CCMA is the recommended lead
- **BY October 31, 2004:** Kick-start mobilization once a governance structure is in place
 - Organize a program management office that will serve as true facilitator and enabler of the program objectives
 - Must know what level of regulatory changes must be enacted
- **BY December 31, 2004:** Develop the detailed Implementation Plan for industry-wide achievements of the identified critical path items



Getting There

Regulation

The following regulatory changes must be addressed and a determination made as to enacting the required changes:

- **Enact** CSA Rule 24 -101 Institutional Trade Matching and adherence to Standards and Business/Market Practices
- **Mandate** electronic filing of all public company entitlement information and Standards and Business/Market Practices
- **Implement** the Uniform Security Transfer Act (USTA) and provincial legislation supporting electronic holding
- **Amend** *Quebec Company Act* and *Securities Act of Quebec* to allow use of book-entry holdings as loan collateral
- **Conclude** an SRO rule review and alignment regarding clearing and settlement



Getting There

Key Issues That Must Be Addressed

- **There must be industry-wide agreement on an implementation plan for a Trade Matching rule**
 - Develop phased-in approach vs. “Big Bang”
 - Consider milestones under a T+3 settlement in preparation for a possible move to T+1
- **Accomplish Trade Matching/Affirmation on Trade Date**
 - Decide on using a VMU and/or a local matching solution
 - Mobilize the market as part of Trade Matching rule implementation
- **Standing settlement instructions database**
 - Determine the need for a common SSI database to accomplish trade matching goals



Getting There

Key Issues That Must Be Addressed (cont'd)

■ **Modify internal systems processes**

- Firms should conduct a readiness assessment for aligning with the industry-wide implementation plan and develop an internal firm plan
- The industry may want to consider market participant readiness certification

■ **Need to effectively engage the buy side**

- Develop an economic incentive for the buy side participants for same day trade matching
- Utilize the draft trade matching rule as to engage the buy side

■ **Standards and market/business practices**

- Need a broad communication and implementation strategy
- Need to be developed for Investment Funds

■ **Electronic delivery of corporate actions announcements**

- There is a potential need for a CSA mandate for issuers/agents



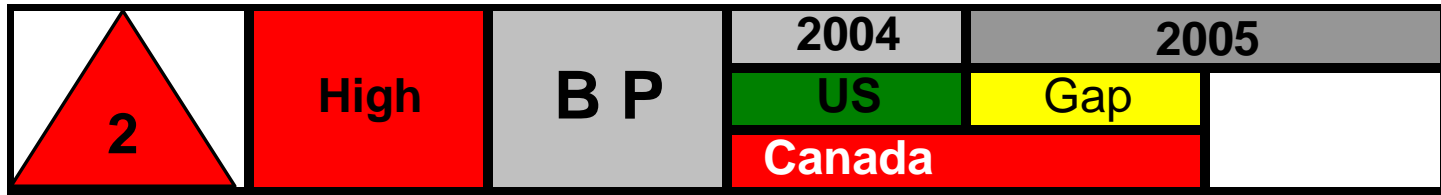
APPENDIX A: Critical Path Comparison--Canada and U.S.



Canadian STP/T+1 Assessment

Critical Path Items--Legend

- The following slides depict the Critical Path items, level of T+1 risk, category, timeline and Gap with the U.S.
- The depictions on the following pages refer to the following legend.



Gap (Indicating Lag to U.S)

Criticality

T+1 Risk

Gap / Timeline

Indicator		Level Indicator		Category		U.S. & Canada	
T+1 Criticality Indicator		T+1 Risk Level Indicator		Category		Gap / Timeline	
	Critical		High		Technology		Ahead
	Important		Medium		Regulatory		GAP
	Nice-to-Have		Low		Behavioral		Behind
					Process		

Canadian STP & T+1 Critical Path

With U.S. Timeline & Gap Comparison

Final
July 12, 2004

Critical Path Items for STP and T+1

				2004	2005	2006	2007
1. Need for Industry-wide Commitment, Leadership, Mobilization and Resourcing	1	High	B P	US	Gap		
				Canada			
2. Need for Regulation, Measurement and Enforcement	2	High	R B P	2004	2005	2006	2007
				US			
3. Need to Effectively Engage the Buy Side	3	High	R B P	2004	2005	2006	2007
				US			
4. Communicate and Implement Standards and Market/Business Practices	4	High	T R B P	2004	2005	2006	2007
				US			
5. Modify Internal Systems/Processes	5	High	T B P	2004	2005	2006	2007
				US			
6. Identify and Comply with Accelerated Deadlines	6	Medium	T R B P	2004	2005	2006	2007
				US	Gap		
7. Trade Matching	7	Medium	T R B P	2004	2005	2006	2007
				US			Gap
				Canada			

Critical Path Items for STP

8. Accomplish Cross-Border Implementation	8	Low	T B P	2004	2005	2006	2007
				US			
9. Achieve Electronic Delivery of Corporate Actions Announcements and Notifications Including Liability Notices	9	Low	T B P	2004	2005	2006	2007
				US	Gap		
10. Modify Investment Funds Processing and Regulation	10	Low	T R B P	2004	2005	2006	2007
				US	Gap		
				Canada			

Canadian STP/T+1 Critical Path With Canadian Market Segment Impact

Need for Industry-wide Commitment, Leadership, Mobilization and Resourcing

1	High	B P	2004	2005	2006	2007
			US	Gap		
			Canada			

- Senior industry leaders need to establish a governance structure
- An action-oriented program management office with adequate funding and necessary resources needs to be established
- A detailed industry implementation plan that acts as a blueprint for change must be developed

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path With Canadian Market Segment Impact

Need for Regulation, Measurement and Enforcement

2	High	R B P	2004	2005	2006	2007
			US			
			Canada			

- CSA and SROs need to agree on appropriate regime for regulation and enforcement
- The industry needs clear agreement on Standards and Business/Market Practices
- The industry must reach agreement on who measures compliance and how it is enforced
- Broad industry agreement must be established regarding the need to mandate institutional trade matching and entitlements reporting

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path With Canadian Market Segment Impact

Need to Effectively Engage the Buy Side

3	High	R B P	2004	2005	2006	2007
			US			
			Canada			

- The Buy Side Investment Managers and Institutions are not fully focused on STP/T+1 readiness and need to be mobilized for institutional trade matching
 - Inertia is prevalent across buy side firms
 - Buy Side firms require clearly defined next steps
 - An economic case for trade matching should be developed
- The Sell Side faces processing challenges as a result of lack of Buy Side focus

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path With Canadian Market Segment Impact

Communicate and Implement Standards and Market / Business Practices

4	High	T R B P	2004	2005	2006	2007
						US

- Standards and Market/Business Practices have been completed by the CCMA for institutional trades, corporate actions, securities lending and direct registration systems
- These standards and practices need to be broadly publicized and monitored for adherence
- Market and Business Practices are clearly needed for Investment Funds

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path

With Canadian Market Segment Impact

Modify Internal Systems / Processes

5	High	T B P	2004	2005	2006	2007
			US			Canada

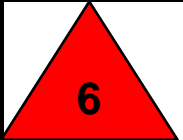
- Firms need to conduct internal firm assessments to identify necessary process and system changes that may be required
- Service providers also need to assess the process and system changes that may be required
- Seamless connectivity among all institutional trade parties is needed
- Sell Side participants and their service providers will need to execute, allocate, match and submit trades for settlement in real-time or near real-time

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path

With Canadian Market Segment Impact

Identify and Comply with Accelerated Deadlines

	Medium	T R B P	2004	2005	2006	2007
			US	Gap		
			Canada			

- CDSX is capable of intra-day trade processing and introduced broker-to-broker matching in June 2004
- Broker/Dealers need to process institutional trades from market execution through to settlement reporting in real-time or near real-time
- There may be a need to accelerate trade matching in a T+1 environment

**Critical for
STP and T+1**

Canadian STP/T+1 Critical Path

With Canadian Market Segment Impact

Accomplish Trade Matching/Affirmation on Trade Date

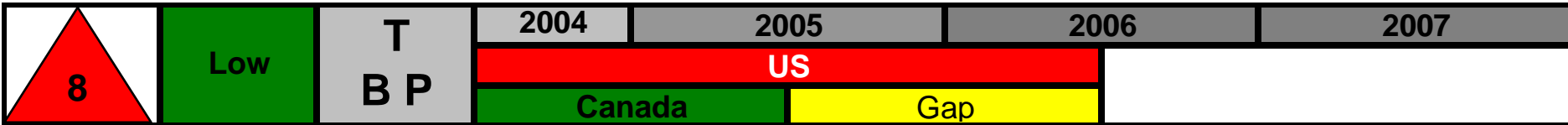
		T R B P	2004	2005	2006	2007
7	Medium		US			Gap
			Canada			

- The Buy Side must supply allocations and match trade details on Trade date
- The Sell Side must process trade details to each account allocation and deliver results to the Buy Side on Trade Date
- CDS must accept matched trade details from any matching utility on Trade date
- The Custodians must accept trade settlement on T+1

**Critical for
STP and T+1**

Canadian STP Critical Path *With Canadian Market Segment Impact*

Accomplish Cross-Border Implementation



- CDS must adapt CDSX to changes in DTCC functionality
- This will require equalization of rules and processes for North/South STP

**Critical for
STP Only**

Canadian STP Critical Path

With Canadian Market Segment Impact

Achieve Electronic Delivery of Corporate Actions Announcements and Notifications Including Liability Notices

9	Low	T B P	2004	2005	2006	2007
			US	Gap		
			Canada			

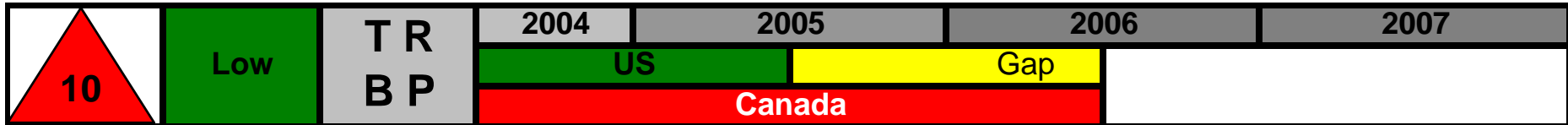
- Entitlement information needs to be available in electronic format with timely delivery to all interested parties
- There needs to be industry adoption of Standards and Market/Business practices

**Critical for
STP Only**

Canadian STP Critical Path

With Canadian Market Segment Impact

Modify Investment Funds Processing and Regulation



- Issues around client name documentation and use of trust accounts need to be resolved
- Changes are required to National Instrument 81-102 for Mutual Funds and other various federal and provincial legislation

**Critical for
STP Only**

APPENDIX B:
Canada's "Important" and "Nice-to-Have" Elements

Canadian “Important for T+1” Items

- **Corporate Actions Proceeds:** Share proceeds are not always credited by custodians on payable date which adds settlement risk to their linked trades. This issue becomes more of a problem with a shorter settlement cycle.
- **Changes to Legislation / USTA:** The necessary changes to provincial legislation to eliminate the need for certificates and to recognize book entry ownership and transfer.
- **MBS / ABS:** It is estimated that changes at CMHC and the industry facilitate T+1 settlement of MBS/ABS securities would require sixteen months elapsed time from the start of any effort.
- **Block Settlements:** The Sell Side Dealers would much prefer to process one block settlement for each Custodian for each block trade completed versus processing multiple trade allocations for settlement to the various custodians.

Canadian “Important for T+1” Items (cont’d)

- **Street-side Trade Reconciliation:** This initiative is for the Sell Side Dealers to match the trades that they process internally on their books and records system to each trade that they have had executed on the exchanges system.
 - Today the Exchanges and the Sell Sides internal systems send files to CDS. CDS then runs a compare program and produces an exception report for each Sell Side Dealer on T+1. This process may need to be accelerated.
 - These Reconciliation's are required for TSX, DTCC/NSCC and potentially ACT/Access
- **Inter-Dealer System Interface / Links to Sell Side Traders' System:** When a Sell Side trader executes a trade using the trading screen of an Inter-Dealer the trader then acknowledges the trade being completed and then keypunches the trade details into his/her system. An interface from the traders internal system to the Inter-Dealers systems would eliminate the need for manual updating
- **Auto Trade Match Inter-Dealers' Bond Trades to Sell Side Trades:** On T+1 today the Sell Side matches trades with the Inter-Dealer by comparing paper trade confirms to trade confirms or fax sheets or by exchange of spreadsheets etc. These trades should be confirmed electronically today on T+1 but will need to be matched on Trade date going forward

Canadian “Important for T+1” Items (cont’d)

- **Restricted Shares:** The rules and the manual processing required today for handling the clearance and settlement of restricted shares needs to be enhanced in order to meet an even further reduction in the number of days between trade and settlement date. The risk of Buy-ins will be dramatically increased in a shorter settlement cycle.
- **Stock Option Plan Share Issuance:** This item is similar to the previous item for restricted stock as it’s the manual process that exists today which needs to be more automated and moved from a physical security issuance request into a book based environment.
- **Delivery Against Payment (DAP) Trades:** DAP trades processed by Retail and/or Institutional Sell Side firms have the same characteristics as Institutional trade settlements since the Dealer must deliver the securities to the clients Custodian against payment. The key differences with this transaction is there is no IM in the middle of the trade, just a Sell Side retail sales advisor, the retail client and the Custodian. Due to the smaller dollar size of these typical transactions they will not attract the same amount of urgency to resolve issues therefore causing a greater number of failed trades

Canadian “Important for T+1” Items (cont’d)

- **Encourage Greater Use of FundSERV for All Investment Funds:** FundSERV should be used to facilitate greater STP.
- **LVTS to be Used for All CDS Payments:** CDS would be required to implement a policy to only accept LVTS payments in conjunction with the Canadian Payments Association (CPA) who would need to lower the minimum dollar amount requirement from \$25 million.
- **TSX to Automate Receipt of Issuer Entitlements Information:** TSX receives fax and email entitlement information from the issuers and then manual keypunches this information into their internal systems. Current volumes are around 5000 events per year.

Canadian “Nice-to-Have” Items

- **Direct Registration System (DRS) / Custodian Direct Registration Systems (CDRS):** A number of the Transfer Agents are working on Direct Registration and Custodian Direct Registration Systems to offer an alternative to physical certificates.

Appendix C: Glossary of Terms

Glossary of Terms

Term	Definition
Affirm a trade	1. To state that the trade is valid. When trading online, a trade is legally confirmed when the first party confirms the transaction and the second party affirms the confirmation of that transaction. 2. DTCC's matching of trade details includes sending the confirmation to the IM and custodian based on trade details submitted by the BD. The IM Affirms the Confirmation and the Affirmed Confirm is then sent to the custodian and the BD by DTCC.
Affirmation	See "Confirm/Affirm"
Best Practices	Includes business and market practices. See below for Business and Market Practices.
Business Practices	Identifying who does what and when; generally accepted and agreed timing and behavior practices.
Buy Side	Class of professional investor who is an indirect market participant; includes banks, mutual funds, pension funds and other entities that participate in the market only on behalf of the members/participants. (Source: G-30)
Carrying Broker	Introducing and Carrying relationship: This is when one SRO member firm wishes to use the infrastructure and system resources of another SRO member for services including trade execution, trade processing, settlements, custody and customer account record keeping. (Source: IDA)
Continuous Net Settlement (CNS)	A settlement mode where all purchases and sales are netted on a continuous basis into one buy or sell for each customer and security, and allotted into one net position between the participant and depository; any portion of the net CNS position is then settled automatically against any available ledger balance each settlement cycle.
Confirm/Affirm Confirmation/Affirmation	In the U.S., confirm/affirm refers to the confirmation of a trade by the broker/dealer upon receipt of the allocations from the investment manager, and the affirmation of that confirm by the investment manager. In Canada, confirm/affirm refers to the agreement between the broker/dealer and the investment manager's custodian by CDS's 7:30 pm cutoff.
Electronic Settlement Instruction Registry (ESIR)	A common registry of settlement agent instructions originating from the settlement agents that may be used by CDS participants during the reporting of client trades.

Glossary of Terms (cont'd)

Term	Definition
Local Matching	Same as "internal matching". Local and internal matching are used to refer to the process of an Investment Manager or Broker/Dealer matching two items on their own internal systems and then submitting this information back to the other party. Examples include an Investment Manager matching a Notice of Execution received from a Broker/Dealer to the order, or of an Investment Manager matching confirmations received from a Broker/Dealer (via TradeSuite) to their allocations and then affirming that confirmation. This is opposed to "central matching" in which the match takes place by third party vendor.
Market Practice	The business data elements used for domestic debt, equity, fund and other investments.
Net Asset Value (NAV)	The value of all the holdings of a mutual fund, less the fund's liabilities; NAV divided by the number of units outstanding equals price per unit.
NYSE Rule 387 and NASD 11860	NYSE Rule 387 & NASD 11860 state that members (broker-dealers) cannot accept an order from a customer where payment or delivery will be made to or by an agent of the customer unless: <ol style="list-style-type: none"> i. The member organization has received from the customer prior to or at the time of the order, the name and address of agent and name/account number of the customer on file with the agent. ii. It is a COD / POD (payment on delivery) order iii. The B/D delivers a confirmation to the customer no later than the close of business on the next business day after execution iv. The B/D has obtained agreement from the customer that the customer will furnish his agent instructions to the B/D promptly upon receipt of the confirmation and to his agent by T+2 for COD purchases and T+1 for sales (POD).
"on Trade Date"	In practical terms, the date the trade was entered, or the established time at which transactions are entered before midnight on trade date ("T") at a depository and are still registered as being entered "on Trade date"; for CDS, it is 7:30 pm. Any trades entered after that cutoff are registered as T+1.
Sell Side	In U.S. terminology, a retail broker, institutional broker and trader or research department which engages in securities transactions. (Source: SIA Glossary)

Glossary of Terms (cont'd)

Term	Definition
Standards	The protocols and syntax for communications.
Standing Settlement Instructions (SSI) Database	Central repository for customer/account and settlement information, e.g., client name, custodian's client account number, custodian ID, investment manager ID
Straight-Through processing (STP)	Seamlessly passing financial information electronically, on a timely, accurate, system-to-system basis, to all parties in the end-to-end securities transaction chain without manual handling or redundant processing. From the SIA and CCMA, the STP scope for the industry is from Notice of Execution (NOE) through to settlement for institutional trading. For retail and corporate actions, the STP scope is broader.
TSX Rule 5-105 Uniform Settlement Rule	Canadian exchange (i.e., TSX) rule similar to NYSE 387, but not widely acknowledged or enforced. For complete description, refer to: http://www.tsx.com/en/pdf/TSXRulebook.pdf
Uniform Securities Transfer Act (USTA)	Purpose is to clarify property rights associated with indirectly held securities and uncertificated securities.
Virtual Matching Utility (VMU)	Virtual Matching Utility (VMU): Software model that allows for seamless, real-time matching of trade data throughout a trade's lifecycle, from post-execution to settlement, from investment manager to broker/dealer to custodian to settlement body; also know as Central Matching Utility (CMU) or Matching Utility (MU).