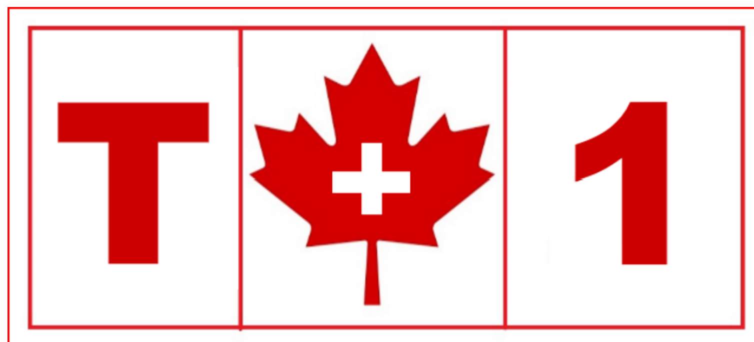
T+1 Project
Post-Implementation Report

October 31, 2024



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Executive Summary

This report describes the Canadian capital markets' 2021-to-2024 efforts to shorten the investment standard securities trade-to-settlement cycle from two business days to one (T+2 to T+1). It follows the format of the 2018 T+2 post-mortem report, excluding any matters no longer relevant and adding sections describing new issues. Prepared by staff of the Canadian Capital Markets Association (CCMA) for the CCMA's Board of Directors, the report:

- Summarizes the T+1 initiative, project governance details, work streams, outcomes, lessons learned, and considerations for the future.
- Suggests possible improvements for any project crossing as diverse and dispersed a group of stakeholders as did T+1, for example, preparing for a settlement cycle that is shorter still.

We thank all industry stakeholders[1] for their participation during the successful two-and-a half-year project.

Decision to move to T+1: Consistent with efforts to shorten the settlement cycle in the late 1990s/early 2000s, and the 2017 move to T+2, Canadian capital market stakeholders recognized they would have to change systems either to match the U.S. or to accommodate a different settlement cycle. Given North-American market integration, remaining on the same cycle as the U.S. helps maintain the competitiveness of Canadian capital markets. In 2021, the CCMA Board of Directors approved analysis of the project and then gave the CCMA the go-ahead to co-ordinate keeping Canada's capital markets on the same cycle as that of the U.S. by moving to T+1.

Key findings: The move to T+1 was both easier and harder than the move to T+2, for several reasons.

The conversion was made easier because:

- The relatively recent change to T+2 (completed in 2017) meant staff with the necessary knowledge and skills were accessible.
- CCMA T+2 staff were quickly re-assembled, and able both to repurpose a considerable amount of material and to reconnect easily into the U.S. T+1 project structure.
- The T+1 project was treated as an industry-led initiative by the Canadian regulators. However, the regulators provided certainty regarding a number of key questions in a timely manner.
- Most vendors engaged with their clients early and often.

The conversion was made more difficult because (among other things including COVID):

- The originally U.S. industry-led initiative to shorten the settlement period was taken over by the U.S. Securities and Exchange Commission (SEC), which rejected the proposed common (to both Canada and the U.S.) three-day/holiday weekend for implementation sought by U.S., Canadian, and other global market participants and then took a year to set a final implementation date, leaving further uncertainty as to both implementation timing and whether T+1, T+0, or some other variation would be adopted.
- The SEC's delay in a final decision on date and goal also complicated Canadian T+1 project planning and preparation due to CDS's then concurrent Post-Trade Modernization project (PTM). Had PTM been completed prior to the T+1 project launch, it would have helped in the move to T+1. Having to put PTM aside, instead, added to complexity and has led to

[1] CCMA members include dealers, custodians, asset managers; key securities infrastructure organizations, such as marketplaces, Canadian Depository for Securities Limited CDS Clearing and Depository Services Inc. (CDS), and Fundserv; back-office service providers and vendors – and others (e.g., regulators, self-regulatory organizations (SROs), etc.).

work duplication and an increase in overall project costs of the transition to T+1 and in all likelihood the PTM project.

- The U.S.'s and Canada's transition to T+1 (unlike the move to T+2) *preceded* a move to a shorter cycle in Europe and Asia-Pacific. This, compounded by the fact that countries in the western hemisphere are at the latter end of the worldwide trading day, left little time for non-North-American time-zone markets to take the steps necessary to facilitate settlement on a shorter cycle.
- The elimination of an overnight batch process to resolve trade/settlement errors and delays meant that downstream processes – notably securities lending and foreign exchange, as well as exchange-traded fund (ETF) creation – demanded considerably more resources than with the move to T+2.

A number of challenges associated with the move to T+2 re-emerged during the T+1 project, and, while expected, presented new issues. These included investment funds, which were not mandated by the Canadian Securities Administrators (CSA) to move to T+1, and the overall competing priorities among different industry segments and their associations.

Results: Despite the more and greater challenges, quantitative and qualitative evidence show that the T+1 project was completed successfully in Canada in sync with similar changes in U.S., as well as Mexican, Jamaican, Argentinian and Peruvian capital markets. Canadian system implementations to allow reporting of trades and settlement with a T+1 value date went smoothly over the May 25-26, 2024 weekend, and payment exchange settled on time daily from the first day (May 27th) on.

The CCMA issued a congratulatory announcement on Friday, May 31, 2024, but waited for the final word before sharing the following quantitative evidence of industry members' success:

- ***Trade entry and matching:*** With the National Instrument (NI) 24-101 regulatory requirement of at least 90% of institutional trades matched by volume and value by 3:59 a.m. ET on T+1, trade entry and confirmation rates increased, with the Canadian industry confirmation rate increasing by more than 50% by value and 95% by number of trades when compared to the rates at the outset of the project.
- ***Fails:*** The settlement fail rate, a week after implementation, was in line with fail rates in a T+2 environment – below 2% based on value and comparable with those in the U.S.
- ***Collateral savings:*** Early reductions in the value-at-risk (VAR) component of the continuous net settlement (CNS) collateral pool ranged from 23% to 28%, comparable with U.S. results.

Due to the many people who worked sometimes very long hours to achieve a smooth transition, the project was delivered on time and without market disruption or unexpected effects for institutional and other investors. Some initial transitional issues were experienced but these ultimately had little negative impact on industry members. CCMA's role was completed on budget.

Next steps: While there are no *required* next steps, the SEC saw T+1 as a step on the way to a shorter settlement cycle still; Canada must be ready to adopt a shorter cycle at the same time as the U.S. should the SEC proceed with rule-making or the American industry announce the intention to move to less than T+1. While the T+1 project helped prepare Canadian markets for a shorter settlement cycle still to some extent, this report is unlikely to provide a roadmap for a move to T+½, or T+0 because, whereas the move to T+2 was about doing the same things faster, and the transition to T+1 encouraged fundamental technology and process changes, any further move will require substantially more work, time, reliance on technology, money, and co-ordination. It will entail much greater transition risk than did the move to T+1. At each step, there will be a need for certainty. In fact, it is probable that the use of CNS will not work in a T+0

settlement cycle, and therefore a completely new settlement structure will be required, such as Real-Time Gross Settlement (RTGS) as one example.

The final section of this report highlights a number of areas that should be considered or addressed in future efforts to shorten the settlement cycle.

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I. Introduction

This report documenting the process and experience of Canadian capital markets' move to a one-business-day standard settlement cycle has been prepared by Canadian Capital Markets Association (CCMA) staff for the CCMA Board of Directors and members. It assumes knowledge of capital markets operations and the history of settlement cycle changes (additional background detail can be found in the CCMA's 2018 *T+2 Post-Mortem Report*).[2] This report is not a roadmap for a move to T+$^{1}/_{2}$ or less, in light of considerable changes that continue in Canadian and global capital markets and of the need for the smaller Canadian marketplace to follow (while contributing appropriately to) changes to any new North-American settlement standard. It concludes with suggestions that should help in future projects aimed at further shortening the settlement cycle.

- **Definition:** T+2 (and T+0, T+1, and T+3) refer(s) to the number of business days between when a trade is executed (or T) and the related trade settlement – when the buyer's payment for securities is exchanged with the seller at the same time as the seller's securities are transferred to the buyer. While money market instruments and other investment products already settled on T+1 or less before the T+1 project was initiated, most investments – equity, debt, most investment funds, and some other products – settled in two days. ***Note:*** For convenience and brevity, the report uses T+1 to refer to the transition of equities, debt, etc. to a standard T+1 cycle although some securities remain on a different (e.g., T+0, T+2 or longer) basis.

- **Why T+1?:** The main benefits for the Canadian marketplace and its stakeholders from the move to a shorter settlement cycle included: remaining aligned with U.S. from a systems and timing perspective, reduced collateral requirements, lowered risk, improved efficiency, preparation for a further expected reduction in the settlement cycle, and enhanced client service. Moving from T+2 to T+1 was expected to be less risky and less expensive than directly transitioning to T+0 or T+½ while still achieving benefits and positioning the industry for the shorter settlement cycle.

- **Why now?** As in the late 1990s, when a move from T+3 to T+1 was first discussed, there was debate regarding whether Canadian capital markets had to remain aligned with U.S. markets. Many capital markets players said 'yes' intuitively, and this was confirmed by economic analysis conducted by Charles River Associates (CRA) in a November 1999 report that concluded Canadian capital markets should change the settlement cycle at the same time as the U.S. – neither before, nor after. At that time, about 40% by value of trades on Canadian stock exchanges were in inter-listed securities (that is, a single security listed on both Canadian and American exchanges) and Canada-U.S. cross-border transactions made up nearly 25% of the millions of trades processed annually through CDS. Different settlement dates in Canada and the U.S. would increase risk, add costs due to more errors and therefore more manual corrections, potentially cause Canadian firms to lose business, be confusing for investors, and potentially reduce client investment options. Whether T+1 also needed to be extended to investment funds, which do not directly compete with American funds, was a question discussed when the standard settlement cycle moved from T+3 to T+2 and again in the transition from T+2 to T+1. At the conclusion of the T+2 project, there was an expectation that there would be a further move to T+1 or less, with the SEC committing to a review within three years.

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[2] **Note:** There was no follow-through on recommendations in the *2018 T+2 Post-Mortem Report*. It is not clear whether acting on any of these would have helped in any way in the transition to T+1.

- **What's in the report:** This report, to help prepare the Canadian investment industry for any future industry-wide reduction in the standard security settlement cycle, includes:

  - Background on the T+1 initiative, with project organization details, work streams, successes, lessons learned, and future considerations.
  - Input from a call made to CCMA committee members and industry stakeholders (unless otherwise specified, 'service provider' refers to infrastructure (e.g., CDS, Fundserv, marketplaces, etc.), service bureaus/back-office service providers (e.g., Broadridge, Kyndryl, IFDS, Paramax, etc.), correspondent clearers (e.g., NBIN, etc.), and vendors) for feedback on the T+1 implementation process.
  - Considerations/recommendations.

  It does not include aggregate information regarding project costs, as the project was viewed as "must-do."

Note: For convenience, **Appendix A** includes a list of acronyms used in this report.

II. Background

a. Precipitating T+1 factors

There are considerable benefits from a shorter settlement cycle, especially risk and collateral reduction. The debate has often centred on the quantum of the benefits to be realized as compared to the cost of the related change. As global markets grow and become increasingly integrated, both the benefits and cost of change also grow, although there are expected to be net benefits in the longer term under any scenario.

During and following T+2 implementation in 2017, considerable efforts were being directed at blockchain/distributed ledger technology (DLT), with an expectation that this could well help in a move to T+1 or less. However, DLT for this purpose had not achieved the proof-of-concept stage at the time a major U.S. market volatility event in early 2021, arguably due to unaddressed U.S. regulatory issues,[3] became a catalyst for the SEC to mandate T+1.

b. T+1 project co-ordination launched

The different segments of Canadian capital markets are represented by separate industry associations. There is one cross-industry group that is resurrected on an ad hoc basis for cross-industry projects: the CCMA. The CCMA is a federally incorporated, not-for-profit organization launched in 1999 with a mandate "to communicate, educate and help co-ordinate the different segments of the investment industry on projects and initiatives spanning multiple parts of Canada's capital markets." The move to T+2 was such an initiative. As T+1 was another project crossing industry segments and likely to be very similar to the successfully concluded T+2 project, the CCMA was again chosen to co-ordinate Canadian industry efforts to shorten the settlement cycle. This was because the project was time-sensitive; the CCMA's membership was broadly based; the association and staff engaged for preliminary analysis (and later the project) were known, credible, and independent from any particular industry segment; the association and staff had established connections with regulators and U.S. industry counterparts; and there was an agreed funding structure that might be used (out-of-pocket costs for the CCMA/T+1 project were covered by CDS participants – effectively only some

[3] See last paragraph, p.1, of Memorandum: "Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Pt. III"?).

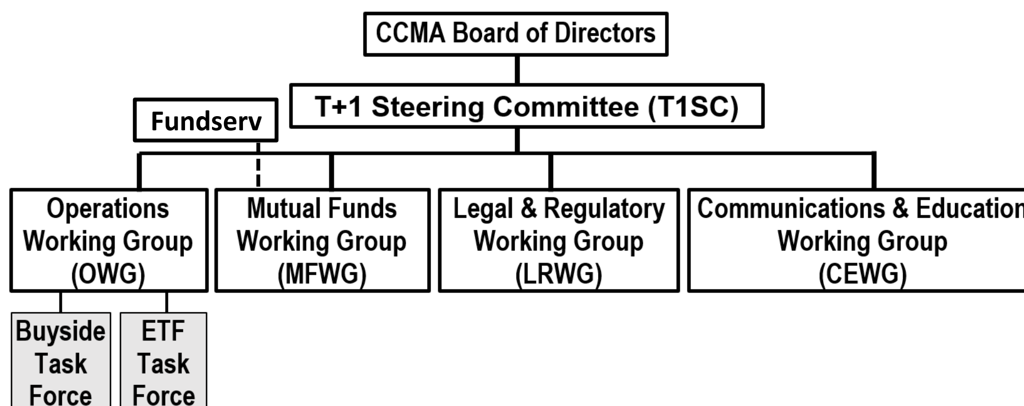
investment broker/dealers and custodians). A review of the possible move to T+1 was announced in April 2021. The project was formally confirmed by the CCMA's Board of Directors in October 2021.

c. Project structure – resourcing

The CCMA Board added T+1 to the CCMA Executive Director's then responsibility for the Post-Trade Modernization (PTM) project at CDS and he, with two part-time contract employees, were hired to manage the project from the Canadian side. An additional contract worker was engaged to work on analysing the timing of post-trade processing at CDS to identify what changes would be required to meet the shorter timeline. The team also was able to rely on some of the U.S. project work of the Securities Industry and Financial Markets Association (SIFMA), The Depository Trust & Clearing Corporation (DTCC), and Investment Company Institute (ICI) staff, as well as a team of Deloitte staff, hired for the duration of the U.S.T+1 implementation.

d. Project structure – committees

A big challenge in any cross-industry project, and for any association, is two-way communication. As with most associations, the CCMA relied on committee members both to provide input into decision-making and to disseminate information out to those affected. Below is a diagram of the committee structure; this is identical to the T+2 committee structure, with the exception of the addition of ad hoc Buyside and ETF Task Forces for the T+1 initiative.



T+1 Steering Committee (T1SC)[4] – made all material decisions relative to T+1 after receiving working group input; monitored progress towards achieving T+1 at the same time as the U.S. and discussed action where delays might compromise a smooth, simultaneous transition.

Working groups reporting to the T1SC include the following:

- ***Operations Working Group (OWG)*** – mandated to identify all non-mutual fund operational issues/obstacles related to Canada's transition to T+1 and to identify the necessary cross-industry systems, process, procedural, and administrative changes needed. During the course of the project, two ad hoc task forces were established for limited periods:
    - ***Buyside Task Force*** – established to identify and document roadblocks to one-day institutional trade processing securities settlement and recommend

[4] T1SC members totaled 153 at the T+1 project close; voting members (no formal votes were taken) can be found here.

processing timeline revisions to accelerate settlement to T+1 (see subsection III.c below).
    - ***ETF Task Force*** – formed to document concerns in the creation of ETFs arising from the transition to a T+1 settlement cycle and investigate potential solutions for these concerns (see subsection III.c below).
- ***Mutual Funds Working Group (MFWG)*** – managed by Fundserv (using their Standards Steering Committee) with interaction with some Investment Funds Institute of Canada (IFIC) committees; operating with a mandate similar to that of OWG, the MFWG focused on investment funds and other related products.
- ***Legal & Regulatory Working Group (LRWG)*** – mandated to identify and address all legal and regulatory issues. In addition, the LRWG followed up on the progress to ensure timely approvals were given.
- ***Communications & Education Working Group (CEWG)*** – mandated to manage communications to stakeholders, including developing the structure and content of the CCMA website to deliver information; raising awareness of T+1; engaging stakeholders to act; co-ordinating communications with the U.S.; and managing/being prepared to manage industry reputational issues.

The T1SC and its working groups and task forces included all interested individuals, as well as association representatives, regulators, vendors, consultants, and other stakeholders. Committee membership was higher during the move to T+1 compared to the move to T+2 (see table below). The increase in committee numbers for T+1 likely can be attributed to the greater complexity of the project and the delay in the SEC's confirmation of a T+1 implementation date; staff turnover (including due to retirement); and non-North American time-zone clients not transitioning at the same time.

Committee	Members T+1 (2024)	Members T+2 (2017)
T1SC/T2SC	**153**	110
OWG	**323**	231
MFWG	**Unknown***	185
LRWG	**84**	74
CEWG	**71**	43

* Many participated, but the exact number is not known as Fundserv used their Standards Steering Committee (SSC) as a proxy for the MFWG.

The committees were designed to be broadly representative, including small, medium and large firms, from all industry segments and parts of the country. They met, usually monthly, and as required (see below for meeting numbers).

Committee	T1/T2SC	OWG	MFWG	LRWG	CEWG	BTF	ETFTF
T+1 (2024)	**32**	**30**	**13**	**30**	**29**	**5**	**18**
T+2 (2017)	23	19	8	23	22	-	-

e. Governance

i. **Decision-making:** Within each committee, decision-making and issue resolution were achieved on a consensus basis, with any material matters and issues requiring resolution being referred to T1SC for confirmation or final decisions. Working group Chairs reported at each T1SC meeting on their committee's progress towards objectives, usually reflected in the review of an issue log or report. The T1SC

approved action or decisions based on working group recommendations and resolved undecided issues.

ii. **Co-ordination with the U.S.:** A critical success factor for Canada was ensuring effective two-way communication channels with the U.S. The dual purpose of this was to make sure that the Canadian marketplace kept pace with the U.S. and that U.S. counterparts were aware of differences between U.S. and Canadian marketplaces, systems, and processes. As had been done in the T+2 project, the CCMA Executive Director played an active role on the U.S. T+1 Industry Steering Committee and with the implementation Command Center. There also was SIFMA/DTCC member representation on the Canadian T1SC and working groups, which proved extremely helpful, as did the close informal relationship between CCMA, SIFMA, and DTCC staff, and close CCMA staff ties with CDS. Some firms/members sat on both U.S. and Canadian T+1 committees, providing additional avenues for information-sharing.

iii. **Policy of trust but verify:** As in the T+2 initiative, it was important to maximize the industry participant and regulatory comfort level that all parts of the Canadian capital markets would meet the transition deadline. This was all the more important given that the settlement-cycle-shortening project had gone from being industry-driven to SEC-imposed, without a formal "go/no-go" decision point: that is, if it appeared there was a critical mass of firms ready to transition, transition would proceed (be a "go") recognizing some firms would have to adopt some manual workarounds; if not, implementation would be deferred ("no go") to an already selected back-up date (the next common three-day weekend). This had been a formal part of the move to T+2: eight weeks before the implementation date, there was confirmation of general readiness to allow sufficient time for communications throughout the industry of a new date should there appear to be a substantive problem on either side of the border. As this was not a feature of the SEC proposed T+1 rulemaking, the CCMA discussed concerns with industry stakeholders and, later, with SEC staff in the months leading up to transition. In the end, CCMA did not need to escalate concerns in light of satisfactory industry T+1 test results.

Without a planned go/no-go discussion, the CCMA and Canadian industry stakeholders relied on three mechanisms to assess progress along the way: surveys, test results, and a CCMA-issued T+1 Project Acknowledgement Form.

- **Three CCMA surveys:** T+1 surveys – the first focused on T+1 awareness-building, the second on preparations progress, and the third on broad-based readiness – were similar but not identical to surveys undertaken for T+2. They served two main purposes. The first was ***informational:*** the introduction and nature of the questions informed recipients of the T+1 timeline, gave guidance on steps to take, and were a way to extend the CCMA's reach to a broader audience. The second was for ***planning purposes:*** survey responses allowed the CCMA to measure progress towards, and identify any concerns regarding, transitioning to T+1 with U.S. markets in May 2024; compare developments with the benchmarks of earlier T+1 surveys and comparable T+2 surveys; and identify if there were any substantive concerns that a material number of Canadian marketplace participants would be unable to implement successfully the shorter settlement cycle. In the latter case, T+1 would have proceeded, however, there would be significant manual workarounds for a period of time.

Note: ValueExchange and CCMA staff connected early in the project and regularly shared information. Headed by a respected global post-trade expert, ValueExchange was also sponsored by DTCC and TMX, with the participation of other global organizations including the CCMA, to undertake a series of surveys. The CCMA provided input into question development, and insights into findings of, the three global ValueExchange surveys that complemented CCMA ones. The surveys were undertaken at staggered times to CCMA surveys and results provided additional nuances for the Canadian T+1 initiative from U.S. and global players. While the usefulness of ValueExchange survey results for individual firms may have been limited because of a somewhat uncontrolled participant pool despite efforts to reach appropriate respondents, ValueExchange summarized findings in a useful way and sessions hosted by ValueExchange's CEO were productive in reinforcing CCMA messaging.

- **Testing:** Given the necessary postponement of the PTM project in May 2023, a T+1 industry test schedule was late in being confirmed, and testing was delayed further due to the usual systems freeze period between mid-December 2023 and mid-January 2024. For those unfamiliar with the differences between the Canadian and U.S. market make-up and infrastructure, the much shorter Canadian test period (4 cycles as compared to the U.S.'s 19) may have seemed risky, however, the Canadian and U.S. test plans were virtually identical to those used for the move to T+2 in 2017. In addition, with many Canadian members dealing in both countries, there was a benefit to having U.S. clearing and settlement systems updated and tested so that the firms could test the full scope of their business, including cross-border transactions, at the same time. Lastly, in contrast to Canadian testing, not all 19 U.S. test cycles were full "day-in-the-life (some only tested corporate actions, others only tested conversion weekend, etc.). Testing was co-ordinated by CDS/Canadian Derivatives Clearing Corporation (CDCC) and Fundserv. See subsection III.c for testing discussions.

- **T+1 Project Acknowledgement Forms:** Due to highly integrated Canadian and American capital markets, there was discussion by CCMA members of the value of some form of sign-off by major industry stakeholders to ensure significantly-senior management focus on preparedness. Concerns regarding legal liability in the U.S. meant that mandatory sign-off was not a viable option there. The Canadian marketplace once again adopted a middle ground, seeking confirmation by way of a T+1 Project Acknowledgement Form of the readiness of the "links" in the interconnected system (e.g., CDS, Fundserv, major service providers, etc.). Also, CDS required readiness responses from its direct participants using an almost identical form. In all, 37 major service and infrastructure providers were asked to agree that, to the best of their knowledge at the time they were ready, their clients/participants were aware of and preparing for T+1, and they knew of no reason why adoption of T+1 could/should not proceed in Canada. Thirty-six confirmed their readiness (one ATS had recently ceased business in Canada), a 100% response rate.

III. Project Plan and Issue Logs/Major Work Streams

The Canadian project plan and most work streams had to integrate with the U.S.'s T+1 project. Settling on a particular implementation date is critical to any project and good project management practice is to set a date after a full analysis of the tasks to be undertaken and the addition of some time for contingencies. This was essentially the case

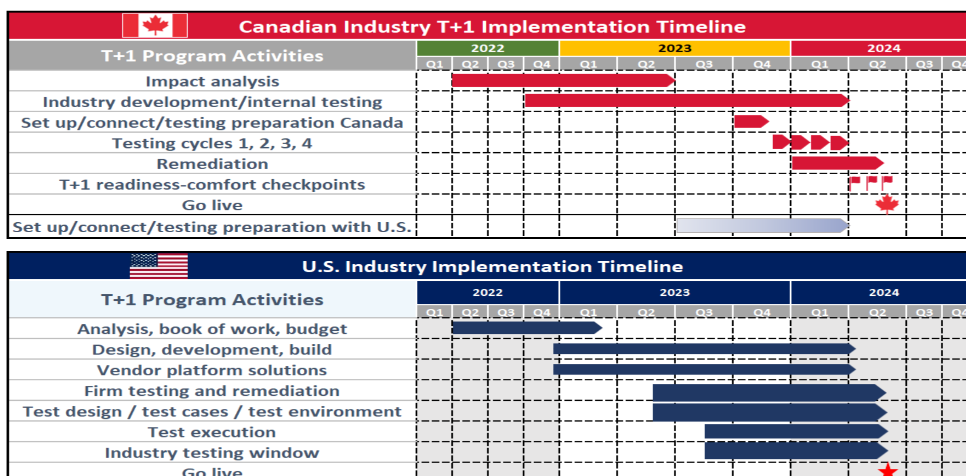
for T+2, however, not in the case of T+1, where a date and plans had to be based on a work-back from the SEC-set date.

DTCC, working with SIFMA and ICI, published a proposed T+1 plan on December 1, 2021 that some believed was ambitious as certain issues (e.g., securities lending, foreign exchange, and dealing with European and Asia-Pacific time zones) had not yet been as comprehensively addressed as some wanted. This would not have been a concern had the project remained industry-driven. There would have been flexibility as to when to ask the SEC for the necessary rule change. However, the SEC pre-empted this approach.

a. Project timeline

Aware of industry T+1 plans, the SEC introduced a proposed rule on February 15, 2022, asking for comments by April 9, 2022 on the proposals, including a compliance (transition) date of by the end of Q1 2024. Due to the industry's strong preference for a long weekend to implement T+1, the latest this would realistically mean was the U.S. President's Day weekend (not a three-day weekend in Canada) in February. For the year between when the SEC introduced the proposed rule and February 2023 when the SEC issued the final rule, it was extremely difficult to finalize some planning because firm and industry solutions would vary depending on whether the SEC would proceed with or change its proposed transition date and/or whether transition would be to T+1, T+0, or one and then the other, or any other variation of cycles. Even though the proposed compliance date was pushed out by a quarter to "by the end of Q2 2024," it really provided fewer than two months more because of the strong industry preference for a 'common' long weekend with an extra day's contingency to address any transition issues that arose unexpectedly. This meant the latest date possible for the States was the U.S. Memorial Day weekend, with the first day of T+1 trading being Tuesday, May 28, 2024. The fact that May 27 was *not* a holiday in Canada was another issue to consider, discussed in subsections III.c and III.d below.

As with T+2, the Canadian T+1 timeline (see below) was determined largely by the U.S. as the much larger market. Canada's timeline was complicated by the Post-Trade Modernization project (PTM) underway at CDS: had it been completed on schedule, it would in ordinary circumstances have helped achieve T+1 settlement in a more straightforward way. Delays in the PTM project and the earlier-than-industry-desired T+1 compliance date set by the SEC led to a decision to put PTM on hold to free up industry resources needed to achieve the T+1 deadline. **Note:** This meant Canadian CDS participants had to go through a transition to T+1 with CDS's existing systems, and that equivalent changes would have to be made to PTM (and possibly their own) systems and processes afterwards.



A separate mutual fund schedule, integrated with the above, is in subsection III.d below.

b. Industry-wide tools

In addition to the T+1 project timeline, there were a number of other critical documents that were the focus of considerable work and discussion during the T+1 project: issue logs, the asset list, a transition and support plan, and data analysis.

i. **Issue logs:** Logs were used to ensure real and potential obstacles to T+1 were assessed and, if need be, addressed. They also provided structure for CCMA committee meetings. To remain an issue subject to committee consideration, they had to have the possibility of impeding a material portion of Canadian firms' migration to T+1 at the same time as the U.S. and/or cause regular problems for a meaningful number of firms' ability to settle on T+1. Issues that were closed could be re-opened due to the emergence of new information. A few items were not issues under T+2 but became so under a shorter settlement cycle (such as foreign currency exchange, which settles on a T+2 basis excepting for CAD/USD pairs). Issue logs associated with the operations, mutual funds, legal and regulatory, and communications and education workstreams are discussed below.

ii. **Asset list:** The CCMA was able to re-use the asset list that identified which T+3-settlng securities would move to T+2 for the T+1 project – in general terms, equities, ETFs, longer-term debt, certain notes, and certain other securities would be impacted. Initially, there was some expectation that funds and other products that had moved to T+2 – non-security equivalents, such as segregated funds and certain federally-regulated products – would also move to T+1 because for decades the overwhelming majority of Canadian securities had settled on the same date, and those holding both funds and other securities expected to be able to move seamlessly among different forms of holdings.

    The Canadian list of securities was updated and guidance as to how to determine if any new security was "in scope" or not was clarified. The list identified what securities would move to T+1, the standard settlement cycle of those not moving to T+1, and those "under review". The list went through three iterations with several of the same issues that arose in T+2 discussions of the list – confirming intentions regarding Canada Mortgage and Housing Corporation (CMHC) mortgage-backed securities; trying to identify what were, and if any changes needed to be made with respect to, investment funds that were not subject to NI 81-102; and principal-at-risk and principle-protected notes. The third and final asset list (Fr) was posted on the CCMA's website on October 31, 2023.

    Note: The CCMA compared the Canadian list with the U.S. asset list appearing in draft versions of what became the December 1, 2021 SIFMA/DTCC/ICI paper to determine if there were any variations; this U.S. list, however, did not appear in the December 1, 2021 document. Reportedly, references in the U.S. rule were considered at the time to be adequate, and the situation was not clear-cut as U.S. rules are more complex and whether a security was "in scope" or not could depend on volumes and other determinations. The U.S. identified different potential scenarios for dual-listed securities subject to Rule 15c6-1 and published voluntary recommendations, with an FAQ, on the U.S. T+1 website. The U.S. later also issued an asset list of American securities moving to T+1.

iii. **Transition support plan:** As for the T+1 project, the CCMA discussed and co-ordinated a support plan to enable Canadian stakeholders to share information and

discuss emerging issues through the transition period, including the week before and after the transition weekend. The move to T+1 was determined to be considerably more difficult than the transition to T+2, with one day less (Canada did not have a three-day holiday weekend) to 'fix' things and no formal go/no-go checkpoint. The Two-Week T+1 Transition Support Plan, similar to that developed for 2017, ran from Tuesday, May 21 to Friday, May 31, 2024 with meeting notes posted on the CCMA website.

iv. **Data analysis:** Since 2007, when NI 24-101 first took effect, CDS was required to make institutional trade-matching statistics available to individual firms, which was done monthly, and aggregated matching data was also published monthly via the TMX website. While NI 24-101 specified times at which trade entry and confirmation had to be reported by CDS, this did not provide the desired granularity needed for the T+1 project. Early in the project, in response to a CCMA request, CDS programmed a detailed query to provide hourly trade entry and affirmation data over a three-day period with the hope that it would provide insights to help plan an appropriate shortened processing time. The CCMA later requested CDS to start reporting aggregate trade details according to the new reporting timelines of amended NI 24-101, however, due to resource constraints at CDS, this was not possible. This left CCMA members, with some exceptions (i.e., where a firm had additional insights through the service provider Paramax), as well as the overall industry and regulators, with little to no sense of whether or not there was much movement toward matching 90% of securities trades by early on T+1.

c. Operations – institutional trade processing and exchange trade issues

Due to the delay in the SEC confirming an implementation date, with complexities added by the PTM project, the OWG issues list was later prioritized to first focus on the critical "must-do" changes. Through discussions, some issues were combined; others were later broken out into more than one issue. Below are the highest-priority issues.

i. **National Instrument 24-101 *Institutional Trade Matching and Settlement*** *(OWG-005)* (also **CDS Scheduler** *(OWG-013)*/**Trade Confirmation/Allocation/ Affirmation/Matching Process** *(OWG-031)*): Considerable time was spent identifying how the T+2 processing timeframe could be condensed to facilitate T+1.

- ***Consulting on shortening the processing cycle:*** A former CDS employee was engaged to consult with custodians, representatives of the buyside, and sellside dealers, as well as CDS, together forming the Buyside Task Force. He held 14 one-on-one interviews and then chaired discussions of the results with the Buyside Task Force, leading to agreement on a new proposed CDS schedule reflected in the Buyside/Custodian Task Force Report, which was approved by the T1SC on June 27, 2023. The longstanding end-of-day single file from each marketplace was to be replaced by hourly intraday trade files as of May 27, 2024, commencing at 10:00 a.m. ET, with the last being an hour after the close of markets at 4:00 p.m. ET. Hourly trade slices throughout the day were to enable (i) dealers to reconcile trades, allocate block trades, and communicate to the buyside and custodians earlier and (ii) CDS to feed trades more efficiently into its systems, reducing potential end-of-day stress on the systems as well as risk. Additional minor changes were later agreed to and reflected in the final processing schedule (May 30, 2023).

- ***Proposed NI 24-101 amendments:*** In a release dated December 15, 2022, Canadian Securities Administrator (CSA) staff proposed amendments to NI 24-

101 *Institutional Trade Matching and Settlement* (NI 24-101). NI 24-101 sets the timeline for confirming/matching trades in Canada. For consistency with the U.S., the proposed rule amendments would have required 90% of institutional trades to be matched by 9:00 p.m. on trade date (T). The SEC proposed rule required 100% of institutional trade matching (i.e., allocations, confirmations, and affirmations) to be completed by midnight on T, and DTCC had set a 9:00 p.m.-on-T operational deadline for affirmations to enable the industry to achieve the 100%-affirmation-by-midnight target. CCMA members discussed this matter extensively, ultimately agreeing that that a 90% matching deadline at 3:59 a.m. ET on T+1, before the next business-day settlement processing starts, was the best (most flexible and cost-effective) option for Canada that did not impede parties with U.S. operations (see CCMA FAQ 23). The final NI 24-101 incorporated the CCMA-proposed 3:59 a.m. ET on T+1 timeline.

- ***Applicability of NI 24-101 (trade matching and settlement):*** One matter that surfaced in Buyside Task Force discussions that continued to be pursued after the matter of 3:59 a.m. ET on T+1 was resolved, relates to the applicability of NI 24-101 in the case of certain buyside parties (see legal and regulatory issues in subsection III.e below).

- ***Staged implementation:*** There was discussion of CDS implementing the ultimately adopted multi-batch process that ran hourly during business hours in, say, February 2024 in order to reduce pressure at implementation in May 2024. CDS determined that this was not appropriate, since this change was part of a broader T+1 package of changes. Consequently, no further action was taken.

- ***Implementation date:*** As noted, the U.S.-set implementation date of Tuesday, May 28, 2024 was chosen by U.S. participants as it followed a long weekend; Canadian markets did not have a holiday on Monday, May 27, 2024 and CCMA members discusses the pros and cons of requesting that markets be closed on Monday or being the first to transition to T+1. It was agreed that even if a market close for non-holiday and non-emergency reasons were possible, treating Monday in Canada as a normal working day was preferrable: holiday processing was an understood practice; implementing over the two-day weekend was preferrable to working on a T+2 basis on Monday and then implementing T+1 changes overnight between Monday and Tuesday; implementing in Canada while U.S. markets were closed would provide an opportunity to make corrections and adjustments. The table below depicts the overlapping Canada/U.S. transition.

Canada Settlement Cycle T+1 Transition Timeline

Friday May 24, 2024	Saturday May 25, 2024	Sunday, May 26, 2024	Monday May 27, 2024	Tuesday May 28, 2024	Wednesday May 29, 2024	May 30 on, 2024
Last T+2 Trade Date	Conversion Weekend	Conversion Weekend	**First T+1 Trade Date**	**Double Settlement Date**	Trade and settle T+1	Trade and settle T+1

U.S. Settlement Cycle T+1 Transition Timeline

Friday, May 24, 2024	Saturday, May 25, 2024	Sunday, May 26, 2024	Monday, May 27, 2024	Tuesday, May 28, 2024	Wednesday May 29, 2024	May 30 on, 2024
Last T+2 Trade Date	Conversion Weekend	Conversion Weekend	Markets closed Conversion Weekend	**First T+1 Trade Date**	**Double Settlement Date**	Trade and settle T+1

ii. **Industry T+1 test plan and testing** *(OWG-001)*: Bilateral and industrywide unscripted and scripted testing would be critical for the move to a shorter settlement cycle. CDS and CDCC facilitated testing of debt, equity, derivatives, and other platform-based trading, sharing testing results for participants, involving service providers, marketplaces, and vendors. DTCC co-ordinated U.S. market testing and the CDS-DTCC link facilitated cross-border testing. One lesson learned from the move to T+2 resurfaced despite reminders, that is, participants needed to make sure that they were set up and had completed connectivity testing before starting the T+1 testing. The first of four test cycles at CDS began in January 2024, with one segment (corporate actions) delayed until the second cycle in February; the first of three CDCC test cycles also began in February. While a number of firms would have preferred testing to have started and finished earlier given the absence of a formal go/no-go decision and the need for contingency time to correct and retest if problems had been identified, particularly if a larger service provider or vendor had issues, testing proceeded well in both Canada and the U.S. **Note:** Fundserv also ran two testing cycles: the first was completed in the latter part of January 2024, with the final cycle being completed in February 2024. Both cycles were completed without incident.

iii. **ETF creation process** *(OWG-003)*: While it was clear early on that ETF trading in the secondary market would move to T+1 settlement in line with marketplace rules, there were concerns that challenges in ETF creation (the delivery of baskets of underlying securities that form ETF units) in the primary market could impact secondary markets (it was determined that this issue did not arise with the reverse – ETF redemption – process). A survey was done that confirmed some lack of consistency in practices amongst stakeholders and extensive discussions were held within the ETF community through the Canadian ETF Association (CETFA) (representing manufacturers but not designated brokers), which sought to engage subject matter expertise, including through the engagement of a major law firm. Manufacturers and dealers, as well as custodians, discussed a range of issues, determining that some were not possible or critical for T+1 and should be passed to others to pursue. A summary of these discussions is included in the Exchange-traded Funds Task Force Report (July 13, 2023).

In the absence of a centralized collateral facility, the solution to avoiding negative impacts on secondary ETF markets was confirming a way to use cash collateral in the subscription process for delayed basket securities in the primary market. This would mitigate the risk of failed trades, which was in the investors' (and regulators') interest and did not, if precautionary provisions were put in place, introduce new risk. A number of proposals to address the issues identified were considered. For dealers, it was important that the approach not add significant work or require systems changes that they had neither the time nor inclination for. While some parties were concerned that raising the issue could draw unwarranted attention to a matter they believed was settled, all ultimately agreed there was value in addressing the apparent lack of clarity among some industry participants. The solution would be optional for industry participants to adopt and had to be acceptable to the manufacturer, dealer, and custodian in each instance (see subsection III.e below). Ultimately, there was agreement to put forward a request for regulatory guidance to eliminate this lack of clarity and provide certainty to the industry.

iv. **Securities lending** *(OWG-009)*: Securities out on loan may need to be recalled for settlement purposes and, if this process could not be adapted for T+1, fails and/or costs would increase. Members of the Canadian Securities Lending Association

(CASLA) engaged with U.S. and global counterparts, and worked with the CCMA and TMX, on a two-pronged solution:

- ***Portal:*** TMX agreed to develop an offering similar to DTCC's SMART/Track stock loan recall messaging service, with additional enhancements. The new securities lending portal was intended to let agent lenders and borrowers using different vendors (Equilend, FIS, Pirum) receive/communicate and upload notifications, enabling easier and more reliable processing of securities loan recalls from the beneficial owner, who advises an agent lender of a recall need, and the agent lender, who gets information to the borrower to process the recall. The system was in implementation at the point of the Canadian capital markets' transition to T+1. As at the time of writing, take-up is unknown.

- ***Notification:*** Securities lending participants discussed confirming the time by which recall notices should be sent to borrowers in order for loaned securities to be recalled if necessary to meet sale obligations in a T+1 environment. Prior to the T+1 implementation, market practice for a recall to be considered as having been made was 3:00 p.m. ET on T+1. CASLA and two other industry organizations agreed that there should be no change to this cut-off, but that it would apply on T rather than T+1, and the majority of market participants were understood to be onside. **Note:** Although the legally binding recall time is determined according to the applicable securities lending agreement, in the U.S., a later (11:59 p.m. ET on T) recall cutoff was identified as a "leading practice."

v. **Foreign exchange** *(OWG-020)***:** T+2 continues to be the spot FX settlement convention for major currencies other than CAD/USD pairings, which settle on T+1. Risks of currency and securities settlement mismatches involving other currencies once the standard securities settlement cycle was T+1 could increase funding costs and fails. There was discussion of the FX implications of the change to T+1 in the U.S., however, there was no co-ordinated effort on solutions in the U.S., Canada, or more globally. While extending hours of FX desks and CLS Bank operations was discussed, nothing was implemented. After the issue was discussed at several OWG meetings without apparent progress, and as indications from CLS were that FX should not be a major stumbling block to T+1 transition, T1SC members agreed to close the issue, noting that individual firms needed to make the systems or operational changes that worked best for their situation. A post-transition conclusion was that market participants and their custodians were able to successfully adapt their operations without the need for altering the CLS activity for securities settlement.

   Note: Publicly, CLS said in an early February 2024 post that "Over the past few months, CLS has engaged extensively with both buy- and sell-side market participants to identify the challenges T+1 securities settlement poses to the FX trade lifecycle. In particular, we are exploring how CLS's services can support the market in the short term and assessing the feasibility of adjusting CLS Settlement processes to accommodate later cut-off times." **Note**: It is thought likely that, with the U.K. and European countries now seriously considering T+1, there will be added pressure for CLS to move to a one-day shorter standard settlement cycle for currency pairings beyond the current one-day USD/CAD cycle.

vi. **Ex-date processing during T+1 transition period** *(OWG-022)*: Ex dates for entitlement processing (determining to whom and when an entitlement obligation is paid to the buyer or seller) are based on events' record dates. Large and complex

corporate action events could have been complicated by the May 27, 2024 T+1 transition. The CCMA prepared an FAQ (#29) providing background on the subject. In October 2023, and again in a March 21, 2024 Staff Notice, the TMX advised issuers and their advisors to avoid, as much as possible, the T+1 transition period around May 27, 2024 for new issues with corporate actions and entitlements. As a supportive measure, CDS agreed to publish, on Friday afternoons from April 26 through May 24, a list of equity corporate actions in a confirmed state with an ex, record, expiry, or CDS payment date falling within the transition period. Members found this useful.

vii. **Conversion weekend backout plan** *(OWG-038)*: There was material discussion of back-out plans – a typical consideration in major systems projects. The need to back out systems and procedural changes was not a significant worry in the move to T+2, because there was a planned industry-driven go/no-go decision point and testing had concluded on both sides of the border with eight weeks to go before transition. Neither of these reassurances were available for T+1. The Executive Director had discussions with Canadian regulators, the Bank of Canada, U.S. equivalents, and members individually and as a group on this issue.

The CCMA also spoke with SEC staff and learned that the SEC had assessed a range of scenarios in the context of past experiences with significant events, including market/economic disruptions (e.g., 2008 financial crash), natural disasters (e.g., Hurricane Sandy), and global incidents (e.g., 9/11): in these very serious cases, settlement continued even if markets closed temporarily. SEC staff believed that the transition was very unlikely to be problematic from a systems and technology perspective and they added that the SEC had the capacity to act quickly in emergencies. While there might be a challenge in the early days following T+1 implementation (more for behavioural than technology reasons), the SEC did not anticipate a situation that would require a system-level back-out and acknowledged that last-minute unwinding would be even more difficult if Canada, Mexico, and others had already moved to T+1 on May 27. Instead, the most likely response would be consideration of very targeted relief or exemptions limited to those affected. The industry accepted the policy of "fail forward; fix fast."

viii. **Implementation:** The CCMA and SIFMA/DTCC/ICI Command Center communicated daily or more frequently in the days leading up to, during, and following the T+1 implementation weekend. This process worked extremely well. No issues were reported over the Canadian implementation weekend leading to May 27. In both Canada and the U.S., there were manageable glitches during implementation. In Canada, the systems supporting the move to T+1 worked well and as expected. All CDS/Fundserv overnight batch processes and intra-day functions were completed on schedule and all CDS systems and processes were stable after Tuesday, with some isolated delays and operational issues. The CCMA published:

- A summary of industry implementation issues on May 31, 2024.
- A summary of post-implementation results (and thanks to industry members) on June 6, 2024.

As well, on June 5, 2024, CDS published an Incident Report for the period of May 27 – May 31, 2024; it did not include reference to, or description or resolution of, issues or errors originating from or relating to external stakeholders (such as marketplaces) and the intra-day trade files they provided to CDS. The CCMA did not receive implementation/post-implementation reports from other infrastructure providers.

Note: In discussions during May 2024, the CCMA identified that there were different ways being used by different parties to calculate fail rates. This was ultimately not critical, however, was a good reminder of the importance of consistent definitions, good data, and user-friendly reporting options in any future project.

ix. **Post-implementation*:*** The following table shows key industry metrics at the time the T+1 project was approved:

Debt and Equity Trades		Entered (#)	Entered ($)	Confirmed (#)	Confirmed ($)
Nov-21	3:59 a.m. ET T+1	84.6%	77.8%	41.7%	51.7%

The table below shows the matching results immediately after implementation:

Debt and Equity Trades		Entered (#)	Entered ($)	Confirmed (#)	Confirmed ($)
May 27-31, 2024	T1 0359 ET	90.0%	87.5%	81.1%	79.7%

Note: In light of the challenges inherent in the T+1 project, as well as the short time-frame and intersection with the PTM project, CCMA members had some discussions with CSA staff to frame expectations at implementation. CCMA members believe that CSA representatives anticipate a period of adjustment following implementation as with other major projects. It is understood that regulatory practice is to observe for one or two reporting quarters and then to make enquiries where there did not appear to be progress towards compliance. Also, the ValueExchange surveys, referred to above, showed that in both Canada and the U.S., the short time until implementation left by the SEC delay in specifying a date, meant that there were expectations among a material number of firms that further T+1-related systems work would continue after the specified compliance date and into 2025.

d. Operations – investment funds

As in the transition to T+2, the move of investment funds (excluding secondary market ETFs discussed in subsection III.c above) to a shorter cycle was uncertain. Unlike in the case of inter-listed securities, Canadian investments funds and certain other products processed through Fundserv are not available for distribution in the U.S., nor are U.S. equivalents available in Canada, so there was no cross-border competitive pressure to change these instruments' settlement date. There were reasons to consider continuing to keep the standard settlement cycles of funds and products processed through Fundserv aligned with that of other investment products from a customer convenience and operational perspective: standard Canadian securities settlement cycles diverging would be a significant change in practices after decades of consistent standards between product types.

In trying to reach a consensus, the challenges of end-of-day pricing and fund managers not knowing until the morning of T+1 if a fund were in net redemptions from the previous day were discussed. This dynamic left insufficient time to redeem securities if a fund had insufficient cash due to an expected increase in the mismatch of underlying securities settlement dates, given that Europe, Asia-Pacific, and elsewhere would continue to settle on a T+2 or longer basis. The liquidity problem was exacerbated for funds significantly invested in international markets that were not transitioning to T+1, as well as index funds, and funds of funds. There was a brief discussion of earlier cut-offs/pricing, however, no change was approved.

CCMA
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For purposes of this report, investment fund issues are classified into a number of areas, with different organizations taking the leads on each in terms of issue management:

i. Policy perspective – Investment Funds Institute of Canada (IFIC)

IFIC members are comprised of manufacturers and dealers, which may be categorized as independent or integrated. They considered a range of T+1-related issues, including liquidity, investment, operational, and customer experience risks. Pursuing exemptive relief to address the trade-date mismatch between funds holding Canadian securities and those issued in markets with a longer settlement period, which had been done in the case of some funds following T+2 implementation, was not considered a practical option. In September, 2022, outgoing IFIC chair Paul Bourque wrote an Op Ed published in *Investment Executive* titled *The best solution to the complex transition may be flexibility*. The CSA staff's views appeared in CSA Staff Notice (CSN) 81-335 – Investment Fund Settlement Cycles:

> "… we are of the view that, where practicable, mutual funds should settle primary distributions and redemptions of their securities on T+1 voluntarily… We think it is important, however, to enable each mutual fund to have flexibility to determine whether a T+1 settlement cycle can work for them. Requiring a T+1 settlement cycle … can raise issues related to the fund's liquidity and directly impact the portfolio management of the fund since portfolio assets may need to be purchased or sold. ...
>
> CSA staff are of the view that many Canadian mutual funds would be able to settle primary distributions and redemptions of their securities on T+1 if the standard settlement for portfolio assets held by the fund move to T+1 in Canada. In our view, moving to T+1 would allow the mutual fund industry to improve investor and dealer cashflow management, align with U.S. settlement cycles, and allow mutual funds to remain competitive from a settlement perspective.
>
> However, we recognize that moving to T+1 settlement would present operational difficulties for funds that have a significant portion of their portfolio assets that settle at T+2 or longer and so the CSA is not proposing amendments to sections 9.4 and 10.4 of NI 81-102 to mandate a T+1 settlement cycle for all mutual fund securities at this time."

For legal amendments pursued by IFIC, see subsection III.e below).

ii. Operational/systems perspective – Fundserv

Fundserv electronically connects manufacturers, distributors, and intermediaries to buy, sell, and transfer investment funds, and many firms sit on both IFIC and Fundserv committees, which allows for useful cross-fertilization of ideas. Fundserv staff managed the Mutual Funds Working Group (through their Standards Steering Committee) as it had in the case of T+2, and oversaw the MFWG issue log, which included 13 issues, as well as 14 potential issues. These can be categorized as technical systems/procedures/testing-related, legal/regulatory (changes to standards/rules), liquidity/funding (see subsection III.a.i above), and practical, that is, when and how firms and advisors would know which funds were moving to T+1 and which were not. The Fundserv implementation schedule is provided below:

Note: At an early project stage, Fundserv staff advised that if the U.S. decided on a Q1 2024 date as was proposed by DTCC and the SEC, Fundserv would issue a V33 point release (that is, not on the standard June schedule) in the Summer or Fall of 2023.

Fundserv and its members have a long-established practice of implementing system updates (known as versions) annually, and usually in June. Fundserv used this proven process for T+2 and again for T+1, completing necessary systems changes for T+1 in V33, implemented in June 2023. A change related to in-cash transfers (ICTs)[5] was included in V34,scheduled for implementation on June 10, 2024. The fact that ICTs were not identified as being on the T+1 critical path (although of value for client-name processing), as well as the flexibility fund issuers enjoyed regarding implementation as funds do not face the same cross-border issues as do inter-listed securities, led to a discussion in 2022 of the transition date. There was some discussion of choosing June 10, 2024 for T+1 implementation, however, this was rejected as most of the underlying securities would be moving to T+1, and to plan for an additional set of procedures for the May 27-June 10 period was seen as impractical (especially by firms that offered both funds and non-funds).

iii. **Operational perspective – Other**

While the very significant majority of investment funds are processed through Fundserv, some are not.

- Some are understood to be ***proprietary funds*** issued by fund managers affiliated with a dealer that are processed in-house, and so are not considered here.
- A number of ***fund products not covered under NI 81-102 or NI 24-101*** clear through Fundserv, including segregated funds, labour-sponsored investment funds (LSIFs), registered education savings plans (RESPs), investment funds that are not reporting issuers such as non-redeemable investment funds, certain

[5] ICTs are relevant for client-name accounts: an investor sells a fund from Fund Company A to buy a fund at Fund Company B. Instead of sending a redemption and waiting for the proceeds to be able to subsequently place the buy, a dealer could achieve this in one step by placing an ICT. In a T+2 environment, Fundserv receives the contract for the redemption to settle on T+2. For T+1, Fundserv creates a buy order, with a T+1 redemption, for Fund Company B so that the sell and buy settle on the same day.

funds in Quebec, and investment funds that are mutual funds but not reporting issuers (e.g., pooled funds).

Some ***non-fund products***, such as principal/non-principal-protected notes (PPNs/NPPNs), flow-through shares, mortgage-backed securities, and GICs, clear through Fundserv also; while money market funds were already on a T+1 basis, other products, such as PPNs/NPPNs, traditionally followed the standard settlement cycle (and continued to do so).

CCMA staff asked CCMA members, as well as IFIC and Fundserv staff, for any further information that might help determine whether there could be or were any issues with these non-conventional-mutual-fund products, however, no additional information was forthcoming. The table in subsection III.d.vii below shows that many of the non-NI 81-102 funds and other products did move to T+1 and no issues were reported.

iv. Testing – Fundserv

Fundserv facilitated mock environments as with T+2, including to test for the transition weekend. Testing was not mandatory, and no attestation (a requirement in the T+2 transition) was required with respect to the V24 flat file to XML. Between mid-January and mid-February 2024, Fundserv hosted two mock cycles to allow its members to simulate the days leading up to and following the May 27, 2024 implementation weekend for funds moving to a T+1 settlement cycle. Fundserv members also were able to continue testing T+1 funds once V34 user acceptance testing opened in early March 2024. Testing proceeded without incident.

v. The big question in Canada – what funds would move to T+1?

Early in the project, Fundserv and its members agreed that fund companies could send FD or MD files to Fundserv to update the settlement period, with May 27th as the effective date, well in advance of the implementation weekend. Few reportedly did so until shortly prior to transition. Fundserv also agreed to host a spreadsheet of funds making the transition for dealers that did not use the FD or MD files.

Early polls conducted by Fundserv in 2022 suggested that 85%-90% of funds would transition to T+1. Later discussions in different parts of Fundserv members, under the auspices of IFIC, surfaced funding and liquidity issues. IFIC conducted a confidential analysis of Canadian mutual fund assets that showed more than 1,539 funds (over 46% of all Canadian funds) had a greater than 10% exposure to jurisdictions that would not likely be moving to T+1 and that $365 billion in assets under management (AUM) held by Canadian mutual fund managers – 19.2% of Canadian mutual fund AUM – would be impacted.

This led to CSA CSN 81-335 (see subsection III.d.i above), which left the fund transition to T+1 optional. It was up to fund managers to determine which of their funds, if any, would move to T+1 (e.g., North-American funds) and which would not (ones with a large global component of securities still settling on T+2 or longer). Fund managers moving funds to T+1 had to decide on what day to transition (from an efficiency perspective, dealers preferred to have funds transition to T+1 at the same time as debt and equities on May 27, 2024) and when to announce this date. To add to possible complications, there was nothing preventing fund managers that moved to a T+1 settlement cycle from transitioning some or all funds back to T+2. In any scenario, communications would be key for dealers, custodians, and online do-it-

yourself investors, with a desire for a minimum of six-to-eight weeks' notice requested by dealers and vendors.

It proved to be difficult to get information on fund manager intentions, with many expecting only to decide closer to implementation date. The CCMA was advised in the summer of 2023 that a number of individual fund managers were questioning the value in moving any funds at all to T+1 due to cost although CSN 81-335 outlined the CSA's expectation that most would indeed adopt the shorter cycle. Given that fund managers might be waiting to decide what funds to move to T+1 based on what competitors' intentions were – a chicken-and-egg situation – when no funds had formally declared by mid-fall 2023, the following steps were taken:

- CCMA staff polled a number of fund managers – three integrated firms (two bank-owned and one non-bank-owned) and an independent manufacturer – and with their permission shared their results to encourage additional fund managers to disclose; a number of custodians/service providers were similarly seeking information from their clients but needed client permission to make the information public even to a limited audience within the industry.

- In January 2024, Fundserv circulated a survey to its members for completion by March 1st, asking whether they intended to move all, some, or none of their funds to T+1. Not all fund companies responded (and one later changed its decision) and the Fundserv survey did not have the granularity that CCMA dealer and other members required, that is, specifically which funds would move to T+1 for firms moving only some of their funds.

- A number of CCMA members met in February 2024, three months before implementation, to discuss how to advance the issue. Combining Fundserv's survey responses of firms moving 100% and 0% of their funds to T+1 with the information the CCMA received directly from a number of CCMA members, the CCMA was able to confirm approximately two-thirds of funds were moving to T+1, leaving approximately one-third undeclared. The CCMA and CEWG worked on communications material to be sent to fund managers to explain why information was necessary well before the week of implementation, which was when Fundserv would share information with its member clients by spreadsheet, but not publicly.

- In late March 2024, with 60 days until implementation, the CCMA met with the presidents of IFIC and Fundserv to discuss how the three organizations might work together so that dealers and advisors (and investors including retail clients) would know with confidence which funds were moving to T+1 and which were not. The CCMA suggested that manufacturers (those using Fundserv and those not) be asked to do the following three things:
  - Make known publicly and accessibly, by April 12, 2024, which of each firm's T+2 funds would move to T+1, and which would not; as a minimum, non-Fundserv and Fundserv members willing to do so were asked to complete a very short survey to make available to CCMA members the latest information. Fundserv members not wishing to do so were asked, if they had not already done so, to at least complete the less detailed Fundserv survey.
  - Minimize and ideally avoid *non*-T+1 settlement cycle changes during the week of May 27-June 1, 2024 to reduce confusion, mitigate transition risk, facilitate post-implementation regression testing, allow for a stabilization period, and reduce the potential for confusion.

- Send formal notices to advise dealers of settlement cycle changes that occurred after May 27th for the rest of 2024 because not all Fundserv members used the FD and MD files by which changes in settlement cycle were transmitted, relying instead on information received directly from the fund managers.

- In April 2024, an IFIC representative said they understood that their members did "… not wish to share more broadly and would not necessarily reveal this data. As such, [IFIC] would not ask them to complete an additional survey. Fundserv data should serve the industry very well and [IFIC's] understanding [was] that commercial marketing and communications efforts [would] be made by all fund cos to educate their advisor and distribution partners and supporters accordingly."

- The CCMA's April 30, 2024 Technical Bulletin set out how Fundserv would share information on investments moving to a T+1 settlement cycle in the week prior to implementation, and noted that based on Fundserv and CCMA information, an estimated 76.5% of instruments cleared through Fundserv would move to T+1. The final result (see III.d.vi below) was 76%.

vi. Implementation – investment funds/other items clearing through Fundserv

The Fundserv transition was smooth, with no implementation issues reported. Nearly 71,000 (76%) of 93,669 fund profiles moved to T+1 on May 27, 2024.

Net Increase in T+1 Profiles on May 26 Compared to May 24, 2024				
May 24, 2024	Product	May 26, 2024	Change	% Change
107	**Flow-through shares**	**113**	6	**5%**
70	**GICs**	**1 274**	1 204	**95%**
697	**Hedge funds**	**758**	61	**8%**
29	**Labour-sponsored Investment Funds (LSIFs**	**29**	-	**0%**
80	**Liquid alts**	**632**	552	**87%**
3	**Mortgage-backed securities**	**3**	-	**0%**
69	**Mortgage funds/MICs**	**69**	-	**0%**
4 080	**Mutual funds**	**35 204**	31 124	**88%**
1 149	**Non-principal-protected notes (NPPNs)**	**14 336**	13 187	**92%**
16	**Other**	**90**	74	**82%**
1 825	**Pooled**	**2 248**	423	**19%**
958	**Principal-protected notes (PPNs)**	**6 691**	5 733	**86%**
168	**Private funds**	**168**	-	**0%**
59	**Real estate**	**58**	- 1	**-2%**
13 485	**Segregated funds**	**31 846**	18 361	**58%**
1	**Structured notes**	**1**	-	**0%**
4	**Venture capital**	**4**	-	**0%**
19	**Wrap products**	**145**	126	**87%**
22 819		**93 669**	**-70 850**	**-76%**

e. Legal and regulatory review

The LRWG was able to reuse the T+2 issue log to review and identify what regulatory instruments required amendment, and the Chair followed up rigorously with industry participants and regulators to monitor progress. The LRWG T+1 issue log included 76 issues (up from 72 for T+1), almost entirely regulations or rules of infrastructure providers (marketplaces, clearing agencies, etc.). Most did not require any change. For those rules requiring change, two levels of regulatory review and approval were required in some cases, for example, by a self-regulatory organization (SRO) and then by a

provincial authority (securities commission). The serial-rule approval process did not impede the move to T+1.

The CSA supported the initiative from the project's start. Representatives of some or all of the Autorité des marchés financiers (AMF), B.C. Securities Commission (BCSC), and two sections of the Ontario Securities Commission (OSC), as well as the Bank of Canada (BOC), attended most meetings. The CCMA Executive Director met regularly with AMF, BCSC, OSC, and BOC staff, and presented annually in person to the full CSA.

During the course of the project, the following regulatory instruments were issued:

- **February 3, 2022:** CSN 24-318 – Preparing for the Implementation of T+1 Settlement (Fr)
- **[U.S.] February 9, 2022:** SEC Shortening the Securities Transaction Settlement Cycle
- **December 15, 2022:**
    - CSA Outline Steps to Support Transition to T+1 (Fr)
    - CSA Request for Comments National Instrument (NI) 24-101 – Institutional Trade Matching and Settlement (Fr)
    - CSN 81-335 – Investment Fund Settlement Cycles (Fr)
- **April 20, 2023:** Request for Comments – New SRO Proposed Amendments to Facilitate Investment Industry's Move to T+1 Settlement (Fr)
- **June 15, 2023:** Coordinated Blanket Order 24-930 Exemption from Certain Filing Requirements of National Instrument 24-101 Institutional Trade Matching and Settlement (Fr)
- **August 10, 2023:** CSN 24-319 re NI 24-101 Institutional Trade Matching and Settlement – Update and Staff Recommendation (Fr)
- **September 28, 2023:** CIRO Rules Bulletin 23-0141 re NI 24-101 Trade-Matching Statement
- **December 14, 2023:** CSA Adopts Amendments to NI 24-101 Institutional Trade Matching/Settlement
- **March 21, 2024:** TMX Staff Notice to Applicants, Listed Issuers, Securities Lawyers re T+1 Settlement
- **May 22, 2024:** OSC Releases Guidance on Use of Cash Collateral for ETF Delayed Basket Securities
- **May 23, 2024:** Canadian Securities Regulators Adopt Final Amendments re Shortened Settlement Cycles for Mutual Funds
- **May 27, 2024:** Canadian Securities Regulators Announce Move to T+1 Settlement Cycle (Fr)

The CCMA responded to a number of regulatory requests for comments or initiated proposals. These include:[6]

- **April 19, 2022:** CCMA Responds Regarding T+1 Implementation Date to SEC Request for Comments on Proposed T+1 Rules
- **October 10, 2022:** CCMA Co-signs Letter requesting SEC to Publish T+1 Implementation Date

[6] Non-CCMA comment letters on proposed amendments to NI 24-101 its and Companion Policy filed March 16, 2023 were from: Andrew Mitchell (IFIC), Christopher Climo (IIAC) (prepared in consultation with CCMA staff), and Katie Walmsley (PMAC); CCMA and Portfolio Management Association of Canada (PMAC) staff later clarified to the CSA that while preferring midnight ET on T to the initially CSA-proposed 9:00 p.m. on T, PMAC supported the industry position of 3:59 a.m. ET on T+1).

- **February 9, 2023:** CCMA Letter to SEC on Risks of Q1 Implementation v. Benefits of Labour Day 2024
- **March 17, 2023:** CCMA Comments on Proposed NI 24-101 Amendments (Fr)
- **July 25, 2023:** Additional CCMA Comments re Amendments to NI and CP 24-101 (Fr)
- **February 26, 2024:** CCMA-CETFA Request to OSC for Collateral Guidance for ETF Delayed Basket Securities
- **April 23, 2024:** Joint CCMA-CETFA Letter to OSC with Details for Regulatory Guidance re Collateral
- **April 23, 2024:** CCMA-CSA Letter Recommending Amendments to NI 62-104 (Take-over/Issuer Bids)

The following instruments were considered and, where required, addressed by the LRWG:

i. NI 24-101 *Institutional Trade Matching and Settlement:* NI 24-101 sets the timelines for reporting and confirming institutional trades. For T+2, 90% of trades were to be reported and confirmed by noon ET on T+1. NI 24-101 was identified as a priority for possible change at the outset of the project and there was agreement on the desirability of a rule amendment. The industry proposed and received approval for a matching deadline of 3:59 a.m. ET on T+1 (see also subsection III.c above). Other changes to NI 24-101 included the elimination of particular sections regarding exception reporting. On December 14, 2023, the CSA announced approval of the rule changes for effect May 27, 2024, providing the earlier certainty the industry had requested.

ii. Institutional Trade-Matching Statement: A novel approach adopted with the introduction of NI 24-101 in 2007 was, as an alternative to bilateral trade-matching agreements, a published trade-matching statement. The Investment Industry Association of Canada (IIAC), from 2007 to 2022/3, had developed and hosted a central online facility where dealers, custodians, advisors and other trade-matching parties could have their statements posted and verify that their counterparties also had posted statements confirming they had in place appropriate trade-matching policies and procedures to enable the matching threshold to be met. This was updated to provide for matching for T+1 settlement. In late 2023, IIAC staff had removed the trade-matching facility while updating its website. On behalf of members who relied on the IIAC trade-matching statement posting facility, the CCMA followed up with the IIAC requesting an update status; as an interim measure, the CCMA posted the updated statement (Template T+1 Trade Matching Statement (Fr)), following discussion with CIRO, on June 29, 2023.

Note: There was one matter raised that proved *not* to be an impediment to the move to T+2 or T+1 but should likely be considered in any further shortening of the standard settlement cycle. The Buyside Taskforce report noted that under NI 24-101, institutional investors such as pension funds and custodians are not mandated to have trade-matching policies and procedures (see summary of related NI 24-101 provisions) and a number of investment managers advised that they do not fall into the category of "Adviser" under securities law and so were not legally required to implement the trade-matching procedures. They added that they had instituted processes voluntarily to enable counterparties to meet the matching requirements in terms of percentages and timelines, and that they intend to continue doing so. The perceived lack of engagement by many firms in the buyside – possibly because many expected their service providers to take what steps were necessary – was of

sufficient concern that T1SC agreed the CSA should be requested to clarify the scope of NI 24-101 with respect to non-advisor investment managers and custodians.

On August 22, 2023 and February 2, 2024, CCMA staff met with the OSC to seek clarity. It was learned that one pension fund, because it managed some third-party assets, had obtained OSC exemptive relief from the requirement to be registered as an adviser; another, which provides investment management services to various federally-governed pension funds, made a relief application to the OSC noting that it was neither registered as an "adviser" nor was acting as an adviser in reliance upon exemptions from the adviser registration requirement under securities legislation. The issue was not pursued further in 2024 as transition to T+1 took place successfully.

iii. **NI 81-102 *Investment Funds:*** Several changes to National Instruments to accommodate a shortened settlement period for investment funds were discussed. NI 81-102 permitted settlement up to and including the second day following a trade (i.e., the maximum settlement period). Even if the industry convention were to move to T+1, subsection 10.4 of NI 81-102 did not technically need to be amended. As with respect to the move to T+2, IFIC worked closely with the regulators to discuss possible amendments. As mentioned, CSN 81-335 was issued, which encouraged but did not mandate that funds move to T+1, leading to uncertainty (see also subsection III.d.vi above).

There were a number of other regulatory issues considered by IFIC/Fundserv members, including changes to section 2.6 of NI 81-102 that permits funds to borrow cash of up to 5% of the fund's net asset value (NAV) on a temporary basis to fund redemption requests (the fund industry decided *not* to pursue a change to this threshold as one way of addressing the T+1/T+2 mismatch issue); whether rights of withdrawal/recission/confirmation had to change (no); whether documentation changes were required by Fundserv (yes); and if there was a need to make a change to allow force-settling (yes).

Note: Although there was discussion of a change to the 5% of NAV borrowing threshold for redemptions, fund industry representatives decided not to pursue this as an industry. In June 2024, following the T+1 May 27, 2024 T+1 launch date, the OSC announced in its weekly bulletin terms of relief granted for three years to 11 major fund managers, including AGF, CI, Fidelity, and TD Asset Management from the cap on cash borrowing, allowing them to now borrow up to 10% of net asset value (NAV), requiring them to adopt controls to exceed the 5% borrowing limit, setting conditions on the excess borrowing, and requiring disclosure of the new borrowing limits to investors.

IFIC agreed that to accommodate mutual funds voluntarily moving to T+1, technical amendments to section 9.4(4)(a) of NI 81-102 were necessary so that securities for non-payment could be redeemed on the next business day after the standard settlement date. IFIC staff saw proposed CSA drafting to clarify that payments must be made no later than the reference settlement date of the purchase order but required mutual funds to disclose "in writing" the business day it determined as the reference settlement date under subsection 9.4(0.1)(a). Concerned that "in writing" could be interpreted in a way that was unnecessarily inefficient, IFIC proposed that the NI 81-102 Companion Policy be amended to provide as examples of acceptable communications via Fundserv through a Fundserv file or other mechanism or by

"posting the mutual fund's settlement cycle on the mutual fund's designated website." It is believed that the overwhelming majority of industry participants use Fundserv files, or notices directly from the manufacturer, and that disclosure via a fund's designated website would not be operationally attractive to dealers.

Note: Amendments to address force-settling and other changes came into force on August 31, 2024.

iv. **NI 62-104 *Takeover Bids and Issuer Bids:*** At the onset of the T+1 project, NI 62-104 provided for a three-day period to settle accepted tender offers. An oversight in the move to T+2, this instrument needed to be amended to align payment deadlines for taken up deposited securities under takeover bids and issuer bids with settlement practices being adopted in Canada on May 27, 2024. As of the writing of this report, the CSA is expected to issue new draft changes to this National Instrument, likely reflecting CCMA suggestions.

v. **SRO Rules and Guidance:** Early in the T+1 project, CIRO[7] identified necessary changes to what were then Investment Industry Regulatory Organization of Canada (IIROC) Rules, issued a request for comment and received feedback, and waited for the CSA's review of, comment on, and approval of the final rule changes, after the CSA approved NI 24-101 changes. Mutual Fund Dealers Association (MFDA) rules for fund dealers did not require change (MFDA is now part of CIRO along with the former IIROC). As for T+2, it was determined that some change to examination procedures would be sufficient.

vi. **NI 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations;* IIROC 3816 – Trade Confirmations; Universal Market Integrity Rules (UMIR) Policy 7.1, Part 13 – Specific Provisions Respecting Client Disclosures:** While these rules did not require amendment, shortening the settlement cycle led to a review of confirmation requirements, summarized in the following tool published on December 22, 2022: Plain Language Summary of Confirm Requirements.

vii. **Other:** As noted above, there are a number of products not covered under NI 24-101 or 81-102 (see subsection III.d.iii above).

viii. **Marketplaces including exchanges:** Trading rules, subscriber agreements, SRO rules, and exchange/alternative trading system (ATS) listing policies were reviewed, amended where necessary, and approved/adopted after the CSA approved the NI 24-101 changes. Information about whether changes needed to be made to documentation was not shared, and it was left to clients of the parties to verify and address any changes necessary.

ix. **Clearing agencies:** Changes to procedures were identified, with CDS and TSX submitting changes as housekeeping, and CDCC – as material changes. The Montreal Exchange self-certified amendments. Changes to Fundserv procedures for V33 and V34 did not require regulatory approval. No required changes relative to foreign clearing agencies were found.

[7] On January 1, 2023, what is now called the Canadian Investment Regulatory Organization (CIRO) was formed through the merger of the Investment Industry Regulatory Organization of Canada (IIROC) and Mutual Fund Dealers Association (MFDA). On April 24, 2023, CIRO was approved by its members as the name of the combined organization.

x. **U.S. rule changes:** The LRWG issue list included relevant U.S. rules (the U.S. also has a number of instruments without direct Canadian equivalent but of relevance to Canadian parties, including a Prime Broker No-Action letter, Reg SHO prospectus delivery rule, etc.). There were some challenges in obtaining responses to the LRWG Chair's requests for clarity on various potential U.S. rule changes, but this ultimately did not have a negative effect on implementation. As noted above, the CCMA responded to the SEC request for comments, focusing on the implementation date, and later signed a joint letter with U.S. and global counterparts pressing for a Labour Day 2024 implementation date. The CCMA also provided background to SIFMA regarding the Canadian solution to help avoid timely and costly agreements by adopting a policies-and-procedures approach.

xi. **Transitional/administrative relief for NI 24-101, NI 82-101, and IIROC Rule:** Transitional and administrative relief, which had been requested in the case of T+2, was discussed, however, did not prove necessary. There may have been individual requests for exemptions or relief of which CCMA staff were unaware. See also note in subsection III.e.ii.

f. Communications

A communications process, plan, and messaging were early priorities in the T+2 project, in light of multiple dispersed and disparate parties. While the interconnectedness among and within the different parts of the industry can help in implementation, it also can add complexity. On the positive side, considerable material from the T+2 project could be and was updated for T+1, allowing the Canadian project to advance quickly once it seemed certain that the move to T+1 would go ahead. As for T+2, the CEWG's issue list was short: (i) awareness-building, (ii) developing engagement; (iii) re-launching a website (and, later, a focused T+1 portal) to support communication channels; (iv) linking with the communications team for the U.S. T+1 initiative; and (v) addressing, if and when needed, reputational risks. See details in **Appendix B**.

A number of unexpected communications issues arose during the T+1 project that CCMA staff addressed (in some cases, CIBC Mellon kindly provided media support):

- CCMA staff spent a week correcting erroneous claims that had appeared in a U.S. association letter and, separately, a different U.S. association media release that "Canada, […] has already announced a compliance date of September 2024." This was false: the CCMA had always said that Canadian capital markets would adopt the same transition time as the U.S.
- SEC staff believed that Canada had made T+1 optional (possibly due to misunderstandings arising from CSN 81-335 (see above). Again, this was false: while mutual funds were given an option, the cross-border trade in inter-listed securities was clear that there would be a rule change to facilitate the full-scale move to T+1 of Canadian debt and equity markets.
- After the SEC announced the compliance date of by the end of Q2 2024, at a very well-attended major American industry conference in the fall of 2023, a number of speakers left the impression that the SEC would defer implementation to Labour Day. This was also false. Unfortunately, when requested to provide some public SEC mention (verbally or in writing) to the effect that the compliance date remained Q2 2024, we could not find evidence that the SEC did provide comment.

Also:

- The CCMA hosted daily week-prior-to, transition-weekend, and week-following transition meetings. The CCMA's central role in Canada and link with the U.S. T+1 Command Center led to the CCMA having to manage communication of some infrastructure glitches, with messaging needed to accurately recognize issues *and* avoid counterproductive interim action/re-action (the issues were acknowledged as not (yet) cured but not serious and being managed).
- Questions arose from the U.S. regarding a Bank of Canada notice referencing T+1 that was causing confusion – this was clarified as not being an issue but the case underscores the importance of clear communication.

IV. Results

The Canadian marketplace transitioned to T+1 on May 27, 2024 as scheduled, and the double settlement was successfully achieved on May 28, 2024, with no public evidence of market disruption. CDS and CDCC system changes went into production smoothly over the transition weekend (no system changes were required at Fundserv). All major deliverables at CDS, CDCC, and Fundserv were met.

a. Metrics

- **Trade matching:** Comparing a CDS three-day data analysis of trade entry and matching at 3:59 a.m. ET on T+1 in November 2021 (the month the Canadian T+1 project kicked off with the first CCMA T1SC meeting) to the week of T+1 implementation, trade entry rates increased by 6.1% (#)/12.5% ($) and confirmation rates increased dramatically, almost doubling, and by value – by over 50%, translating into significant risk reduction. Note also the significant "overnight" improvement between the first three weeks of May 2024 and post implementation.

TMX Institutional Trade Processing Report Extract - Debt & Equity Trades at 3:59 a.m. ET on T+1					
		Entered		Confirmed	
		#	$	#	$
Nov. 2021	T1 0359	84.6%	77.8%	41.7%	51.7%
Apr. 2024	T 2400	85.5%	85.4%	56.3%	64.4%
May 1-25, 2024	T 2400	85.0%	86.3%	**56.3%**	**68.6%**
May 27-31, 2024	T1 0359	90.0%	87.5%	**81.1%**	**79.7%**

The above compares to U.S. affirmation rates approaching 95% of transactions (varying by market segment) by the 9:00 p.m. DTCC cut-off.[8] Canadian regulators will be watching for movement by Canadian registrants toward a minimum 90% matching rate per firm (and a higher average rate by definition). It is too early to speculate whether CDS's implementation of the T+1-delayed PTM project, again underway now that the T+1 project is complete, will facilitate the Canadian industry's reaching the goal.

- **Fails:** Fail rates, a week after implementation, were below 2% based on value. This was in line with average fail rates experienced in Canada in a T+2 environment and compares with those in the U.S. following the T+1 transition.

[8] *T+1 After Action Report*, SIFMA, ICI and DTCC, September 2024

- **Collateral savings:** Early reductions in the VAR component of the continuous net settlement (CNS) collateral pool ranged between 23% and 28%. While less than some expected (~42%), savings for sellside dealers were significant and comparable with U.S. results. NSCC reported clearing fund requirement decreases of 23% from the prior three-month average value in a T+2 environment and 20% from the prior-month average.

There are no publicly available details on the cost to individual firms or aggregated industry of T+1 implementation. CCMA staff completed the work on a timely basis and within budget, with a staff and other resources considerably less than industry project management equivalents in the U.S. This was in large part because the U.S. determined the parameters of the project and the Canadian marketplace benefited from shared information, however, the limited CCMA administrative support was a constraint to T+1 project management in certain respects (see VI.b.ix).

b. Canadian feedback

Industry members were generally pleased with the results of the transition to T+1, considering the significant impediment at the start – that is, deferral in the PTM project – caused by the SEC delay in confirming, and then imposing of, an earlier-than-ideal transition date. Meetings of T1SC and OWG in particular were well-attended, evidencing the value to participants and their firms of the CCMA committees and meetings.

Reactions were muted compared to the very positive responses following the T+2 implementation in 2017. A number of T+1-related glitches were questioned by participant representatives who believed issues should have been identified in testing between infrastructure parties or in stress testing; these were visible to senior capital markets players in other countries, but resolved without impacting the public. These matters are reflected in Section V. Lessons Learned below.

c. U.S. and global feedback

Throughout the T+1 implementation period in North America and a number of other countries, there was some skepticism expressed about whether the move to T+1 would be delayed (it wasn't) or that markets would experience problems (they didn't). There was positive feedback, most recently evidenced in the recent joint SIFMA/ICI/DTCC-prepared *T+1 After Action Report*, which noted.[5]

> "After more than three years of rigorous and coordinated activities to plan for -- and ultimately implement – a shortened settlement cycle, the industry is recognizing reduced settlement risk across the U.S. capital markets. Firms are now able to make better use of their capital while promoting financial stability. Ultimately, T+1 has provided the appropriate balance between increasing efficiencies and successfully mitigating risk for the industry."

Note: This SIFMA/ICC/DTCC report was not a post-mortem *per se*, focusing more on how much more complicated a move to T+0 would be and suggesting what steps could be taken to advance global clearing and settlement.

As successful as the U.S. May 2024 transition was, it was not without jitters before the fact. A May 28, 2024 Bloomberg article quoted the SEC as seeing the potential for a "short-term uptick" in fails and, from among industry players, there were reports that:

""There's a lot of dependencies within the industry, and there may be some rough patches with individual firms," says Tom Price, SIFMA's managing director and head of technology, operations and business continuity, whose team staffs the industrywide T+1 Command Center. … Christos Ekonomidis, T+1 program director at BNY Mellon, says, "We're ready for those expected waves. We know there are going to be some issues with a transition like this, so it's about having the right resources to fix them quickly.""[9]

A report issued later by Citi Securities Services provided more granular input, saying based on a survey run one month after the American transitions:

"… 44% of respondents indicated that they were significantly impacted by T+1, up from 28% [in the comparable 2023 poll] a year ago. Every area appears to have been more impacted than originally anticipated, from funding to headcounts, securities lending, and fail rates.

… while the sell-side has seen a notable funding improvement, asset managers have seen their funding costs worsen, as 46% of them have had to cover significant gaps in settlements between T+2 and T+1 markets and in their funds' subscription and redemption cycles.

… [while the same sell-side houses […] have benefited from new funding efficiencies, [they] have also seen two other core part of their businesses hit by T+1:

- First is securities lending (and recalls), where 56% of sell-side respondents claim to have been "significantly impacted" since the move. Market concerns around lending recalls have figured at the top of the industry issues agenda for much of the last two years but early experience is showing that the true impacts of T+1 are being felt across the entire trade cycle, through reduced supply, increased buffering and greater conservatism between traders.

- Secondly, 52% of banks and brokers have seen T+1 significantly impact their headcounts and staffing levels. In the lead-up to T+1, concerns were already being raised around the industry's preference for hiring over automation – many of which appear to have materialized. After the transition, the sell-side has found themselves exposed to large volumes of manual processing and exception handling triggered by their clients.

… the industry is still only two-thirds of its way through its North America T+1 project agenda. With 33% of project work still to be undertaken (mainly in 2025) in the form of further automation as well as additional hiring, the effort and focus on T+1 extends well beyond the transition date."[10]

There also have been some comments by European market observers[11] regarding the market impacts on European funds from the move in North America to T+1, however,

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9 U.S. markets ready to open with T+1 settlement, Bloomberg, May 28, 2024

10 Citi Securities Service, Securities Services Evolution 2024: Disruption and transformation in financial market infrastructures, September 2024

11 "Lower returns for European funds investing in U.S. equities compared with U.S.-domiciled funds with similar portfolios are accelerating demand among asset managers for the EU to cut fund settlement times. Ignites Europe analysis of Morningstar data suggests the change may be having a negative effect for European investors, bearing out warnings from asset management executives on differences in settlement times between Europe and the U.S." However, commenters on the article noted several reasons why the article's conclusions are incorrect including that the most important factor is withholding tax – a physically replicating Irish-domiciled Undertaking for Collective Investment in Transferable Securities (UCITS) ETF will incur 15% tax on U.S. dividends, whereas a U.S.-domiciled ETF will not.

most agree that conclusive responses will require more time to measure and assess. While European observers and the Citi analysis had a more global focus, a prominent organization in the American capital markets polled American asset managers with somewhat different results. There were, as expected, areas of increased cost due to the settlement cycle mismatch between North-American and other developed markets, but also reports of better-than-expected post-trade-execution process efficiency gains and lower-than-anticipated costs due to the significant improvements industry-wide.

The CCMA-commissioned Charles River Associates study (2000) referenced the free-rider effect that can arise in industry-driven initiatives, when firms not investing in systems improvement "free-ride" on – benefit from without incurring costs of – efficiency investments made by other firms. With T+1 being firmly regulator-driven in the U.S., the ability to free-ride diminished, meaning almost all firms benefited from having trades matched and affirmed on trade date. The U.S. asset managers that provided feedback also said they were saving on reconciling and repairing unmatched transactions that used to take place on T+1 prior to T+2 settlement. As fail rates did not change, anticipated additional costs of manual fixes did not materialize. While global settlement misalignment increased spreads as expected, some American observers have said that they are much lower than anticipated (e.g., E.U.-listed ETFs with international investment exposure). Finally, while there is no concrete evidence that sellside savings have been being passed on, anecdotally some asset managers reported easier access to capital from their custodians and counterparties for short-term financing needs due in part to the latter's lower margin requirements.

Whatever global views were on the North-American, Caribbean, and South American country moves to T+1, many other countries are now looking at a similar move (see VI. The Future below).

d. Conclusion

While the T+1 transition was described as a success, the goal of 90% matching by 3:59 a.m. ET on T+1 in Canada has not been achieved. An industry-driven initiative to start, there was an expectation that T+1 would be achieved by significantly improved automation, however, more manual workarounds were used due to the undesirably long period of effective date uncertainty. While matching rates by volume have improved since transition, they have not reached 90% as can be seen in the table below:

TMX Institutional Trade Processing Report Extract – Debt & Equity Trades at 3:59 a.m. ET on T+1									
		Overall Debt & Equity Trades Entered				Overall Debt & Equity Trades Confirmed			
		#	%	$	%	#	%	$	%
May 27-31	T1 0359	25 786	90.0%	$93 785 301 975	87.5%	110 830	81.1%	$99 706 580 770	79.7%
Jun-24	T1 0359	67 357	91.1%	$295 868 772 383	85.7%	407 022	86.5%	$385 119 514 503	79.2%
Jul-24	T1 0359	94 264	92.3%	$259 905 954 017	88.2%	419 758	87.7%	$310 946 093 727	80.5%
Aug-24	T1 0359	98 814	91.5%	$298 593 863 225	89.3%	410 524	87.6%	$355 023 873 598	81.1%
Sep-24	T1 0359	83 592	92.2%	$326 868 325 468	88.3%	408 144	88.9%	$401 588 832 235	82.7%

One commenter aptly summed up the "glass half-full/glass half-empty" sentiment saying: "It's important to recognize that [ultimately] T+1 was able to be launched without fundamental changes to the infrastructure design supporting market activity. For the most part, batch-based store-and-forward processes continued either "as is" or with adjustments to timetables. An admirable accomplishment, T+1 likely represents the limit of that infrastructure's ability to be further optimized."

That said, and as mentioned above, this evaluation may be re-assessed once the T+1 projects to be completed after May 27, 2024, combined with T+1 components of PTM implementation, are fully in place and optimized in 2025.

V. Lessons Learned

Specific feedback received in response to the CCMA's request for comments on what went well, what was a surprise, what could have been done better, and what should be considered for improvement in any future cross-industry projects included the following:

a. What went well:

i. Use of the CCMA for overall industry co-ordination and education.
ii. Well-led (Chair or Co-Chair) and well-organized committees with Jason O'Born, Sheera Badial, and Domenic Sgambelluri contributing valuably toward the industry direction, along with CCMA representatives Keith Evans, Jamie Anderson, and Barb Amsden.
iii. Early "deep dives" into current-state and future state options that provided valuable groundwork.
iv. Appropriate use of experts (Fran Daly – CCMA) and task forces – BSTF, ETFTF, CASLA's T+1 committee.
v. Regular participation at CCMA meetings by CDS/CDCC and Fundserv; these organizations and other key infrastructure and service providers participated and designed an integrated testing plan.
vi. Early and continuing regulatory involvement from AMF, ASC, BCSC, BOC, OSC, IIROC/CIRO staff who attended most meetings and met industry-requested regulatory change deadlines.
vii. The CCMA Canadian Asset List was very helpful.
viii. CCMA provided a common voice for all participants by drafting various letters to regulators.
ix. Regular CCMA meetings and status updates were useful; the CCMA Executive Director kept meetings on target, working behind the scenes as appropriate, and guiding issues for resolution rather than repeated discussion; CCMA staff ensured key regulatory questions were clarified by follow-up phone calls.
x. Tracking of all issues within issue logs with status updates on progress relayed at each meeting.
xi. Executive Director visits to members for "soft sounding" of real preparedness of firms and industry.
xii. Status update meetings held throughout the transition weekend that were helpful in ensuring all were aware of potential issues.
xiii. Publication of CCMA meeting minutes monthly, and every day during the transition period.
xiv. Topical and relevant website — a continually handy reference; CCMA newsletters and FAQs that provided helpful information to industry members; while all tools might not have been useful to all industry participants, even the better-staffed project teams on occasion mentioned finding something new (e.g., in the last-minute pre-transition checklist) and some (e.g., why 3:59 a.m. ET on T+1, why May 27 and not May 28 was chosen as the implementation date in Canada, how to find a fund's settlement cycle) were widely referred to.
xv. The CCMA was able to arrange two useful meetings with SEC staff.

b. **What was surprising (bad and good):**

i. That certain issues were not identified and addressed during intra- and inter-infrastructure testing exercises and stress testing.

ii. That a back-office service provider missed T+1-critical processing parameters for segregation and entitlements and seemed not to have effectively assessed if U.S. business partners/vendors (e.g., DTC) had imposed changes affecting its processing.

iii. That certain industry associations were less involved than in earlier settlement cycle projects due to staff turnover, perceived higher priorities, and/or other unexpected developments

iv. That incorrect information surfaced in the U.S. regarding Canadian markets intentions and that documents with errors were not corrected by those making the error.

v. That the SEC Chair ignored strong arguments from U.S. and global sources for a three-month implementation deferral to reduce risk and declined to respond to rumours that T+1 would be delayed, contributing to confusion and risk.

vi. That it was more difficult to obtain information and members were at times less responsive due to the high volume of internal and industry projects, including regulatory ones.

vii. That despite efforts to identify which other countries intended to move to T+1, there were surprises in the last month and a lack of details when a country did announce it was moving to T+1.

viii. That Canadian industry media issued T+1 information from the regulators, but not from the industry until the matter was escalated, possibly a resource issue.

ix. That penalties for fails (and forced settlement) were being or had been implemented in Europe, which arguably provide useful incentives (the possibility of penalties had been raised in the T+2 Post-Mortem Report). **Note:** Coincidentally, the Government of Canada Market Functioning Steering Group (GMF) held public consultations during (but unrelated to) the T+1 project, publishing a final framework for a fee in the case of Government of Canada (GoC) bond and bill transactions that fail to settle. While this did not affect T+1 implementation, the possibility of penalties for European/U.K./Swiss stakeholders and Canadian parties may have spurred some players' focus.

x. That DLT/blockchain was not the solution that had perhaps been overoptimistically expected; that there was less full automation and more partial automation solutions and manual workarounds.

xi. That more of the functional work involved tweaking timing and other parameters already set up under T+2.

xii. That the confirmation rates increased so dramatically, apparently overnight.

c. **What may need/needs improvement:**

i. Meeting representation could have benefited from a broader range of expertise. Most attendees had operational or project management experience, with few having systems understanding. An even tighter settlement time will require much more expertise to implement a change since much of the current infrastructure is now at its limit of efficiency.

ii. Meeting attendees needed to speak up when items within their expertise would be discussed. Too often issues were relegated to a few individuals, or not discussed at all, only to discover the issues had to be revisited later on.

iii. The Canadian industry is still a considerable distance away from the confirmed goal of 90% at 3:59 a.m. ET on T+1.

iv. Intraday tranches were identified as critical to allowing earlier detection and correction of trading errors (and so allow earlier confirmations), as well as to reduce CDS batch processing time, however, there were issues; there should have been a parallel run between exchanges and CDS for intraday file processing to mitigate the risk of performance issues such as those experienced.
v. The quasi-monopolistic aspects of parts of the capital markets, e.g., transfer agents, can lead to unintended consequences and inefficiencies; regulators could consider what action might be helpful.
vi. Early communications to CDS participants on the first day of implementation went only to standard CDS contacts, rather than to, or also to, T+1 contacts and were not clear enough – CDS did indicate a switch from the test to the implementation phase, but this was not understood as meaning the communications would not go to T+1 contacts. CDS is to be commended for rectifying communications issues.
vii. Details of certain other countries moving to T+1 on May 27/28, 2024 were late to be received and details were sometimes missing.
viii. Corporate actions related to Telus continued to be problematic; can anything be done to avoid this problem which is understood to arise from rules designed to protect the Canadian telecommunications industry?
ix. There would need to be a drastic overhaul of industry and individual firms' infrastructure and operating models in any transition to T+0 on an order of magnitude higher than any T+1 considerations, mainly due to an industry that still heavily relies on overnight batch processes.

d. What could be useful to future projects

- A strong mandate for the CCMA or another party(ies) to identify, solve, and fix multiple Canadian capital market issues that would be useful in the current environment and have the potential to help move to a T+0 settlement cycle in the future.
- More involvement of marketplaces in testing phases, especially as it relates to the quality of their Security Master File changes.
- Sufficient resourcing is required: two steps that may have helped with the T+1 transition – moving to intraday tranches several months prior to transition and early adoption of the new reporting cycles – could not be pursued due to CDS resource constraints occasioned by the overlap of PTM and T+1.

Note: Additional improvements are included in VII. Recommendations below.

VI. The Future

Unlike in the immediate aftermath of T+2 implementation in 2017 when regulators issued requests or requirements for feedback on a further shortening in the settlement cycle, there have not yet been such announcements in Canada or the U.S., although the SEC clearly indicated an interest in T+0. And why not, especially as the future – in terms of a shorter settlement cycle – is now. This is not just because some securities in North-American markets already settle on a same-day basis. Even before T+1 was implemented in North-America and a handful of other countries in May 2024, the Securities and Exchange Board of India (SEBI) had announced an optional T+0 settlement cycle with settlement of funds and securities completed by the end of the trading day starting March 28, 2024 for 25 smaller-cap stocks and a limited number of brokers (trades made until 1:30 p.m. will be considered for settlement by 4:30 p.m. on the same day). A second phase is to involve immediate trade-by-trade settlement of funds and securities with the

optional T+0 settlement implemented under phase 1 being discontinued. Identified benefits in India are quicker access to funds after a trade for investors, reduced systemic risk, and enhanced liquidity in regulated markets: the change is expected to attract investors from crypto markets that already commonly offer immediate settlement. Possible concerns from having T+0 and T+1 cycles in the same security are liquidity fragmentation that could affect price discovery efficiency and allow for arbitrage, along with operational change costs. SEBI is monitoring the two-step implementation and, if necessary, will adjust the process to minimize disruptions. If all goes as expected, optional Phase 1 T+0 settlement will be suspended.

Why, if India can achieve T+0, should there be hesitation in other countries (such as the U.S. and Canada) looking at adopting T+0?

- First, Indian capital markets were fortunate in that they do not have the legacy systems that many European, U.K., and North-American capital markets still rely on and that will present more of a challenge than they did in a T+1 environment.

- Second, the "looking forward" section of the CCMA's *T+2 Post-Mortem Report* focused on expected technology developments – DLT, also referred to as blockchain – that would facilitate greater capital markets efficiencies and a shorter settlement cycle still, but did not materialize. Three projects were cited:

    - In 2018, Payments Canada, the Bank of Canada and TMX Group Ltd. had announced a joint experiment integrating a securities and payment settlement platform as a proof of concept for the clearing and settlement of securities using central bank money (cash-on-ledger or Large Value Transfer System (LVTS), now Lynx, as the settlement asset or token. We understand that nothing new has been announced, noting that DLT/blockchain offers possibilities but also risks and that more investigation is still required.
    - ASX (the Australian Securities Exchange) had announced the intention to replace CHESS (Clearing House Electronic Sub-register System that recorded shareholdings and managing equity clearing and settlement) using blockchain: the result has been described as "failed and bailed." A September 8, 2024 article in *The Australian*, titled ASX board push amid CHESS replacement concerns, says that "This comes amid shareholder anger over the ASX's disastrous "blockchain" CHESS replacement scheme, and legal action from the corporate regulator after the market operator wrote off $255m in [related costs]." See further reference to Australia below.
    - The Canadian Securities Exchange (CSE) announced its platform for clearing and settling securities using blockchain would enable companies to issue conventional equity and debt through security token offerings (STOs), rather than certificated or traditional book-entry evidence, and that unlike Bitcoin or other DLT-based currency trading, the STOs would be subject to full regulation by applicable securities commissions. Despite the expected STO regulatory framework and differences with cryptocurrency, the pall cast by FTX and Binance slowed work on the area for a period.

- Third, while capital markets stakeholders in Europe, the U.K., Asia-Pacific and the Americas recognize the benefits of a shorter settlement cycle, they also see greater risks and face additional challenges:

    - ***The U.K.***, on March 28, 2024, announced plans to move to T+1 no later than December 31, 2027 with a "go-live" date to be finalized in 2025.

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- ***The E.U.*** post-trade environment is much more complex than in North America in terms of the number of infrastructure providers (depositories, marketplaces), legal structures, and the multi-country approval processes. The European Securities Market Authority (ESMA) – the EU's financial markets regulator and supervisor – sought and analyzed[12] responses to question on the benefits of settlement cycle harmonization. In its response statement, ESMA recognized stakeholder preference for not dealing with misaligned settlement cycles and acknowledged responses referencing the need for prior internal harmonization within the E.U. regulatory framework and settlement systems.

  The Statement also described responses to the Call for evidence on shortening the settlement cycle as:

  > "quite mixed. Respondents have highlighted a number of operational impacts that go beyond simple adaptations of post-trade processes. From a cost and benefit perspective, while respondents have clearly identified the main areas of focus and have clearly highlighted the negative aspects and the costs, together with a number of benefits resulting from shorter settlement cycles, ESMA has received limited quantitative evidence due to forecasting complexities."

  The Statement also says:

  > … The majority of respondents have indicated that whichever definition of T+0 would be given, the costs of such move would largely outweigh the benefits. According to many respondents, T+0 would not be achievable in the short or medium term, would require radical changes to the way markets operate and would likely involve new technologies which are not yet deployed at sufficient scale in financial market."

  ESMA aims to publish the report mandated by CSDR Refit in Q3/Q4 2024, before the given legislative deadline of January 17, 2025.

- While the ***Asia-Pacific region*** post-trade environment may be newer and simpler, capital markets in the area are also earliest in the trade-to-settlement cycle, adding complications. On April 23, 2024, the ASX published a white paper seeking comment on a possible move to T+1, and on August 2, 2024, issued a summary of feedback received. Feedback recommended that Australia adopt a T+1 settlement cycle to align with global markets, however, the majority of respondents opposed CHESS replacement *and* T+1 being run concurrently and thought that the replacement of CHESS should take place ahead of T+1 due to the substantial industry effort required (uncannily similar to Canada's dilemma with T+1 and PTM fighting for resources). Based on increasing interest and focus across the globe, more consultations will likely be released in the not-so-distant future, potentially from markets like Hong Kong, Singapore, Japan, Taiwan, and South Korea.[13]

- In ***North America***, as well as Jamaica, Argentina, and Peru, the move to T+1 was less straightforward than the transition to T+2. While straight-through processing solutions were expected to solve many problems, the rush to implement occasioned by the SEC compliance date meant that less automation was achieved than would have been desirable.

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[12] Feedback statement: Call for evidence on shortening the settlement cycle, ESMA, March 21, 2024

[13] *Transitioning to T+1 Settlement: Lessons for Asian Firms*, Regulation Asia, August 22, 2024

- In ***South America***, Chile and Colombia have reportedly announced plans to move to T+1 in Q2, 2025. Other countries in Central and South America, and the Caribbean, can be expected to follow at some point.

Of most relevance to Canada is that despite the SEC Chairman's desire to move to T+0, adopting a shorter standard settlement cycle still – same-day (whether T+0 or some intraday settlement sometimes described as T+½), especially if other major western markets have not yet moved to T+1, has not received broad support. SIFMA, ICI and DTCC, in their recent *T+1 After Action Report*, declare that:

> "T+0 is not simply the next step in the process. It would require a comprehensive independent review. While past transitions were an evolution of industry practices, moving to T+0 would require a fundamental reinvention of a range of products and processes across the trade lifecycle and large-scale changes bring with them risks that could potentially disrupt the operations of multiple products critical to the operations of the capital markets. T+1 has brought many benefits, however, industry consensus is that further accelerating to T+0 could introduce significant risks and complexities. … **There are still more benefits to be realized with the successful global market adoption of T+1 and corresponding shifts of key infrastructure to better accommodate for T+1 settlement such as adoption of standardized automation practices. This should be the focus of global market participants, policymakers, and regulatory bodies, before any fundamental reworking of securities operations that would be required for T+0 settlement**. …" *[emphasis added]*
>
> The T+1 cycle is advisable to preserve market stability and efficiency for the foreseeable future. We recognize that individual market participants may see value in developing faster settlement models for a subset of their activities. However, it is also critical to recognize the success of focused experimentation involving same-day settlement on a voluntary basis by certain market participants for a subset of their overall trading activity does not mean that a broad-based market move to T+0 is viable, or beneficial for the entire industry. The industry consensus is that accelerating to T+0 is premature. It would require costly and extensive changes to market operations, potentially increasing risks for both institutional and retail customers. Any action towards T+0 should be preceded by an extensive cost-benefit and risk analysis to validate that the perceived benefits outweigh the risks and costs…"

Although reasonable caution was expressed by SIFMA, ICI, and DTCC in the recent report, BlackRock chairman and CEO Larry Fink said in January 2024, "We believe the next step going forward will be the tokenization of financial assets,[14] and that means every stock, every bond […] will be on one general ledger." More and more institutions are rolling out and scaling tokenized products, from tokenized bonds and funds to private equity and cash. In Canada, to complement these and other promising models, and address growing cybercrime, there is a focus on addressing the need for better digital identifiers and for a digital identity passport authorizer(s). The Digital ID & Authentication Council of Canada (DIACC), a non-profit coalition of public and private-sector leaders resulting from the federal government's Task Force for the Payments System Review, was established to develop a Canadian digital identification and authentication framework. It seems that while some use cases have demonstrated measurable economic benefits, broad adoption of tokenization and trusted digital authentication remain years away and so are beyond the scope of this paper.

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[14] A step towards DLT is tokenized digital assets that offer, among other things, 24/7/365 availability; instant global collateral mobility; equitable access; and managed transparency and traceability.

The final section of the report is Recommendations for the situation that pressure for a shorter settlement cycle than T+1 be adopted.

VII. Recommendations

In summary, the transition to T+1 was successful, but unexpected and undesirable situations arose. Any move to a shorter securities standard settlement cycle will be considerably riskier and more costly. Also, while T+1 was expected to be a useful stepping-stone to a shorter settlement cycle, the rushed nature of implementation in certain instances led to approaches that some may refer to as "duct tape and bailing wire." Some of these may be replaced, as T+1 project components continue to be implemented and additional changes may be part of the final PTM implementation. Some issues may be resolved as part of other initiatives, such as foreign currency settlement advances.[15] However, and to paraphrase a U.S. counterpart, the success of T+1 should not lead policy-makers and regulators to the conclusion that a move to T+½ or T+0 will be as successful as the transition to T+1 without significantly rewiring the financial markets, more extensive testing (possibly with systems running in parallel where/if needed), considerably more contingency planning, and a more robust back-out plan.

To provide context to this section, it is well understood in Canada that the U.S., with substantially larger capital markets, effectively drives Canadian decision-making: the SEC-set T+1 implementation/compliance date impacted the PTM project and the PTM project impacted the resourcing and planning for T+1. Canada will always be acting, to some extent, in reactionary mode, however, Canadian capital markets participants should be prepared to react faster and better. This section is divided into four parts: issues that will be even more challenging in a move to further shorten the settlement cycle with related recommendations, other primary recommendations, other considerations/proposals, and final conclusions. These should be reviewed in conjunction with lessons learned in section V above.

a. Issues likely to be more challenging for T+0:

Issue	***Implication if T+½/T+0 announced***	***T+½/T+0 Recommendations***
Same-old but faster is not faster or better long term: Material increases in automation and straight-through processing were expected to materialize as part of the T+1 project but were not achieved for reasons discussed in earlier sections.	Even had there been the optimal increase in automation and straight-through processing, it is likely that start-from-scratch solutions will be needed – despite hopes that DLT/blockchain would provide an answer – if multi-intraday batch or real-time processing is announced in the short-term (less than five years).	Jumpstart work through a small group of extremely knowledgeable experts with experience in several segments of capital markets, and from both sides of the border, on options for re-imagining what could achieve earlier settlement, including the possibility of shared platforms, an assessment of systems, operations, business implications of a potential future move to real-time gross settlement (RTGS), and possible changes to the end-of-day fund pricing model.

[15] For example, CLS has announced the enhancement of its post-trade platform for global financial market infrastructures (FMIs), migrating CLS Settlement onto its Unified Services Platform (USP) and optimizing technology supports its settlement services. This integration allows CLS to control change delivery for CLSSettlement, CLSClearedFX, and CLSNow on a single platform, which may help move more currency pairings to T+1 or T+0 in the future.

Issue	Implication if T+½/T+0 announced	T+½/T+0 Recommendations
Undesirable implementation date and lack of go/no-go discussion: The final U.S. T+1 rule was published in February 2023 with a compliance date of May 2024, leaving very little time to implement automated or intra-day solutions.	While some regulators believe that no matter what implementation date is set, regulated firms will complain and press for delays, the lack of a reasonable timeline from the start, in our view, introduced an unwarranted level of implementation risk, impeded opportunities for efficiencies and automation, and resulted in additional direct and indirect costs.	• Press hard for a go/no-go date as in the move to T+2, with the go-live date set for eight weeks after agreement the industry is substantially ready. • While a long weekend common to both Canada and the U.S. was requested for T+2 and T+1, consider whether staggered Canada/U.S. implementation over a long weekend in the U.S. should be adopted as it would result in lower transaction volumes on the first day, possibly allowing issues to be identified/ resolved in a lower-volume environment.
Conflicting regulatory priorities (e.g., total cost recovery) and competing industry-wide projects (e.g., PTM): Canadian capital markets participants face many, sometimes competing, and often inter-related changes in securities and non-securities-related rules, technology, and risk in an environment of intense cost pressures, making system-wide projects challenging especially as global markets and financial regulation, as well as the world's political and economic environment, are changing rapidly. Total cost recovery and other initiatives were cited by IFIC, IIAC, CETFA, Canadian Life and Health Insurance Association (CLHIA), and/or PMAC members, as well as custodians and effectively, their vendors and service providers, for some challenges faced in the transition to T+1.	There should be proactive discussion, if T+½ or T+0 is identified as a U.S. priority, of steps that can be taken to ensure critical resources are available. While investor protection improvements, tax rule amendments, and infrastructure updates requiring systems and procedural changes and operationalization (such as PTM) will always be underway, the SEC's choice of compliance/implementation date, in part based on DTCC's overly optimistic timetable, would almost certainly have had serious ramifications if the transition had been to less than T+1.	The T+0 (or ½) Steering Committee must be comprised of substantially more executives able to discuss serious concerns and escalate them, if necessary to the federal Finance department/BOC/CSA level.[16] Given greater risks of moving to a shorter settlement cycle, quarterly senior meetings should be held to ensure pressure can be exerted, if necessary, at a government-to-government level.
Delays in addressing identified high priorities: The time before three high priority issues (e.g., automated recalls; ETF collateral solution; FX	• In light of the industry's interconnectivity, if the settlement cycle is to be shortened further, sequentially addressing high-priority issues is unlikely to be an option.	As industry participants may often operate on the basis of assumptions about other industry segments, establish cross-segment working groups

[16] When T+1 was first contemplated in 1999 and when the T+1 goal was reprioritized following 9/11, the CCMA's T+1 Steering Committee included representatives from the federal, Ontario, and Quebec Departments of Finance, Bank of Canada, AMF, OSC, the Office of the Superintendent of Financial Institutions (OSFI), and what is now Payments Canada.

Issue	***Implication if T+½/T+0 announced***	***T+½/T+0 Recommendations***
mismatch for other than CAD/USD pairings) were looked at seriously meant solutions were not in place before the go-live date.	• While focusing on items with greatest impact makes sense, one respondent to the request for post-mortem feedback said: "it would have been beneficial to also find time to work on medium- and low-priority items, which were not adequately addressed as an industry."	of senior experts early on high-priority issues (securities lending, foreign exchange, funds, possibly corporate actions), as was done in the 1999 T+1 project, so work can proceed in parallel.[17, 18]
Industry is less cohesive: There appeared to be a disconnect among members and within different associations, as well as some confusion as to roles, leading to hiatuses in work at times, e.g., (i) CETFA (representing manufacturers) proposed a solution that designated brokers that weren't CETFA members would have found unworkable; (ii) MFWG members concluded work nine months before go-live, while which funds were moving to T+1 remained unknown.	An unfortunate situation for T+1 efforts, this issue would make a reduction from a T+1 settlement cycle worse. A post-mortem feedback respondent said: "[A number of] issues … are the result of years of not being organized as an industry and not tackling common issues. Outside of large regulatory initiatives such as T+2, PTM, and T+1, the industry did not give CCMA (or any other forum/ association) the mandate to identify, solve and fix common industry issues to enhance Canadian capital markets.". This lack of mandate and discussion/assignment of tasks from the T+2 post-mortem report may have increased the challenge of T+1 implementation.	• Consider, where there are options provided (e.g., whether a fund would move to T+1 or not), including a date to expeditiously provide the information needed by other parts of the industry to work efficiently. • Consider ensuring, as CDS is not an industry utility, that industry concerns with the number and timing of test cycles is taken into consideration (**Note:** The late CDS testing start was due to the SEC's effective (and late) rejection of a Labour Day 2024 implementation and the annual December-January cross-industry system freeze.
Less big bang where possible/warranted: Industry members asked for earlier delivery of two measures that could have helped the transition to T+1. Implementing the hourly marketplace tranches in February 2024 could have surfaced issues experienced on/after May 27. An earlier start to the new institutional trade-matching reporting could have helped identify matching progress (or lack thereof).	The shorter the cycle, the less time there is to correct errors. The more countries involved in efforts to reach (either directly or because they are dealing with countries that are switching to the shorter cycle), the greater the risk of errors. While the all-at-once implementation approach has been very successful for moves to T+3 and T+2, India provides examples of staggered implementation, although this is arguably much easier in a single jurisdiction in one time zone. Also, almost all matters would become more challenging if the U.S., and so Canada, move to a shorter cycle before other major markets move to T+1.	• Consider what features of the move to a shorter cycle could be implemented earlier to reduce implementation risk (and obtain earlier benefits). • Work with the U.S. and other foreign organizations (Association of Global Custodians (AGC), and the International Swaps and Derivatives Association (ISDA)), as well as regulators, to ensure that other markets are encouraged and able to move to T+1 on a reasonable timeline before there is discussion of a shorter settlement cycle in North America.

[17] A stated benefit at the time of issue-specific working groups on, for example securities lending, was the better appreciation lenders, borrowers, and infrastructure providers gained of each other's constraints.

[18] While not a matter for blame, and impossible to fully prepare for, providers may not know how different parties use information they receive, for example, CDS was not aware how BOC used green screens; greater probing by service providers and clients will be essential in a move to a shorter settlement cycle.

Issue	*Implication if T+½/T+0 announced*	*T+½/T+0 Recommendations*
Too nice/too accepting/too concerned about infrastructure reactions/ pushback: Some CCMA members would express concerns to CCMA staff and to certain providers, but not in meetings of the CCMA, leading some observers to think there were no issues or that they were minor. As well, there is a natural expectation that infrastructure providers know their business best.	The glitches at implementation were small if frustrating, but equivalent "small" errors in a move to a shorter cycle are more likely to result in big and visible problems. These will impact not just those with affected transactions but also the generally favourable reputation of Canadian capital markets, potentially risking a tarnishing of Canada's credit reputation.	• Encourage stakeholders through more than just checklists to push providers' understanding of T+1 requirements and analyses, including confirmation with their down- and upstream partners/vendors. • Consider having a third party review key infrastructure providers' implementation strategies and provide change/testing assurances.

b. Other primary recommendations

A number of recommendations (marked with an asterisk) would be reasonable to pursue independent of T+1. Note that there is some overlap between the recommendations above and those that follow.

i. Leadership:

Respondents to the CCMA request for comment on T+1 implementation identified the importance of the CCMA Executive Director in co-ordinating as many parts of the industry as possible to move forward, and committee chairs also were critical to achieving goals. When the industry was working, in 1999, with the U.S. to move to T+1, it was not just the Executive Director and committee chairs, but also the CCMA Board Chair, Members, and Observers who were visible and vocal industry champions. Such champions could have been useful in advancing some issues faster in the T+1 project. Finding these champions will be critical to a successful less-than-T+1 project.

ii. Overall project structure:

The overall project structure used for T+2 and T+1 (committees, issue logs, etc.) remains generally appropriate for a shorter settlement cycle, but the resources and focus needed will be geometrically greater as will the related costs and required budget.

- The industry should give the CCMA or other industry-run organisation(s) a strong mandate now to have a small group of recognized industry experts knowledgeable in different industry segments, ideally in concert with a connected U.S. counterpart, assess and identify ways, including blue-skying new approaches, to help move to a shorter settlement cycle (**Note:** While some complain at the proliferation and cost of associations, this should be considered against the cost of not being prepared).
- The industry should discuss options that previously were not critical, such as earlier implementation of key functionality, staged implementation, and, absent such options, development of a robust back-out for any big bang implementation.

iii. **Budget and payment model:**
- The moves to T+2 and T+1 were financed by levies on CDS participants only. There may not be agreement to continue this practice so alternatives would need to be considered. The 1999 initiative to move to T+1 relied on an allocation of costs among CDS/its participants, the then CIRO (Investment Dealers Association of Canada or IDA), Fundserv, the Canadian Bankers Association, and other parties. The efforts and time expended to reach agreement on cost-sharing was considerable for what was comparatively a small budget. Also, there may be new entrants and others who benefit from the established Canadian functioning clearing and settlement system but have not contributed to its development and so should bear some portion of new costs.
- * While likely not popular, infrastructure providers and regulators could consider levying fees on parties identified as having repeatedly failing transactions; the fees from this could be directed to a fund to help pay for particular solutions of a move to a shorter settlement cycle (e.g., the ETF service discussed below or enhancements to the securities lending service).[19] **Note:** In the past, there have been suggestions that existing industry fines, that do not relate to monies that should be returned to wronged investors, could and should be assigned for industry improvements that did not benefit a particular firm and would implicitly be in the markets' and/or investors' interest.

iv. **Different legal/regulatory approaches**
- * As noted earlier, some federally and provincially regulated financial entities do not see themselves as subject to NI 24-101; this ultimately was not an issue in the case of T+1 adoption. If in the pursuit of faster settlement the case can be made that for efficiency/clarity, these entities could be subject to the mandatory requirements (as Registered Advisers and Registered Dealers are), this could be done by amending subsections 3.2 and 3.4 of NI 24-101, possibly by requiring (rather than encouraging) each trade-matching party to enter into a trade-matching agreement or provide a trade-matching statement to a Registered Dealer or Registered Adviser.
- * Regulators should consider requesting a post-mortem report from key infrastructure providers (e.g., entities that confirmed they were T+1-ready) on the lessons learned from T+1 implementation that may be useful in a move to a shorter settlement cycle.

v. **Support for move to a shorter cycle**
- * It would be useful to agree on and manage the collection of data on clearing and settlement activity that would be helpful in measuring progress (or the possibility of progress) towards a shorter settlement cycle; additional data that could be obtained by regulators and might be helpful if made publicly available on an industry basis with the TMX ITP statistics are:
  - Fail rates with a common definition of fails to be established.

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[19] One Canadian development to keep in mind is the fee to be implemented for failed transactions in Government of Canada (GOC) debt. Before any decision to fully activate the fee, there will be a minimum 18-month trial period after CDS's PTM project is implemented, during which time fails and associated fees will be calculated and disseminated, with an audit trail of failed transactions and indicative fail fee invoices to be provided to CDS participants. A decision to activate fail fee payments would follow immediately or as part of a second trial stage. While such a fee has not been discussed for non-GOC securities, the fact that CDS will have a system to capture GoC security fails, calculate fees, and collect the charges would make implementing a fee for other fails in securities relatively simple.

- High, low, and median (in addition to average) trade-matching statistics at 3:59 a.m. ET on T+1.
- Firms in the U.S. and Canada should begin to assess the implications on their systems, operations, and business of a potential future move to Real-Time Gross Settlement (RTGS).

vi. Staged improvements:

Progress can be made with incremental changes so that laggards move towards industry averages. Examples are, after a period of stability:

- Move to a 95% trade-matching-by-3:59 a.m. ET on T+1 (Note: It is recognized that even matched trades may not settle[20]).
- Move to 90% matching earlier in the day, say, by 6:30 p.m. ET on T.

vii. Outstanding issues that did not impede T+1 implementation but are relevant:

We recommend that the following tasks, discussed as part of the T+1 project, be assigned:

- To the CSA:
  - Amendment to address collateralization prohibitions in NI 81-102 for purposes of settlement mismatches addressed temporarily in Guidance.
  - Amendment to NI 62-104 – Take-over Bids and Issuer Bids
  - Possible amendments to NI 24-101 regarding Registered Advisers.
- To a group of manufacturers/designated brokers/custodians:
  - Discussion with CDS of a centralized clearing agency process for primary market ETF transactions
  - Discussion of ETF basket confirmation file standardization
  - Discussion of the impact of pricing files on striking an ETF's NAV
  - Discussion of other aspects of different settlement cycles in primary and secondary ETF markets.
- To the industry:
  - Agree on and publish formulas behind/explanations for comparative data.
  - Discuss statutory changes to facilitate or mandate the issuance of securities in uncertificated format that could be seen as supportive of a move to a shorter settlement cycle.

viii. Communications:

Communication will always be important in a major industry project but becomes even more so as the settlement cycle shortens; pressure for fast information can also lead to incorrect assumptions that can impede solutions.

- Communications channels from infrastructure parties and vendors should be very clear well before transition.
- Communicating that there are no issues, or that an issue has been identified and is being addressed, would help.
- Fundserv distribution of information was generally through their secured site, making it more for some industry project managers and business analysts to obtain information in a timely fashion (although these individuals should have been able to do so through internal means); simpler ways to facilitate the sharing of non-competitive information should be identified to avoid delays and the potential risk of firms missing important information.
- The heads and Boards of industry associations, infrastructure providers, and vendors should understand and accept the critical role they should play in sharing

[20] Institutional trade matching statistics are posted on the TMX website as 'ITPs stats'

information with and collecting information from their members.

ix. CCMA administration:
CDS provided/co-ordinated full administrative support in efforts beginning in 1999 to move to T+1. For the move to T+2 and then T+1, CDS again provided support in the form of office space, some basic IT, as well as legal and Board support and CIRO provided financial services. Any party co-ordinating a move to a shorter settlement cycle now should have further administrative support beyond that in the T+2 and T+1 projects, for example, the current email and calendaring systems are in need of a major overhaul due to limits. This is needed to support larger numbers of members with mass e-mailing capabilities and an effective calendaring/meeting booking function.

c. Other considerations/recommendations

i. Early action if a shorter settlement is in the air:

- Canadian industry members and regulators (because of the potential for systemic risk) should build more or deepen existing relationships with international counterparts, including organizations such as Americas Central Securities Depositories Association (ACSDA), AGC, and ISDA (recognizing that priorities of each will differ over time) so that any move to a shorter standard securities settlement cycle takes into account global impacts and can proceed without unnecessary risk (concerns were raised with DTCC's original proposed T+1 implementation timetable, however, these were muted because the industry-driven move to T+2 had left time to make timetable adjustments; this turned out *not* to be the case as the SEC proactively set an aggressive compliance date).
- Regulators and regulated entities should be prepared to consider a different relationship on key issues should the situation warrant. While regulated entities and regulators operate at arm's length in Canada (neither confrontational nor in as close a relationship as in other countries), there were situations in the T+1 project when regulatory facilitation or the use of moral suasion could have proven helpful (e.g., to encourage manufacturers to release by at least two months before the implementation date their intentions to transition or not to T+1 on a fund-by-fund basis; to engage in discussion with key infrastructure regarding testing strategies, including edits to test for incorrect settlement dates; etc.).
- It would be positive for regulators and industry to discuss how important certainty is for regulated entities against regulatory responsibilities (there have been cases where regulatory amendments have been made after a firm has invested in an expected rule draft). Also, even where something is not seen as urgent from a schedule perspective, clearing an item off the list of outstanding industry issues (e.g., on transitional relief) frees up project team bandwidth. Moreover, regulators are encouraged to show flexibility where possible (the understanding of an informal regulatory implementation policy for a two-quarter settle-in phase helped firms confirm what systems development work to undertake and reduced the level of stress, which can lead to errors, to a manageable level).
- * It would be helpful for regulators through the International Organisation of Securities Commissions to facilitate availability of comparable information on standard settlement cycles for particular countries, market closures for different product types, easy access to the list of dual-listed securities, etc. This information should be easy to identify and not present a competitive concern.

- Firms should discuss the implications of having certain steps to a shorter cycle be regulator-mandated.[21]

Note: There are other recommendations in the T+2 Post-Mortem Report that could be revisited, for example, mandating use of electronic communication (perhaps for parties that have more than a certain number of trades a month) to improve confirmation and affirmation rates considering market-based incentives/disincentives for better behaviour and error reduction; and revisiting best practices (an outcome of efforts initiated in 1999 to move to T+1 was identification of best practices and standards; while not pursued further once the goal of T+1 was switched to STP, there may be value in reviewing, updating, and sharing these standards as a way to promote voluntary movement towards more efficient settlement).

ii. **Firm project best practices:**

Individual firms should expect to devote more time to effective cross-firm T+1 project management to counter the effect of siloes. Given that staff turnover is increasingly a fact of life, and despite the fact that the CCMA Executive Director sent recent minutes, newsletters and information to new members, and there was a generic T+1 PowerPoint presentation firms could use to provide better knowledge transfer to new project team members, more internal clarity is needed.

Paraphrasing one respondent to the CCMA's request for post-implementation feedback, firms should not underestimate the discovery skill needed to work out what today's infrastructure is doing at a macro and granular level, including as regards data sources and pathways. The interaction among small components evolved over decades and missing them in any redesign can have an outsized negative impact (*e.g.,* hardcoding of T+2 for some exchange securities). There will be no room, in future, for any delays given the interdependency of processes.

Moreover, while currently failures can often be recovered by reintroducing previously missed files into an infrastructure built to wait for such data, STP eliminates those conveniences; data must be sent successfully to all downstream targets, evaluated in real-time, and then processed or rejected as appropriate. Evaluations must be conducted to ensure multiple dependent systems present an accurate, synchronized view. Sending systems will need augmentation to support real-time rejections rather than allowing future cycles to correct rejectable data. Reference data sources such as CUSIP will need redesign to support dynamic environments cost-effectively.

d. Conclusion

A former CDS President and CEO compared the work on major CDS projects with changing the motor of a car while it is barreling down the highway at over 100 km an hour. Under any scenario, the challenges of co-ordinated implementation among multiple firms, marketplaces, infrastructure providers, service bureaus, correspondent clearers, the Bank of Canada, and others are significant: this is not a single supplier struggling with huge implementation issues, but rather many organizations, with a large range of old mainframe to more modern technology, all having to move on the same day in a new direction or risk affecting the Canadian capital markets from a reputation, investor, and potentially systemic perspective.

- A T+0 solution will almost certainly require industry-wide infrastructure redesign to enable considerably more STP. The combined operational and systems knowledge this

[21] While settlement cycle changes in Canada are said to be industry-driven, they are in fact U.S.-driven.

will require must not be underestimated: as one person providing feedback said, replacing a batch-based store-and-forward model with interactive two-way flows that find and correct errors will take considerable discovery and design skills along with considerable patience (and a sense of humour doesn't hurt).

- It is likely that many participants would welcome regulators imposing mandatory compliance requirements for T+1, rather than simply changing policies at the central securities depository (CSD) level. The regulatory mandate is needed to allow back-office functions to secure the funding and resources needed to adopt and leverage the automated solutions critical to meeting T+1 requirements.

- Innovation made possible by DLT, big data, artificial intelligence (AI), and open banking (i.e., allowing third-party providers access to parts of the financial marketplace through application programming interfaces (APIs)) have shown great promise in many fields and are "exciting," however, the desire for more competition through more open markets and new players has consequences. Players involved in the Gamestop/Robinhood event, that the SEC used as rationale for expediting a shorter settlement cycle, did not, or chose not to, understand, or else dismissed, the risk mitigation techniques in place. With the Canadian marketplace dependent on U.S. regulatory and market decisions, CCMA members have a limited ability to direct developments as was apparent in the T+1 project.

In light of the above, it is extremely unlikely that there will be a quick (or even slow) easy fix to moving to a shorter settlement cycle, so however appealing DLT, AI, and open banking may appear as ways to accelerate the process (particularly as it is easy to criticize the "clunkiness" of current systems for their inefficiency and oligopolistic aspects) in highly integrated clearing and settlement systems, they must be assessed against the risk presented by companies without regulated firms' risk cultures and ever-present cybersecurity threats.

Because of the high risk – "the unknown unknowns" – the CCMA Board is therefore encouraged to discuss and adopt the recommendations in this report and assign work accordingly.

Once again, CCMA staff wish to recognize and thank (i) community members for their hard work, (ii) Canadian regulators for their support, (iii) U.S. counterparts at SIFMA, ICI and DTCC for their partnership during implementation of T+1; and (iv) the CCMA Board for support throughout the project.

Appendix A: List of Acronyms

ACPM	Association of Canadian Pension Management
AMF	Autorité des marchés financiers
ASX	Australian Stock Exchange
ATS	Alternative trading system
BCSC	B.C. Securities Commission
BOC	Bank of Canada
CCMA	Canadian Capital Markets Association
CDCC	Canadian Derivatives Clearing Corporation
CDS	Canadian Depository for Securities Limited CDS Clearing and Depository Services Inc.
CEWG	Communications and Education Working Group (CCMA committee)
CIRO	Canadian Investment Regulatory Organization
CLHIA	Canadian Life and Health Insurance Association
CMHC	Canada Mortgage and Housing Corporation
CNS	Continuous net settlement
CLS	Continued Linked Settlement
CRA	Charles River Associates
CSA	Canadian Securities Administrators
CSE	Canadian Securities Exchange
DLT	Distributed ledger technology
DTCC	Depository Trust and Clearing Corporation (CDS's U.S. equivalent)
ESMA	European Securities Market Authority
ETF	Exchange-traded fund
Fundserv	Fundserv Clearing Corporation
ICI	Investment Company Institute (U.S.; similar to IFIC)
IDA	Investment Dealer Association of Canada
IFIC	Investment Funds Institute of Canada
IIAC	Investment Industry Association of Canada (similar to SIFMA)
IIROC	Investment Industry Regulatory Organization of Canada (similar to U.S. Financial Industry Regulatory Authority (FINRA); became part of CIRO)
ISDA	International Swaps and Derivatives Association
LRWG	Legal & Regulatory Working Group (CCMA committee)
LVTS	Large Value Transfer System
MFDA	Mutual Fund Dealers Association (SRO now part of CIRO)
MFWG	Mutual Funds Working Group (CCMA-Fundserv-IFIC)
NI	National Instrument
OSC	Ontario Securities Commission
OWG	Operations Working Group (CCMA committee)
PMAC	Portfolio Management Association of Canada
PTM	Post-Trade Modernization Project
RTGS	Real-Time Gross Settlement (RTGS).
SEC	Securities and Exchange Commission (U.S. regulator)
SIFMA	Securities Industry and Financial Markets Association (U.S.; similar to IIAC)
SRO	Self-regulatory organization
STP	Straight-through processing
T1SC	T+1 Steering Committee (CCMA committee)
UCITS	Undertaking for Collective Investment in Transferable Securities (European)
VAR	Value at risk

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Appendix B: List of Communications Activities and Collateral Material

- Updating the CCMA ***website***, incorporating a ***T+1 countdown clock***
- Better delivering, and delivering more, ***material in French***
- Rebuilding/updating the CCMA ***contact database*** (beyond committee members) through outreach to associations, service providers, regulators, and others as well as through the website; newsletters; and other means
- Seeking ***speaking opportunities*** for the Executive Director, who spoke at over 25 industry events as well as providing regular CIRO and CSA updates (significantly more than the nine events recorded during the T+2 project); the Communications Chair spoke at one event. ***Note:*** Unlike for T+2, there were no **CCMA-organized events** for several reasons discussed by CEWG members: as many industry parties had experience with T+2, there was much less need to build awareness; the number of competing industry projects added complexity; individuals who wanted information attended CCMA committee meetings regularly or relied on minutes or newsletters; COVID changed the approach to events generally; the SEC took a year from proposing to announcing a compliance date, which limited new information worthwhile sharing at a broad event.
- Engaging with ***Canadian, U.S., and international communications counterparts:*** This included ISDA, AGC, CLS, etc.
- Building a ***LinkedIn* presence** that grew from two followers in 2022 to 825 followers in 2024, with new postings on average once weekly
- Preparing and issuing ***15 newsletters*** (general updates on priorities, progress, regulatory and operational matters, and U.S./other developments as well as ***6 information bulletins*** (updates regarding preparations and readiness of service providers, etc.) with news, status updates, links to other documents for those needing more information in certain areas and regular sections of To Dos, Tips, Tools, and To Come
- Drafting and publicizing seven ***joint/partner communications pieces***
  - May 2023 : CASLA/CCMA Article on Securities Lending in a T+1 World (Fr)
  - December 20, 2021: IIAC Publishes Op Ed – IIAC and Members Working with CCMA towards T+1
  - November 1, 2022: ACPM/CCMA Article – And Then There Was 1… T+1, *The Observer,* Association of Canadian Pension Management (ACPM) (Fr)
  - May 2, 2023: CASLA/CCMA Article – Securities Lending Moving to T+1 in Canada (Fr)
  - April 25, 2023: ACPM/CCMA Article – It Takes Three to (do the T+1 settlement) Tango (Fr)
  - April 30, 2024: Joint ISDA-SIFMA-CCMA T+1 Settlement Cycle Booklet
  - May 1, 2024: CASLA issued securities-lending T+1 FAQs
- Connecting with ***media:*** It proved challenging to get Canadian financial industry media coverage, however, a number of CEWG members helped connect the CCMA with respected international industry; media key messages were prepared for expected and possible questions from the industry, government/regulators, and media; media monitoring was undertaken with the particular help of CIBC Mellon and National Bank CEWG members; 9 media releases (compare to 5 for T+1 in 2017 were issued, including:
  - April 29, 2021: CCMA Announces Study of T+1 Settlement Cycle
  - December 1, 2021: CCMA Confirms Faster Securities Settlement Project in Canada a Go (Fr)
  - December 15, 2022: CCMA Announces Canadian Regulatory Steps to Support Transition to T+1 (Fr)
  - February 15, 2023: CCMA Announces SEC Releases Final T+1 Rules, Date (Fr)
  - March 14, 2023: CCMA Announces Canadian T+1 Start Date (Fr)
  - May 30, 2023: CCMA announces 1-year countdown until T+1 standard settlement cycle goes live (Fr)

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- August 10, 2023: CCMA Applauds CSN Supporting Move to T+1 (Fr)
- December 15, 2023: CCMA Applauds CSA for final NI 24-101 Rule Change (Fr)
- May 31, 2024: CCMA Says Capital Markets Transition to Shorter Securities Settlement a Success (Fr)
- June 6, 2024: CCMA Thanks all Who Participated and Gives Results of T+1 Project (Fr)

Media mentions include:

- April 30, 2021: Investment Executive – Contemplating T+1 for Canada As the U.S. Industry Considers Shorter Settlement, the CCMA Ponders It Too
- December 4, 2021: Investment Executive: The March to T+1 Is On
- February 15, 2023: Investment Executive: SEC Opts for Early Move to T+1
- February 17, 2023: Asset Servicing Times: Canada/U.S. Capital Markets Will Move Together to T+1
- February 21, 2023: Global Custodian: Canada Affirms Switch to T+1 with the U.S.
- June 13, 2023: Investment Executive: ""Oh my" Is Right, and Don't Drop the Ball!"
- November 30, 2023: FTF The Bull Run Blog – T+1 in Canada: Same Goal, Different Plays
- May 21, 2024: Investment Executive: Portfolio Managers, Advisors Are Ready for T+1
- May 21, 2024 : Advisor.Ca: Advisors and Fund Managers Are Ready For T+1 – Any Time You Shorten a Settlement Cycle, You Reduce Risk, CCMA Head Says
- May 31, 2024: Advisor.ca: T+1 Transition a Success – The Proof Is That Next-Day Settlement Went Largely Unnoticed
- June 4, 2024 : Finance et investissement : Bonnes nouvelles pour a transition vers T+1
- June 5, 2024 : Pari réussi pour la transition vers T+1

- Preparing ***FAQs***, and a set of client-facing FAQs, addressing questions as implementation approached.; Fundserv also published T+1-related FAQs
- Developing ***tools*** to help industry participants prepare, for example, links to matching data, publications, etc.: three CCMA surveys and results, as well as the following:
  - May 27, 2023: T+1 Self-Assessment Checklist (Fr .pdf/.xlsx)
  - May 27, 2023: Amended CDS Processing Schedule for T+1 (v.3) (Fr)
  - June 29, 2023: Template T+1 Trade Matching Statement (Fr)
  - September 29, 2023: Editable Generic T+1 Presentation Template
  - October 31, 2023: CCMA T+1 Asset List (v.1, 2, 3) (Fr) (also see https://ccma-acmc.ca/en/t1-resources/canadian-t1-asset-list-liste-dactifs-canadiens-t1/)
  - January 30, 2024: Considerations re Operationalizing and Communicating T+1 Mutual Fund Settlement Cycles (Fr)
  - March 27, 2024: CCMA Two-Week T+1 Transition Support Plan (Fr)
  - April 1, 2024: T+1 Notice/Request to Fund Manufacturers (Fr)
  - April 1, 2024: Sample Dealer, Advisor, and Client-Facing T+1 Communications Material (Fr)
  - May 14, 2024: T+1 or T+2 How to Find a Fund's Settlement Date on and after May 27, 2024 (Fr)
  - May 17, 2024: Advisors, Have You Heard of T+1? Can You Answer Client Questions? (Fr)
  - May 17, 2024: T+1 Transition Checklist – Are You Ready? (Fr)

  Note: CDS also shared pertinent information from other organisations such as CDS Business Requirements for Migration to T+1, securities lending FAQs, etc.