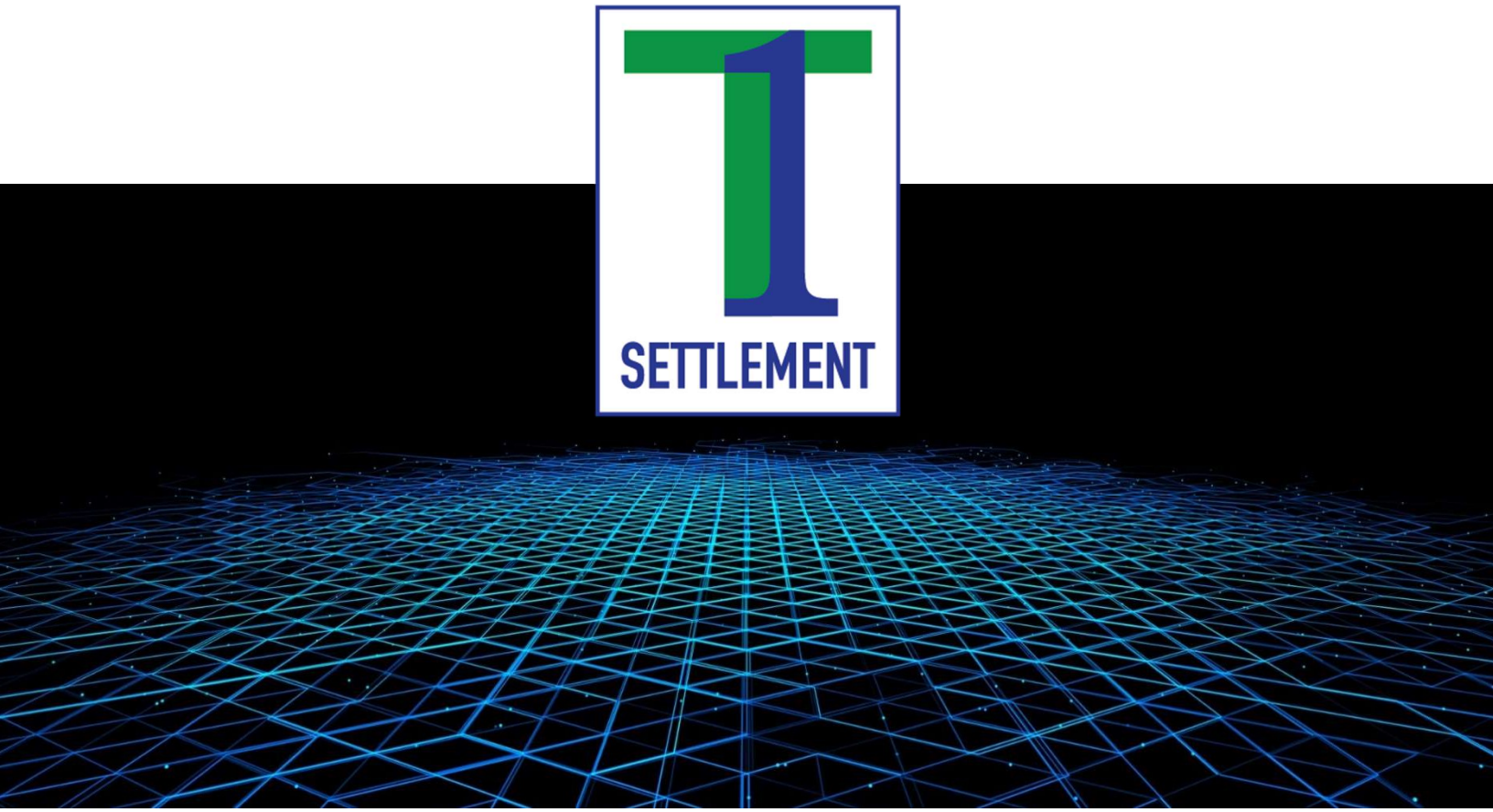

Accelerating the U.S. Securities Settlement Cycle to T+1

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Please visit ust1.org for the latest information on the Industry's acceleration of the settlement cycle to T+1.

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Executive summary

Introduction

In an effort to reduce risk, strengthen and modernize securities settlement in the U.S. financial markets, representative organizations under the leadership of the Securities Industry and Financial Markets Association (SIFMA)[1], the Investment Company Institute (ICI)[2], and The Depository Trust & Clearing Corporation (DTCC)[3] initiated an industry change to accelerate the settlement cycle from trade date plus 2 days (T+2) to trade date plus one day (T+1).

Following the February 2021 DTCC whitepaper outlining the need and approach for moving to T+1, Advancing Together: Leading The Industry to Accelerated Settlement, the U.S. financial services industry formed an Industry Steering Committee (ISC) and an Industry Working Group (IWG)[4] with the intent of developing industry consensus for an accelerated settlement cycle transition, including to understand the impacts, evaluate the potential risk, and develop an implementation approach. The purpose of this report is to summarize the work conducted by these collective groups and present recommendations required to be undertaken by the financial services industry to accelerate the U.S. settlement cycle to T+1.

Industry Steering Committee Recommendations

To support the effort, the ISC engaged Deloitte & Touche LLP (Deloitte)[5] to inform the governing bodies, facilitate the working sessions to analyze the benefits and barriers to moving to T+1, and coordinate

[1] **About SIFMA**. SIFMA is the leading trade association for broker-dealers, investment banks and asset managers operating in the U.S. and global capital markets. On behalf of our industry's nearly 1 million employees, we advocate for legislation, regulation and business policy affecting retail and institutional investors, equity and fixed income markets and related products and services. We serve as an industry coordinating body to promote fair and orderly markets, informed regulatory compliance, and efficient market operations and resiliency. We also provide a forum for industry policy and professional development. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit http://www.sifma.org

[2] **About ICI**. The Investment Company Institute (ICI) is the leading association representing regulated funds globally, including mutual funds, exchange-traded funds (ETFs), closed-end funds, and unit investment trusts (UITs) in the United States, and similar funds offered to investors in jurisdictions worldwide. ICI seeks to encourage adherence to high ethical standards, promote public understanding, and otherwise advance the interests of funds, their shareholders, directors, and advisers. ICI's members manage total assets of U.S.$29.1 trillion in the United States, serving more than 100 million U.S. shareholders, and U.S.$9.6 trillion in assets in other jurisdictions. ICI carries out its international work through ICI Global, with offices in Washington, DC, London, Brussels, and Hong Kong.

[3] **About DTCC.** With over 45 years of experience, DTCC is the premier post-trade market infrastructure for the global financial services industry. From 21 locations around the world, DTCC, through its subsidiaries, automates, centralizes and standardizes the processing of financial transactions, mitigating risk, increasing transparency and driving efficiency for thousands of broker/dealers, custodian banks and asset managers. Industry owned and governed, the firm simplifies the complexities of clearing, settlement, asset servicing, data management, data reporting and information services across asset classes, bringing increased security and soundness to financial markets. In 2020, DTCC's subsidiaries processed securities transactions valued at more than U.S. $2.3 quadrillion. Its depository provides custody and asset servicing for securities issues from 170 countries and territories valued at U.S. $73.5 trillion. DTCC's Global Trade Repository service, through locally registered, licensed, or approved trade repositories, processes 15 billion messages annually.

[4] Industry Working Group participation consisted of 800+ subject matter advisors representing over 160 firms from buy- and sell-side firms, custodians, vendors, and clearinghouses.

[5] **About Deloitte.** As used in this document, "Deloitte" means Deloitte & Touche LLP, a subsidiary of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of our legal structure. Certain services may not be available to attest clients under the rules and regulations of public accounting. This publication contains general information only and Deloitte is not, by means of this publication,

with the industry on recommending solutions for the transition. While concerns have been raised related to the compressed settlement timeframe and several open issues remain to be solved, for example, settlement of offerings of new securities, the ISC recommends, and is committed to, a transition to a T+1 settlement cycle. The specific recommendations from the ISC are summarized below:

Table 1: T+1 Settlement Recommendations

No.	Topic	Recommendation
1	**Allocations and Affirmations**	• Encourage allocations[6] by 7:00 PM ET on trade date (T) to ensure that firms have sufficient time to process affirmations by 9:00 PM ET on T • Change the affirmation deadline from 11:30 AM ET on T+1 to 9:00 PM ET on T • Adopt technology (e.g., DTCC's ITP Central trade matching system (CTM) and/or messaging protocols (e.g., FIX and SWIFT) to automate the communication of allocations and CTM's Match to Instruct to facilitate more timely trade affirmation
2	**Trade documentation**	• Advocate for and promote the broad scale adoption of e-delivery as the default receipt method for trade documentation (e.g., trade confirmations, prospectuses) with the option for clients to request paper documentation post-settlement • Remove rule references that trigger the Electronic Signatures in Global and National Commerce Act (ESIGN) and therefore inhibit clients from receiving e-delivery of investor documents
3	**Global settlement implications and FX markets**	• Promote and socialize new T+1 settlement trade processing timelines in the U.S. and among international investors to reduce settlement issues, including Foreign Exchange (FX) conversion transactions and allocations • Request that wholesale FX market participants conduct their own analysis related to their internal operating models and present-day global practices to identify changes and enhancements that would need to be implemented in order to facilitate T+1 FX where needed for U.S. T+1 settlement
4	**Corporate actions**	• Coordinate with regulators and exchanges to align the ex-date with the record date for regular-way corporate actions • Adopt SWIFT[7] messaging, or other automated means, across the corporate actions lifecycle to increase efficient communication by industry participants related to corporate action events • Industry to evaluate whether the cover/protect period should be eliminated
5	**Prime brokerage**	• The SEC should change the required deadline specified in the Prime Brokerage (PB) No Action letter for executing brokers to inform the prime broker of trade details from the morning of the next business day after trade date (which would be too late to effect settlement in CNS on T+1) to a time on the evening of trade date that would meet the National Securities Clearing Corporation (NSCC) evening cutoff time for matched and affirmed trades to flip into T+1 settlement in NSCC's Continuous Net Settlement (CNS) • Prime brokers, executing self-clearing firms, and clearing firms of an introducing broker acting as an executing broker should identify and implement amendments to their existing contracts regarding the prime brokerage arrangement (e.g., including standardized documents, such as the Form 150[8]), to reflect any necessary changes to timing for trade notification and affirmation, and should consider whether any changes are necessary to disaffirmation deadlines in light of the T+1 environment

[6] For the purposes of this paper, "allocations" is defined as the allocation sent to an Executing Broker from order placer instructing how to allocate a trade amongst the Clearing Brokers/Custodians/Prime Brokers.

[7] A SWIFT (Society for Worldwide Interbank Financial Telecommunication) message combines ISO code with SWIFT connectivity to create a standard and automated communication flow between investment managers, custodian banks, local agents, and market information vendors.

[8] https://www.sifma.org/wp-content/uploads/2017/08/Prime-Brokerage-_Prime-Brokerage-Agreement-Form-150.pdf

6	**Securities lending**	• The current timing for recall issuances (e.g., as late as 3.00 PM ET on T+1), will have to be reconsidered to mitigate an increase in fail rates. The more notice broker-dealers have to return securities, the more likely they will be returned in time for settlement • Promote the widespread adoption and utilization of tools to streamline the recall, contract compare, corporate action, buy-ins, and rebate interest collection processes • The SEC should update existing interpretive guidance about the required cutoff time for a securities lender to recall loaned shares in order to mark its sell trade "long"
7	**Settlement errors and fails**	• Promote greater adoption of Standard Settlement Instructions (SSIs)[9] • Encourage market participants to identify key drivers for settlement fails and to address those where appropriate through automation • Encourage market participants to: – Adopt policies and procedures for timely updates to SSI reference data prior to settlement – Repair errors at the root cause to avoid future settlement issues
8	**Exchange Traded Fund (ETF) creation and redemption**	• Authorized Participants (APs) should use real time messages coming out of Universal Trade Capture (UTC), to mitigate issues with the new proposed timing of the CNS exemption cutoff at 10:30 PM ET • Adopt the use of collateral processing tools, such as NSCC's collateral process and other automated tools, to centralize the collateral process for global components
9	**Equity and debt offerings**	• Retain the exception in Rule 15c6-1(c) but shorten the applicable period to T+2 • Retain the exception in Rule 15c6-1(d) to allow debt and other offerings to have the ability to opt for extended settlement
10	**Regulatory impacts**	• Continue to engage the regulatory community to ensure that rules and regulations that identify regular way settlement as greater than T+1 be changed, including the Securities Exchange Commission (SEC) capstone rule 15c6-1(a) of the Securities Exchange Act of 1934 (the "Exchange Act" and the associated rules derived from it, to create regulator certainty for market participants

In addition to the aforementioned recommendations, and not to understate the effort to move to a T+1 environment, the industry has to embrace adoption of technology and software to achieve optimal settlements in a T+1 framework. This will require thorough analysis and solutioning to address any potential settlement fails including those during high volatility/volume market periods. The realities of a T+1 execution and settlement process for global participants will require a rethinking of trade execution, processing, financing, payments, and settlements. Migration to a T+0 settlement environment was discussed broadly by the IWG members, and a determination was made that T+0 represents a fundamental change in post trade processing and will require the reworking of existing settlement systems, including but not limited to, the elimination of any remaining batch processes.

Migration Timeline

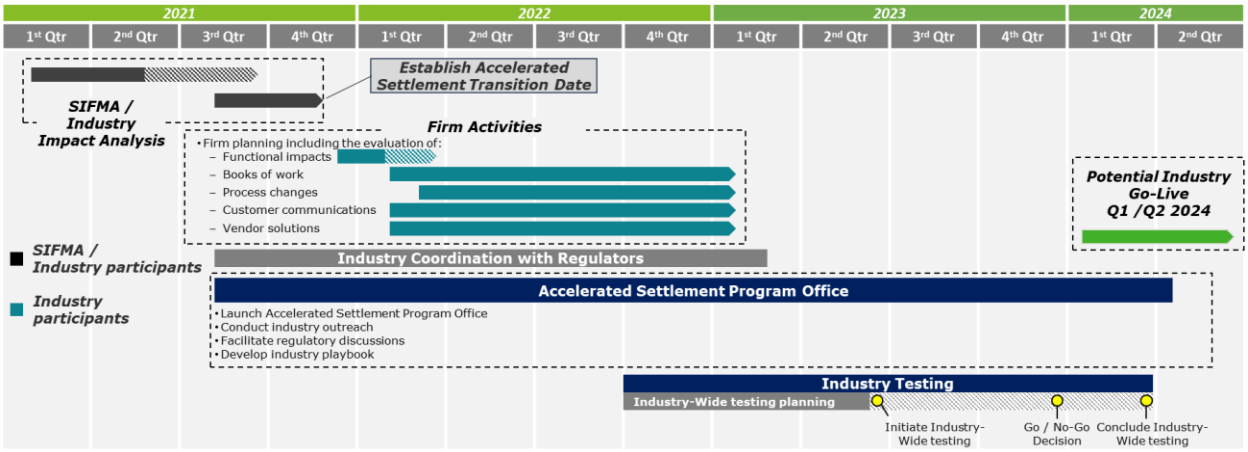
In consideration of the recommendations above and the necessary supporting activities to successfully migrate the industry, the ISC recommends migration from T+2 to T+1 for U.S. securities markets in Q1/Q2 2024.[10]

The timeline below provides market participants with the time needed to assess firm-level required changes and allocate resources and budgets accordingly to support the migration including the creation of an early 2023 comprehensive testing plan. In order to move forward with a T+1 settlement cycle, the industry will depend on regulatory certainty. Figure 1 below assumes the necessary regulatory changes will be adopted in time to implement T+1 settlement Q1/Q2 2024. The industry believes that after

[9] Instructions agreed to in advance by the counterparties and used as standard trade instructions between the counterparties.
[10] The specific migration date to move to T+1 is to be determined.

regulatory certainty and guidance is achieved, a lengthy and necessary amount of time will be required for T+1 implementation.

Figure 1: Proposed industry migration timeline



Overview of T+1 securities settlement

Background on Current Industry Efforts

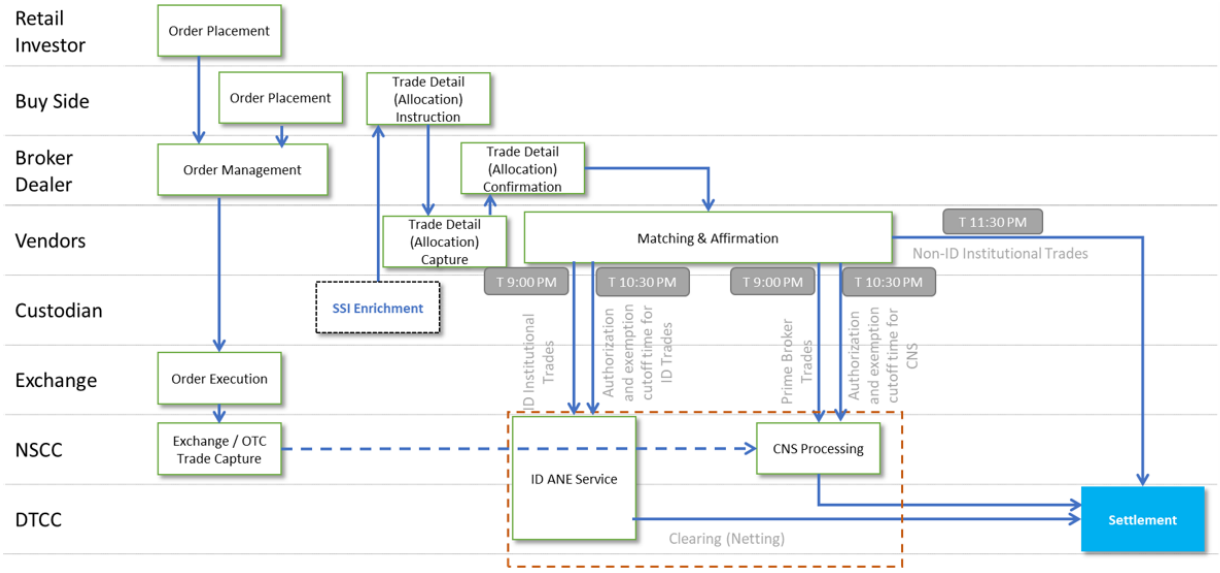
On September 5, 2017, the securities industry successfully transitioned from T+3 to T+2 as a result of thorough planning and coordination among industry participants across the settlement ecosystem. This included a schedule of consistent industry calls, a robust communication program, issuance of various publications (e.g., SIFMA and ICI T+2 Industry Implementation Playbook), a targeted industry outreach program with a disciplined testing regime, and the broad support of the industry and the regulators. The transition from T+3 to T+2 occurred over a period of approximately five years.

The same industry consensus, strong organizational leadership, and communication and coordination among industry participants will once again be required to successfully migrate U.S. securities settlement from T+2 to T+1. As a demonstration of its commitment, the ISC and the IWG have participated in daily, remote working sessions over the past spring and summer with the goal of understanding current T+2 settlement processes and developing consensus on the associated risks and benefits of an anticipated accelerated settlement cycle, including identifying challenges to adopt T+0 (i.e., real time or end of day settlement) in the current state. Hundreds of hours have been committed to the present-day effort and working sessions have averaged 175 to 250 participants, across buy-side and sell-side, service, and system providers (inclusive of transfer agents), and custodian banks.

Overview of T+1 Securities Settlement

The transition from T+3 to T+2 enabled the industry to shred roughly a third of post-trade settlement processing time for U.S. securities that are cleared and settled through DTC. The proposed transition to T+1 is anticipated to reduce the current T+2 processing time by half. Figure 2 below illustrates the T+1 settlement trade flow, including participants and proposed changes for the 24-hour cycle:

Figure 2: Illustrative T+1 settlement trade flow



The transition from T+3 to T+2 included and impacted a range of DTC eligible cash products. Moving from T+2 to T+1 should include a similar product scope, including, *inter alia*, equities, corporates, municipals, and UITs. For the purposes of a T+1 settlement cycle, Fed eligible securities should be considered out of scope. The impact of a migration of cash securities settlement to T+1 on derivative products will also be reviewed as part of accelerating the settlement cycle to T+1. Further, the products that are considered in scope for purposes of T+1 are subject to change as the IWG works toward the T+1 migration timeline.

Benefits of a T+1 Settlement Cycle

The industry believes that moving to a T+1 settlement cycle will increase the overall efficiency of the securities markets, mitigate risk, create better use of capital, and promote financial stability, provided that the appropriate balance is achieved between increasing efficiencies and mitigating risk. These benefits will be realized through direct and indirect means by both industry participants and investors as much of the settlement infrastructure will require reengineering given the compressed timeframes.

Below is a summary of the primary benefits anticipated by adopting T+1 settlement:

- **Reduction of risk, particularly during periods of high volume and volatility:** As the volume of unsettled trades over a single trading day and the time between trade and settlement is reduced, there will be a reduction in systemic, counterparty, and operational risk across the settlement ecosystem, particularly in periods of market volatility. Furthermore, T+1 settlement preserves the benefits of settlement netting at NSCC and, thereby, significantly reduces the volume of securities and currency required to be moved across markets on any given trading day.
- **Reduction in liquidity requirements:** With firms' market and counterparty exposure over the settlement period reduced, there is a reduction in margin requirements posted to NSCC by its members. This reduction will allow broker-dealers to better manage their capital and liquidity

risks and better utilize their available capital. For investment funds, T+1 will align the settlement cycle of U.S. mutual fund shares with the portfolio securities settlement cycle, thus improving cash and liquidity management.

- **Capital and operational efficiencies:** Capital and operational efficiencies can be grouped into three categories: infrastructure modernization, standardization of industry processes and reduction in costs. Each category is explained further below:
  - **Infrastructure modernization:** Through technology adoption, the automation of manual processes will significantly reduce operational risk, increase productivity, and reduce friction for market participants. The migration to T+1 provides opportunities to:
    - Accelerate industry adoption of Straight-Through Processing (STP) and re-engineer certain processes. For example, enabling match-to-instruct capabilities for trade affirmation and confirmation, will eliminate redundant processes, save time and expenses, and reduce manual errors
    - Optimize margin calculations and reduce margin requirements among customers, brokers, and clearinghouses (due to the recommended changes in the allocation[11] and affirmation timelines)
  - **Standardization of industry processes:** By adopting the recommended best practices in this report and implementing behavioral changes across the industry, market participants have an opportunity to standardize and synchronize processes in order to facilitate greater transparency and real-time / near-time access to critical data across the financial ecosystem. Specifically, the migration to T+1 settlement may require standardization for certain industry processes in order to meet updated timelines, including to:
    - Coordinate processing timelines and formalize and adopt industry best practices to facilitate optimized information sharing and data transfers between counterparties, particularly for critical reports or deadlines (e.g., sharing intraday trade allocation data between counterparties)
    - Formalize SLAs between counterparties for as soon as possible allocation submissions to facilitate more timely allocations from block trades
    - Standardize processes for prime broker customer onboarding to enable automated capabilities for recurring, time-sensitive processes (e.g., Form 1 Schedule A)
    - Develop an automated and standardized straight-through settlement processing path for unaffirmed institutional transactions and disaffirmed trades
    - Review and standardize corporate actions processes, including the delivery of corporate action agreements to SROs and exchanges
  - **Reduction in costs**: While there may be increased buy-ins, earlier up-front close outs, and up-front implementation costs to transition the industry to T+1, the industry foresees long-term cost reduction for market participants, and by extension, costs borne by end investors, given the benefits of moving to T+1 settlement

[11] For the purposes of this paper, "allocations" is defined as the allocation sent to an Executing Broker from order placer instructing how to allocate a trade amongst the Clearing Brokers.

Considerations on T+1 Settlement

Because of the benefits mentioned above, the industry is widely supportive of the migration to T+1 settlement. However, the industry believes that any migration plans should be designed to address the following considerations:

- **Possible Reduced percentage of trades that timely settle through NSCC's CNS system.** The compressed timeframe for market participants to determine and instruct trade allocations and settlement instructions, and for PB to receive and process trade instructions from PB clients, could lead to a lower percentage of PB trades that are affirmed for timely settlement in NSCC's CNS system. Any migration plan should contemplate the challenges and lead time necessary for market participants, including brokers, investors, and custodial banks, among others, to upgrade their practices, systems, and operational processes to maximize the number of trades that will flip into CNS, which provides important netting, settlement and other risk mitigating benefits to the industry.
- **Possible Increased risk of fails.** The factors mentioned above that could lead to a reduced percentage of trades that will timely settle through NSCC's CNS system, could, along with the abbreviated timeframe for borrowers to source securities to return to securities lenders, lead to an increase in fails to deliver. Any migration plan should contemplate the challenges and lead time necessary for market participants, including brokers, investors, and custodial banks, among others, to upgrade their practices, systems, and operational processes to minimize the number of trades that could fail as a result of the compresses timeline.
- **Equity and debt offerings.** Equity offerings involve a myriad of unique issues that have historically led the Commission to allow them to have the ability to settle later than the standard securities transaction settlement cycle found in Rule 15c6-1(a), as reflected in the exception provided in 15c6-1(c). Similarly, due to the unique nature of many debt offerings and the documentation involved, they frequently settle on an extended basis in reliance on the exception found in Rule 15c6-1(d).

Considerations on T+0 Settlement

As the industry analyzed the migration to T+1 settlement, the IWG also considered the impacts and benefits of moving to T+0 settlement.[12] The ISC and IWG concluded, by consensus, that T+0 is not achievable in the short term given the current state of the settlement ecosystem. A move towards a shortening of the settlement cycle to T+0, would require an overall modernization of current-day clearance and settlement infrastructure, changes to business models, revisions to industry-wide regulatory frameworks, and the potential implementation of real-time currency movements to facilitate such a change.[13] Additionally, the IWG stresses that the burden of adoption for such technologies would be disproportionately borne by small-/medium-sized firms who currently are reliant on manual processing or legacy systems and may lack the financial and technical resources to modernize their operational infrastructure so rapidly. With ever an eye toward future innovation, the industry will

[12] As defined in this report, T+0 settlement refers to trade date or end-of-day settlement. While the IWG acknowledges that certain real-time settlement technologies have proven effective in pilot scenarios and for certain product classes and trading counterparties, the IWG does not consider these to have the widespread adoption in the current state in order to effectively consider these solutions.

[13] Emerging technologies, such as distributed ledger technology (DLT), need to mature to industrial strength and gain general industry adoption across the spectrum of market participants in order to be considered an effective solution for optimizing securities settlement.

continue to monitor technology developments within the settlement ecosystem and implement cost-effective solutions, where possible, as the industry progresses toward T+1 implementation.

Below are some of the key areas that the IWG has identified would be significantly impacted in a T+0 environment:

- **Reengineered securities processing**. T+0 settlement would require the redesign of many securities processing functions, including Institutional Trade Processing, ETFs processing, options, margin investing, securities lending, FX markets, and global settlements across jurisdictions to meet the regulatory, operational, and contractual requirements.
- **Securities netting**[14]. Significant changes to NSCC securities netting may be required in order to maintain the benefits that the process provides and may require large volumes of securities and cash to move throughout the trading day, which will likely increase the risk of trade errors and subsequent settlement fails.
- **Funding requirements**. Funding trades would require foundational changes, such as requiring The Federal Reserve's payment systems to maintain services for longer periods of time throughout the day to determine funding requirements between counterparties, particularly in order to post funding to clearinghouses to facilitate services. Retail investors may be required to pre-fund accounts given time required to fund ACH and wire transfers from consumer banks to securities accounts and the investment of idle cash would be difficult.
- **Securities lending**. The securities lending process, which requires that securities lenders, their custodians and/or securities lending agents to recall loaned securities when such shares are sold, will not be able to operate in a T+0 environment as it does today and would require an extensive infrastructure and operational overhaul.
- **Prime brokerage.** Current prime brokerage processes are not set up to capture allocations, calculate margin requirements, and ensure margin accuracy prior to Fedwire deadlines on trade date, and facilitate trade reporting and disaffirmations given sequential dependencies between counterparties.
- **Global settlement.** Foreign counterparties and investment vehicles with foreign securities exposure anticipate risk disruption given the asynchronous timing of open market hours across jurisdictions. Foreign investors may be required to pre-fund cash positions and securities prior to trading to meet contractual requirements and currency exchange (FX) could be problematic.
- **Primary offerings, derivatives markets, and corporate actions.** Ancillary securities processing activity related to secondary market trading will require reengineering to execute contracts and allocations across asset classes under compressed timeframes. Often, these processes span multiple trading days given their nuances and the legal and contractual obligations may not, and in the case of primary offerings cannot, be satisfied within the trading day window for end-of-day settlement.

How to use this report

This report focuses on outlining the current considerations and recommendations for migrating to a T+1 settlement cycle at an industry level. It is intended for industry participants to distribute to their internal

[14] See DTCC definition on netting here

business, operational, risk management, and technical functions for review in order to understand the impacts of T+1 settlement on these respective functions. In reading this report it is structured in the following ways: sections have a brief business "background" on impacts of the topic and T+1 impact, "recommendations" on how to solve for T+1 settlement, and "considerations" which are less specific and contain insights for firms on how T+1 may impact them.

Firms should work with their counterparties, vendors, regulators, and clients to better understand their internal impacts related to timing requirements / deadlines, system requirements, system improvements, and process changes in preparation for this migration. Additionally, firms should continue to engage in industry discussions with SIFMA, ICI, and DTCC to remain updated on information regarding this initiative as the IWG will continue to release additional information as it becomes available.

1. Allocations and Affirmations

Background

The allocation of institutional trades is one of the key post-trade processing steps. Once trades are allocated[15] at the account level, the affirmation and confirmation process begins. Current processing shows that approximately 20% of allocations occur throughout the trading day with the remaining 80% of allocations occurring after market close on trade date.[16] It is important to note that the confirmation and affirmation process can only occur once allocations have been completed. Given that most allocations occur post-market close, the current affirmation timeline is set at 11:30 AM ET on T+1. This will need to change in order to meet a T+1 settlement cycle. In a T+1 settlement cycle, the group agreed that a new affirmation cut off should be 9:00 PM ET on trade date. Both U.S. and non-U.S. institutional investors will need to adopt process and behavioral changes to meet this new cut-off time.

Considerations

To meet a new affirmation cut-off time of 9:00PM ET on trade date, the IWG recommends that allocations are made as soon as practicable after an order is executed to ensure members have sufficient time for affirmation processing. Market participants located outside of the U.S. may need to consider pre-allocating trades prior to the close of their business day or the complete execution being filled to ensure the allocation process is completed.

Encouraging trades to be affirmed throughout the trading day increases the time firms have to process allocations and increases the likelihood of timely affirmation. Trades that are affirmed before 9:00 PM ET on T would be eligible for DTC's ID ANE settlement process, and for Prime Broker transactions, NSCCs CNS service. Following the affirmation process, the affirmed trades will be sent from DTCC's ITP service to DTC and NSCC for processing in DTC's Night Cycle Batch process which will start on the evening of T (proposed start time at 11:30 PM ET). Moving to a T+1 settlement cycle, which involves compressing the allocation timeframe, could lead to an increase in trade breaks if the allocations are not completed in a timely manner.

Recommendations

The IWG recommends the following for the institutional trade allocation and affirmation process:

- Encourage allocations by 7:00 PM ET on T to ensure that firms have sufficient time to process affirmations by 9:00 PM ET on T.

- All firms submit allocations as soon as possible following trade execution.
  - Identify root causes and educate industry participants to promote intraday allocation processing

- Change the affirmation deadline from 11:30 AM ET on T+1 to 9:00 PM ET on T.

[15] For the purposes of this paper, "allocations" is defined as the allocation sent to an Executing Broker from order placer instructing how to allocate a trade amongst the Clearing Brokers

[16] Percentages derived from DTCC internal analysis.

  - DTCC's ITP will use the following steps for institutional transactions unaffirmed by the 9:00 PM ET deadline:
    - By 9:00 PM ET on T, DTC and NSCC will receive from ITP affirmed and un-affirmed institutional transactions and include them for processing through DTC's ID ANE service (Automatically subjecting un-affirmed institutional transactions to DTC's ID ANE process represents a change from the current institutional transaction process and will be offered as an option to members)
    - DTC Participants will need to authorize or exempt these transactions by 10:30 PM ET on T
    - The authorized transactions will be introduced as deliver orders into DTC's Night Cycle process which will start at 11:30 PM ET
    - These transactions will be subject to DTC's Receiver Authorization Deliver (RAD) service and additional DTC Risk Management controls as they are today
    - DTC will provide output, related to these transactions processed, at 1:30 AM ET on T+1
- Update legacy technology systems and processes to increase allocations and affirmations by deadlines.
- Encourage the industry to get affirmed transactions into the DTC night cycle on T.
  - Adopt technology (e.g., DTCC's ITP CTM) and/or messaging protocols (e.g., FIX) to automate the communication of allocations and CTM's Match to Instruct to facilitate more timely trade affirmation

2. Documentation impacts

Background

There are several different types of industry documents that reference securities settlement which will need to be assessed when changing the settlement cycle to T+1. These documents may be categorized into three broad categories: Transactional, Administrative, and Agreements. For example, trade confirmations as required by SEC Rule 10b-10 under the Exchange Act are required to be provided by broker-dealer to the customer at or before the settlement of the transaction. In establishing a new T+1 settlement cycle, the transactional, administrative and agreement documents will need to reflect T+1 settlement. The change will require documentation language updates and will impact resourcing and delivery processes (including the associated technology vendors) for both buy-side and sell-side firms.

The following list are examples of documents that will need to be reviewed before migrating to T+1 settlement:

- **Transactional Documents**
  - 10b-10 confirmations
  - Corporate actions notifications
  - Notices of execution
  - Qualified Institutional Buyer (QIB) documentation
  - Product issuance documents for rights and warrants
  - Stock loan recall notices
  - Customer and internal settlement notices
  - Client account statements and disclosures
- **Administrative Documents**
  - Balance restriction
  - New accounts
  - Subscriptions
  - Utility, vendor, and service bureau product guides
  - Accounting policies
  - Internal controls and compliance
  - Trading, liquidity, cashflow models
  - Client education / awareness brochures
  - Internal training material
  - Internet and intranet information
  - System administrative messages (e.g., CNS ID Net announcements, Transfer Agent announcements)
- **Agreements**
  - Client account agreements
  - Fund prospectus and statements
  - Letters of transmittal for voluntary corporate actions
  - Agreement between PB and EB (typically Form 150)
  - Securities loan agreements (e.g., MSLA, GMSLA, and ISLA)

- Reinvestment agreements and DRIP documents
- Trading relationship agreements (e.g., ETFs, Swaps, ESOPs)

Considerations

Meeting the current regulatory requirements regarding documentation delivery (i.e., confirmations) will be a challenge in a T+1 settlement cycle. Current SEC rules require firms to deliver documentation by a defined time to serve as the default statement of record. Firms may deliver such documentation on paper or electronically. However, clients must opt-in to receive electronic delivery thus paper delivery is the default delivery mechanism. In a T+1 environment, firms are going to be challenged to meet the timing requirements for physical delivery of confirms due to the constraints on printing and postal delivery. As a result, the industry believes that SEC rules should allow electronic delivery of confirmations and other documentation to be the default method of delivery to ensure that investors receive documentation on a timely basis consistent with current rules.

Firms should begin to take an inventory of documentation that will be in scope and assess whether changes are necessary internally, to meet regulatory requirements with external parties. Additionally, firms will need to enhance processes and work with vendors where necessary to comply with confirmation delivery requirements. In a T+1 settlement cycle, these compressed timelines will be a challenge to meet with current paper distribution methods (e.g., the U.S. postal service).

Recommendations

The IWG supports e-delivery as the default standard for delivering transaction documents to customers. In addition, the group supports further digitization, such as the basic PDF delivery of confirms and statements, in leveraging technology for these processes. This change would require the support of regulators to change the existing regulations regarding documentation delivery. Such regulatory change would need to address the following key areas:

- Support “access equals delivery” as a default for communication to investors (e.g., statements, prospectuses, agreements), which would satisfy the “delivery” requirement for securities documentation.
- Clarification on what constitutes “delivery” for electronic confirmations in accordance with SEC Rule 10b-10 under the Exchange Act.
- Remove rule references that trigger the Electronic Signatures in Global and National Commerce Act (E-Sign Act) and therefore inhibit clients from receiving e-delivery of investor documents.
    - E-Sign Act may inhibit market participants, due to a potential requirement related to the re-confirmation of the e-delivery designation for documents required to be delivered “in writing”

3. Global settlement implications and FX markets

Background

The U.S. dollar (USD) FX market is the world's largest and most liquid financial market. As an integral part of the global economy, the effective and efficient exchange of currencies underpins the world's financial system. In addition to playing a vital role in cross-border trade and payments, the FX market supports currency exchange needs involved in the purchase and sale of U.S. securities in the global capital markets. FX market participants engage in currency exchange transactions across many different jurisdictions and time zones. It is, therefore, important to consider the implications of T+1 settlement on the FX markets.[17]

Currently, spot FX transactions typically settle via the exchange of two payments in two different currencies on T+2.[18] In certain situations, a spot FX transaction is executed by the buyer of a security denominated and sold in a currency different than the purchaser's local currency in order to obtain the requisite currency needed to purchase the security. For these situations, the buyer will execute the spot FX transaction to buy the amount of currency required to purchase the security to make delivery by settlement.

Considerations

In consideration of the processes related to global settlement implications and FX markets, the IWG notes current considerations that will require attention given the migration to T+1 settlement:

FX Settlement Risk – With settlement of spot Forex transactions generally at two days post execution, accelerating U.S. settlement to T+1 raises the risk that transaction funding dependent on FX settlement may not occur in time. Unilateral cancelation deadlines by currency should be considered; service agreements between corresponding banks will need to agree and identify the cancellation cut-off time to manage risks effectively, within a window that affords T+1 settlement.

The period of irrevocability – the period between the unilateral cancellation deadline for the sold currency and actual receipt of the bought currency – can last up to two to three days at present, more if weekends or holidays fall in between. Depending on arrangements the fund manager may have in place with its transacting banks, alternative sources of funds to settle U.S. trades on T+1 may need to be in place, whether liquidating other readily available assets, pre-funding their trades in USD, or borrowing USD to meet the U.S. settlement deadline, which could lead to increased costs to settle USD transactions and deter trading.

Collateral / Liquidity Risk – FX settlement will need to be considered to meet the obligations of U.S. T+1 trade settlement. Market participants trading in T+2 jurisdictions still face the issue of having to ensure funding is available in time to settle their U.S. trades at T+1. Alternatively, uncertainty about collateral for settlement may mean they forego transacting in U.S. markets or work on alternatives in order to comply with the accelerated settlement requirements.

[17] While FX transactions settle T+2 today, many transactions are required to settle T+1 (or even T+0) in the current state. As such, capabilities exist to adopt T+1 settlement processes.
[18] With some exceptions where currency pairs already settle on a T+1 basis as standard (for example, U.S. and Canadian dollars).

The ability to raise collateral for U.S. trade settlement may become a more acute issue in scenarios such as a rebalancing, where market participants may have to sell non-U.S. positions a day before purchasing USD shares to ensure the funding from sales is received in time for T+1 settlement of their U.S. purchases. This could leave them underinvested for a trading day and could have a significant impact on investor returns unless fund managers develop other strategies to account for the timing differences.

International Banking and Market Coordination Issues – When the U.S. migrated from T+3 to T+2 settlement in 2017, a majority of international markets were already on a T+2 settlement cycle, making the transition much easier and resolving misalignment issues due to a longer U.S. settlement cycle. However, the move from T+2 to T+1 now creates a significant misalignment scenario for the U.S., as many international markets will remain at T+2 with no current announced plans to accelerate the settlement cycle.

For securities interlisted between two separate markets, considerations and adjustments will have to be made as it relates to margin and entitlements. In situations like this, and where applicable, it would be optimal for divergent markets to align settlement conventions. For example, Canada, the market with the most interlisted securities with the US, has announced plans to move to T+1 in concert with the U.S.

The rigid deadlines of the banking system pose a significant risk to timely settlement in a T+1 environment, as do simple time zone or calendar differences that otherwise can be accommodated in a T+2 settlement cycle. Foreign banking deadlines and cutoff times for transaction processing in related markets must be carefully re-examined to ensure activity can be harmonized in an accelerated U.S. settlement framework. Alternatively, U.S. market participants may need to consider the reduction or curtailment of their foreign market participation.

Recommendations

While certain open questions remain regarding the need to pre-fund some securities transactions (due varying settlement cycles in different time zones), the IWG recommends wholesale FX market participants conduct internal analysis of their global operating model, and current processes to identify any changes and/or enhancements that would need to be implemented in order to facilitate timely FX transactions where needed for T+1 settlement. To support these analyses, the IWG recommends firms reference their current processes related to T+1 settlement of certain securities (e.g., U.S. Treasuries) as potential models for expanding T+1 settlement to other asset classes.

Additionally, the IWG recommends:

- Engagement amongst the Federal Reserve and global Central Banks, market infrastructure providers and vendors, and industry groups (e.g., FXC, GFXC) should aim to understand how behavioral changes might best be introduced and reinforced in the industry.
- Continued coordination and engagement among global, wholesale FX market participants to introduce T+1 settlement without disruption, particularly for non-U.S. based investors given time zone differences.[19]

[19] ASIFMA acknowledges the pressure that may arise for AsiaPac to align with the United States. Additionally, ASIFMA indicates certain operational constraints given regulatory ID market requirements imposed.

4. Corporate actions

Background

Corporate actions, specifically income distributions that occur on securities which are traded at securities exchanges such as the NYSE, NASDAQ and FINRA OTC, will trade either with the distribution or without the distribution near the time of the event's record date. To determine when the security is traded without the distribution, the securities exchange will establish (or referred to as "rule") an ex-dividend date (ex-date) where the price of the security is adjusted by the amount of the distribution. Typically, the ex-date will occur prior to the record date of the event, and in a T+2 settlement cycle, the ex-date falls on the trading day before record date. Regular way ex-date occurs when the ex-date is established prior to the event's record date. A move to T+1 settlement will subsequently move the ex-date to the day of the record date of the event.

There are instances where, depending on the size of the income distribution relative to the security's market capitalization, the ex-date is established after the event's record date. In these cases, the ex-date is typically ruled after the event's payable date, and this is often referred to as "irregular ex-date" or "late ex-date". To account for trading activity that occurs between the record date and the ex-date, there is an interim monitoring period that continues to determine investor eligibility in the distribution. This interim period of activity, known as the due bill period, culminates in what is called the due bill redemption date, where most industry participants will allocate cash or securities to their clients. In the current T+2 settlement cycle, due bill redemption date is set to ex-date plus two (2) trading days.

A T+1 settlement cycle will likely impact trading practices around the expiration dates of certain voluntary corporate action events, including tender offers, exchange offers, and rights subscriptions. The issuer often offers a guarantee of delivery that allows investors to purchase securities on the offer's expiration date and still participate in the offer while their securities are in the process of settling. This is also known as the cover/protect period where purchased yet-to-settle securities are instructed in the form of a "protect" and then that protect is subsequently "covered" once the securities settle. Typically, this cover/protect period is aligned to the market's settlement cycle; however, there are exceptions where the time to cover a protect may be shorter or longer. The period is ultimately defined by the issuer and described in detail in the event's offering materials. In a T+2 settlement cycle, the cover/protect period is often expiration date plus two (2) trading days.

Considerations

In consideration of the processes related to corporate actions, the IWG notes current challenges that will require attention given the migration to T+1 settlement:

- The securities exchanges each have their own defined set of rules that govern the establishment of the ex-date, and should work together to standardize the processes for market participants.
- The securities exchanges should review how the migration to T+1 settlement, and the subsequent shortening of corporate action event dates, impact pricing on traded securities, including tender offers, exchange offers, and rights subscriptions.
- The cover/protect period is currently inconsistently applied for many offers and is a current challenge such that member participants have discussed eliminating the cover/protect period

altogether as it increases the need for collateral financing to cover transactions during this period.

- Capital markets teams generally need advanced notice of actions (ideally, T+3 notice) to guide the inclusion or exclusion of securities in ETF baskets and adjustments to this timeline, from notification to inclusion, could potentially increase cash in lieu of settlement.[20]
- Some firms lack automated processes for reconciling unsettled trades by the election deadlines and, as such, rely on manual reconciliation to establish eligible holdings data prior to distribution deadlines.

Recommendations

Based on the above considerations, the IWG recommends the following:

- Advocate for standardized rule set changes for moving the ex-date to the day of the record date for regular-way corporate actions as well as for recalls and dividend reinvestment programs.
- Industry to develop recommendations related to:
  - Whether or not the cover/protect period should be eliminated altogether
  - Standardizing Security Payment Order (SPO) integration processes in the T+1 environment with customizable technology to eliminate or significantly reduce the reliance upon the manual broker-to-broker communication to disseminate SPO information related to trade fails
  - Exploring opportunities for a vendor solution[21] where both counterparties can post the original fails and transform these fails automatically into an SPO
  - Updating securities master reference data to account for same-day security symbol or share changes coinciding with the pay date of corporate actions to avoid increases in cancel / rebook scenarios
- Develop a uniform corporate action process, which would eliminate contract compare breaks and resulting recall issues and drive adoption of SWIFT[22] messaging across the corporate actions lifecycle to increase efficient communication by industry participants related to events, elections, payments, and reconciliations between projections and payment for investment managers and custodians.
- Identify best practices to reduce the amount of contract compare breaks that are the result of corporate action events to decrease the potential fails in a T+1 settlement cycle.

[20] A lack of SPO integration could, when combined with a T+1 timeline, exacerbate stress on manual broker-to-broker communication, and by default, trade fails systemically.

[21] This system could be integrated with a current service provided by DTCC. The Claims Connect tool could be adapted to capture a large portion of the fails that cycle through the market, which will significantly reduce the need for manual SPO communication. This technological enhancement has been discussed at a high level by stakeholders from DTCC and aligns with their discussions around the creation of a transaction warehouse.

[22] A SWIFT (Society for Worldwide Interbank Financial Telecommunication) message combines ISO code with SWIFT connectivity to create a standard and automated communication flow between investment managers, custodian banks, local agents, and market information vendors.

5. Prime brokerage

Background

A PB provides its clients with a set of trade facilitation services including trade settlement, where Executing Brokers (EBs) are instructed to settle trades with the prime broker. In a prime brokerage arrangement, self-clearing, and clearing firms for EBs, are instructed to settle some, or all, of a PB client's trades with the PB. PBs provide other trade services, including custody, settlement, locating securities to settle potential short sales, margin financing, asset servicing, and providing back-office technology.

The confirmation and affirmation processes between EBs and PBs are an essential function of trade processing in the prime brokerage arrangement. Under prime brokerage, trades details for trades that will settle, between EBs and PBs are sent to DTCC's ITP service for matching and affirmation. Timely affirmed PB trades are typically forwarded to NSCC for netting in NSCC's CNS service if the security is eligible for CNS processing as a trade between the EB and PB.

Under the SEC's Prime Broker, No Action Letter[23], a PB has the ability to disaffirm PB trades of a client alleged to the PB by the EB as a means of managing its risk. When ITP receives a disaffirmation instruction from a PB, it generates new offsetting settlement instructions and sends the new instructions to NSCC to offset the original affirmed trades already submitted to NSCC for CNS processing. If disaffirmations occur, the EB then is responsible for recording the original trade in an account in the name of the customer.

In a T+1 settlement environment, the IWG proposes that the SEC change the required deadline specified in the Prime Brokerage No Action letter for executing brokers to inform the prime broker of trade details from the morning of the next business day after trade date (which would be too late to effect settlement in CNS on T+1) to a time on the evening of trade date that would meet the NSCC evening cutoff time on trade date for matched and affirmed trades to flip into T+1 settlement in NSCC's CNS.

In addition, the IWG proposes that, PBs, executing self-clearing firms, and clearing firms of an introducing broker acting as an EB identify and implement amendments to their existing contracts regarding the prime brokerage arrangement (e.g., including standardized documents, such as the Form 150[24]), to reflect any necessary changes to timing for trade notification and affirmation, and should consider whether any changes are necessary to disaffirmation deadlines in light of the T+1 environment.

Considerations

The following are considerations relating to PBs that the IWG believes firms should take into account when reviewing prime brokerage processes internally. These considerations are followed by recommendations in the next section.

- **Trade affirmations**. The timely of affirmation of trades by prime brokers is a critical step in the clearing and settlement process. Timely affirmed trades ensure timely settlement in NSCC's CNS system, ensuring the risk-reducing and operational benefits contemplated by the national

[23] https://www.sec.gov/divisions/marketreg/mr-noaction/pbroker012594-out.pdf
[24] https://www.sifma.org/wp-content/uploads/2017/08/Prime-Brokerage-_Prime-Brokerage-Agreement-Form-150.pdf

system for clearance and settlement that was developed in the aftermath of the "Paperwork Crisis" that occurred in the U.S. securities markets in late 1960s to early 1970s. NSCC margin requirements shift from the EB to the PB for affirmed trades. It is important that the move to T+1 does not result in a material reduction in the percentage of prime brokerage trades that timely settle through centralized clearing systems. In prime brokerage, this means that the EB will need to submit it trades to NSCC for CNS clearing by an early evening cutoff time established by NSCC for CNS settlement on T+1. Similarly, PBs will have a shorter time to screen trade information received from its clients prior to the affirmation cutoff time.

- **Trade disaffirmation.** Today, PB trades may be disaffirmed by prime brokers up until 5:00 PM ET on T+1. In order to exercise its disaffirmation rights based on insufficient margin held in its client's account, the PB must disaffirm all trades on trade date and the day before settlement across all EBs for a given client. Changes to the disaffirmation deadline in a T+1 settlement environment pose a challenge for PBs because (1) there is reduced time to calculate margin, make margin calls and implement other risk management controls, and (2) the absence of disaffirmation automation has left many PBs with inefficient and time-consuming options for disaffirming. The following events at ITP/NSCC will occur in the event of a trade disaffirmation in a T+1 settlement cycle:
  - A PB Disaffirmation submission by the PB results in the reversal of the original transaction that was affirmed by the PB
    - The reversal transaction will be submitted by ITP to NSCC
  - The disaffirmation generates offsetting activity to the original affirmation and the positions are updated accordingly
  - In a T+1 settlement cycle, the disaffirmation can occur after settlement has already occurred and as a result the EB may have a net delivery or receive to the NSCC

- **Regulatory impacts**. The move to T+1 settlement will require clarification from the SEC on aspects of prime brokerage operations.

Recommendations

The IWG recommends the following for prime brokerage activity:

- The SEC should change the required deadline specified in the Prime Brokerage No Action letter for executing brokers to inform the prime broker of trade details from the morning of the next business day after trade date (which would be too late to effect settlement in CNS on T+1) to a time on the evening of trade date that would meet NSCC's evening cutoff time for matched and affirmed trades to flip into T+1 settlement in NSCC's CNS.
- Prime broker participants should conduct an internal analysis with their respective firms to understand present-day practices and identify changes or enhancements that may be necessary in order to implement T+1 settlement requirement.
- Under T+1, participants must (1) ensure that accelerating the affirmation deadline (and/or disaffirmation deadline, if participants decide to accelerate that deadline), which will reduce time for screening, does not compromise risk management controls or margin calculations, and (2) work to mitigate any resulting increase in bilateral settlements.

- PBs, executing self-clearing firms, and clearing firms of an introducing broker acting as an EB should identify and implement any necessary amendments to their existing contracts regarding the prime brokerage arrangement (e.g., including standardized documents, such as the Form 150), to reflect any necessary changes to timing for trade notification and affirmation and should consider whether any changes are necessary to disaffirmation deadlines in light of the T+1 environment.
- Standardize processes for prime broker customer onboarding to enable automated capabilities for recurring, time-sensitive processes (e.g., Form 1 Schedule A).

6. Securities lending

Background

Securities Lending (Sec Lending) facilitates several trading activities, such as, but not limited to, market making, short selling, and hedging. Sec Lending is an essential market mechanism to facilitate trade settlement.

In the current T+2 settlement environment, there is a reliance on batch cycle processes between custodians and third-party lending agents. In the compressed timeframe of a T+1 settlement cycle, the loaned securities subject to recall by the lender need to be identified in a compressed time frame so custodians' and agents' processes can proceed without disruption.

Additionally, the current timing for recall issuances (e.g., as late as 3:00 PM ET on T+1), will have to be reconsidered to avoid an increase in fail rates. The more notice broker-dealers have to return securities, the more likely they will be returned in time for settlement. This change in the settlement cycle will necessitate that lenders, borrowers, custodians, and service providers change their behavior because security lenders will have less time to recall securities on-loan and security borrowers will have less time to return those securities. These behavioral, technological, and process changes are important to mitigate the impact on settlement processes resulting from a compressed settlement timeframe. The IWG analyzed the below considerations in the securities lending process.

Considerations

The following are considerations relating to Sec Lending that the IWG believes firms should take into account when reviewing securities lending processes internally. These considerations are followed by recommendations in the next section.

- The existing timing for recalls specified in SEC Reg SHO FAQ 2.7[25] is specific to an assumed T+2 settlement cycle.
- Moving to a T+1 settlement cycle, compresses the timeline to identify and recall securities, which could lead to breaks in the process resulting in an increase in trade fails and buy-ins unless there is a modification to the existing rules, technology, and processes.

Recommendations

Based on Sec Lending discussions held to-date, the IWG recommends the following:

- Vendors and firms should discuss and provide recommendations on the securities lending process to evaluate the risk to participants in the securities lending and equity trading markets. The current timeline for recall issuances (e.g., as late as 3:00 PM ET on T+1) should be reconsidered. The more notice broker-dealers have to return securities, the more likely they will be returned in time for settlement. Industry discussions will continue regarding the securities lending recall process timeline.
- Utilization of tools made available by vendors to streamline the recall, contract compare, corporate action, buy-ins, and rebate interest collection processes.

[25] For details on SEC Reg SHO FAQ 2.7 please visit: https://www.sec.gov/divisions/marketreg/mrfaqregsho1204.htm

- Vendors and firms should discuss and provide recommendations on the securities lending process in order to look for efficiencies in the current process. For vendors and system providers who utilize overnight batch processing, the T+1 settlement cycle presents an opportunity to move away from batch processing and move towards real time. The following dependencies have been identified by the IWG for further study in coordination with market vendor solutions to understand their impact in the implementation of an accelerated settlement cycle:
  - Update of firm's inventory positions with new trades and send to Agent Lenders
  - Reduction in Contract Compare breaks if STP is adopted (e.g., consideration for smart contracting solutions and the utilization of tools)
  - Automated workflow tools or vendor-proposed solutions to reduce manual processes
  - Vendor-to-vendor interoperability (e.g., books & records and Securities Lending platform integration communication to serve brokers)
- The SEC should update existing interpretive guidance in SEC Reg SHO FAQ 2.7 by clarifying that if a broker-dealer lends an equity security pursuant to a securities lending agreement that requires delivery of a loaned security (recall period) within one business day after a bona fide recall, then sells the loaned security, and recalls the loaned security by no later than two settlement days following the trade date (or T+2), then the broker-dealer may mark the sale of the security "long" for purposes of Regulation SHO Rule 200(g)(1), and that alternatively, if the recall period is two business days after initiation of a recall, then the broker-dealer would need to initiate the recall of a loaned security by T+1 in order to be able to mark such sales "long" for purposes of Regulation SHO Rule 200(g)(1).

7. Settlement errors and fails

Background

Settlement errors and trade fails occur today, albeit a small percentage, within today's T+2 settlement cycle. Settlement errors that are not corrected in a timely manner before settlement date will lead to trade fails. Industry participants expend considerable effort to both prevent errors and fails and then remediate them. In the current T+2 settlement cycle industry participants have 48 hours to remediate trade errors to prevent trades from failing. In transitioning to T+1, there will need to be a heightened focus on both the prevention and remediation processes for errors, as participants will have less than 24 hours to remediate trades. Market participants should review and enhance current operational processes and technologies in order to mitigate the risk of errors thus reducing potential trade fails.

Considerations

Several causes of settlement errors are identified below:

Missing trade counterparty instructions

- Stale reference data not updated with current SSI instructions results in incomplete or inaccurate reference data being utilized for trade execution.
- For block trades, counterparties may not distribute and or receive the allocation information in a timely manner.

Missing or incorrect SSIs

- Due to non-standard processes for obtaining SSIs there may exist missing or incorrect SSIs.
- Root causes of fails likely to interrupt various streams of revenue data for pricing.
  - Customers failing to update SSIs on automated systems
  - Customers trading in a block account and allocating securities with one set of SSIs and then making changes to another account shortly before settlement
  - Firms awaiting trade instructions from the counterparty on a transaction for an illiquid security

Shares not received from a recalled loan or pledged security

- Processing timelines will be compressed in a T+1 settlement cycle. If the recall process is delayed for any reason, the ability to obtain the shares back may lead to a higher percentage of trade fails.
- Given the compressed processing timelines in a T+1 environment, a delay in the request to release pledged securities may lead to a higher percentage of trade fails.

Cancels and rebills

- The cancel and rebill process occurs when a trade is booked, affirmed, and added to CNS. Should a trade be cancelled and then rebilled because of a monetary change to the trade, its attempt to cancel a confirmation and affirmation does not undo the original trade submission to CNS and the settlement of that trade occurs at DTC. Considering these instances occur frequently in a

T+2 settlement cycle, it is believed that these occurrences will occur more often in a T+1 settlement environment.

- The industry lacks a standardized method and process to effectively and timely manage cancel and rebills which creates inconsistencies between firms and is a driver of settlement errors and subsequent fails. The current cancel and rebill process can lead to an increase in SPOs[26] to correct money differences.

Firm communications

- Many firms continue to rely on antiquated communication methods (e.g., emails, faxes) to complete trade settlement. These inefficient communication channels contribute to errors and delay trade settlement.

Conversions/realignments as applicable to RegS 144A securities (ADR/ORDs)

- In order to enable T+1 settlement without increasing fails, the industry believes there needs to be automated solutions to the manual paperwork and physical stamp requirements to process Reg S/144a conversions with the conversion agent community. In the current state, the ability to convert securities ahead of standard settlement cycles to ensure timely settlement is already strained leading to increased fails, counterparty risk and financial exposure. We believe that in a T+1 environment, this risk will be further strained as the current process is not fit for purpose. An industry solution would greatly benefit settlement efficiency and will improve liquidity in the marketplace on these securities.

Recommendations

Based on discussions held to-date, the IWG recommends the following:

- Adopt full utilization of available technology such as DTCC's ITP ALERT Database.
- Custodians should leverage ITPs Global Custodian (GC) Direct Service in updating SSIs, standardizing the process for SSIs across the industry which may lead to several benefits, including:
  - The alleviation of fails that are likely to interrupt various streams of revenue data from the viewpoint of pricing
  - Avoid current issues driving SSI mismatches such as customers failing to update SSIs on ALERT. In addition, avoid issues with customers trading in a block account and subsequently allocating securities with one set of SSIs and then making changes to another account before settlement
  - Avoid situations where a counterparty is awaiting trade instructions from another counterparty on a transaction for an illiquid security, which could impact liquidity
- Propose standardization of processes and further adoption of widely available automated systems and solutions.
  - In the cancel and rebill process, this will allow for industry participants to agree to pair-offs, partials, and other trade details in a quicker manner which will be required to avoid fails in an accelerated settlement cycle

[26] These payment orders enable two parties to adjust the payment in and against payment settlement transaction in the books of DTC without transferring the associated securities charges to settle money differences.

- Market participants should adopt policies and procedures to update SSI reference data in a timely manner prior to settlement.
  - This includes reaching out to clients prior to settlement for updated SSIs and updating the SSI information within internal systems prior to trade execution and/or settlement
- Shorten the CNS buy-in cycle for both CNS and non-CNS participants to facilitate the move to a shortened settlement cycle.
- Market participants should review funding and/or inventory management practices to proactively reduce trade fails in a T+1 environment.
- Develop standardize processes for cancel and rebills, including:
  - In cancel and rebills, where a cancel instruction for an affirmed trade with quantity difference is processed and agreed to by the counterparty, the receiving firm should DK the transaction and the delivering firm will re-deliver the corrected transaction
  - In cancel and rebills, where a cancel instruction for an affirmed trade with monetary difference is processed and agreed to by the counterpart, market participants should settle that monetary difference by submitting an SPO through DTC to collect the monetary difference
- Market participants should implement controls to avoid the manual work required on T+1 for cancel and corrected trades.
- Market participants should adopt policies and procedures that enable participants to update SSI reference data in a timely manner prior to settlement, including reaching out to clients prior to settlement and updating internal systems prior to trade execution and / or settlement.
- Firms and vendors should update their memo segregation[27] processing to account for intraday trading.
- Similar to the migration to T+2, DTC will perform an update of the security master to align reference data and initiate the settlement date to be one (1) day instead of two (2) days.

[27] Please see the DTCC definition on memo segregation here

8. ETF creation and redemption

Background

ETF shares creation & redemption is the primary market trading mechanism for ETFs —where authorized participants (APs) place orders with Fund Sponsor's (ETF's) to create new shares and redeem existing shares. The ability for APs to create or redeem ETF shares at NAV at the end of each trading day is critical to the pricing efficiency and operational integrity of ETFs.

ETF shares are created when an "authorized participant" deposits the daily creation basket or cash with the ETF. In return for the creation basket or cash (or both), the ETF issues to the authorized participant a "creation unit" that consists of a specified number of ETF shares. Creation units are large blocks of shares that generally range in size from 25,000 to 200,000 shares. The authorized participant can either keep the ETF shares that make up the creation unit or sell all or part of them on a stock exchange. ETF shares are listed on a number of stock exchanges where investors can purchase them as they would shares of a publicly traded company.

NSCC's ETF service is the primary market for Create and Redeem eligible funds, the ETF application processes these orders through CNS which provides a Central Counterparty Guarantee.

The IWG reviewed the following key areas of impact of shorter settlement cycle (T+1) on the ETF creation and redemption processes:

- Batch Cycles Timing
- Collateral Requirement
- Alignment of Record and ex-date for ETF distributions
- U.S.-listed ETFs with global securities non-NSCC eligible, except for cash[28]

Considerations

The following are considerations relating to ETFs that the IWG believes firms should consider when reviewing processes internally. These considerations are followed by recommendations in the next section.

- **Timing of batch cycles**. NSCC currently receives ETF creation / redemption input until 8:00 PM ET on T with no plans to extend the 8:00 PM ET cutoff under the accelerated settlement cycle. The batch driven cycle is subject to tight timeframes with Agent Banks, AP's and NSCC waiting on end of day pricing and a small window for processing. This consideration poses the following challenges:
  - Currently the timing of the CNS exemption is set to 10:30 PM ET. In a shorter settlement cycle this may represent processing difficulty to members of CNS as this is the first time those trades are seen via the instruction detail blotter

- **Collateral requirements.** There were challenges considered around the posting of collateral for baskets of securities in a T+1 settlement cycle for funds with global components. T+1 will result

[28] Creation / redemption activity done ex-clearing will not be impacted by NSCC clearance and settlement process.

in compressed timelines and misalignment of global settlement cycles which may create the following challenges:

  - On the creation side, APs will need to post collateral for an additional day to release the ETF shares on T+1 if the underlying securities are international, settling T+2 or later. This will create cash management challenges especially if there is a need to sell underlying securities in global markets with a longer than T+1 settlement. This misalignment in settlement cycles introduce the possibility of APs needing to establish lines of credit with the collateral payment shifting a day forward

- **Other considerations.** The following areas should be examined:
  - AP agreements to perform functions on behalf of clients should be reviewed for language to allow flexibility for a shorter settlement cycle
  - Baskets holding IPO shares may see extended settlement depending on APs ability to deliver the shares but should not be impacted by accelerated settlement
  - Extended settlement for rebalancing will still occur

Recommendations

Based on discussions held to-date, the IWG recommends the following:

- To mitigate issues with the new proposed timing of the CNS exemption at 10:30 PM ET, APs should subscribe to real time messages coming out of NSCC's Universal Trade Capture (UTC)[29] system. Real time messages will allow APs to calculate the exemptions in a timely manner for processing.
  - NSCC will present options to alleviate CNS Exemption concerns including:
    - Distribution of ETF Instruction Detail Blotter with settlement details prior to current 9 PM Cycle
    - Development of a near real time create/redeem process after 7 PM in NSCC's Primary Market Service
    - Distribution of Trade Capture messaging in Near Real time for Create / Redeem trades
- Adopt the use of collateral processing tools such as NSCC's collateral process, to centralize the collateral process for global components. Adoption of these tools will centralize collateral processing and reduce cash management risk due to misaligned settlement cycles.
- Extend baskets holding IPO share settlement when necessary, depending on an APs ability to deliver shares. Extended settlement is an agreed upon order consummation between the AP and the ETF.

[29] Universal Trade Capture (UTC) is a service that validates and reports equity transactions that are submitted to NSCC by an exchange or by a Qualified Special Representatives (QSRs) that is an NSCC Member.

9. Equity and debt offerings

Background

A key consideration for the move to a T+1 settlement cycle is the impact of a shortened settlement cycle on the equity and debt offering processes, including the Initial Public Offering (IPO) process for equities. An IPO refers to the process of offering shares of a company to the public in a new stock issuance allowing the company to raise capital from public investors.

The current market practice for substantially all equity offerings is to settle on the current T+2 timeframe, notwithstanding the exceptions provided in Rule 15c6-1(c) for firm commitment offerings priced after 4:30 pm ET, provided the transaction settles no later than T+4, and in Rule 15c6-1(d) for firm commitment offerings if the managing underwriter and issuer agree to an alternative date for settlement for all securities sold pursuant to an offering. Operationally, given the technology used for the trading of equity securities and the volume of trades occurring between pricing and settlement of the offering, firms in the current T+2 environment are largely unable to accommodate different settlement timeframes for equity offerings versus secondary market equity transactions. While the exception in Rule 15c6-1(c) is rarely used in this current T+2 settlement environment for equity offerings, we believe that utilization of paragraph (c) will be required with increasing frequency if T+1 becomes the default settlement period, as the underwriting community potentially may no longer be able to consistently settle equity offerings on the same period as secondary market equity transactions due to the concerns described below.

For debt offerings, due to the non-standard nature of many such offerings and the documentation involved, frequently settle on an extended basis in reliance on the exception in Rule 15c6-1(d) noted above. We note that substantially all of the purchasers in debt securities offerings are large, sophisticated institutions, and the risk and depositary collateral issues and concerns underlying the desired move to T+1 are largely inapplicable to the settlement of these offerings.

Considerations

Equity Offerings

Equity offerings involve a myriad of unique issues that have historically led the Commission to allow them to have the ability to settle later than the standard securities transaction settlement cycle found in Rule 15c6-1(a), as reflected in the exception provided in 15c6-1(c). While the industry has made great strides over the years to make the equity offering process more efficient, the unique documentation, operational, and transactional features of equity offerings likely will increase the need for firms to more frequently rely on this exception when the default settlement period were moved to T+1.

Certain potential concerns with the reduction of the current T+2 settlement period set forth in Rule 15c6-1 for equity offerings have been identified, including:

- Documentation Issues - Both primary equity offerings (where newly issued shares are sold by the issuer) and secondary equity offerings (where existing shares are sold by affiliates and other existing shareholders) are very document intensive and often require significant participation by counsel to ensure that all the Securities Act, FINRA and state and foreign corporate law

requirements, and various conditions to closing are met. This includes the preparation and delivery of the final prospectuses, which, on a T+2 settlement period, often occurs on the morning of settlement, as well as preparation of various other documentation that is required to effect the closing of new issue equity offerings. As a result, for example, the final prospectus is unlikely to be delivered prior to the settlement of T+1 offering. There are also certain transactions and processes that cannot be accomplished on a T+1 basis in their current formulation; for example, "registered block trades" whereby affiliated shareholders bid out a sale of shares to multiple underwriters require the delivery of stock powers/medallion guarantees cannot practically be completed on a T+1 basis and the information required to complete them is not typically available before the terms of the transaction are finalized at pricing. Additionally, a T+1 settlement timeframe provides firms with virtually no time to address unanticipated documentation issues that may arise in connection with equity offerings. Any delays related to such documentation could affect the ability of the securities to be handled in book-entry form at DTC/NSCC and thus could delay settlement beyond T+1.

- Operational Issues - Similarly, a T+1 settlement timeframe provides firms with virtually no time to address unanticipated operational issues that may arise in connection with primary or secondary equity offerings. Any operational issues that result in processing delays could affect their ability to achieve T+1 settlement for equity transactions.
- Restricted Book-Entry Shares - Selling shareholder's shares are often in restricted book-entry format subject to restrictive legends, so settlement with "clean" book-entry shares held through DTC requires close involvement of the issuer's transfer agent, share registrar and/or ADR depositary, depending on the security being sold. While increasingly rare, selling shareholder shares also can be certificated, which further complicates the process. In ADR-related transactions, there are 2 layers of transfers, one for the local shares and one for the ADRs, and the transfer of the local shares adds time zone constraints as well as applicable local law processes.
- Exercising the Shoe – T+1 practically eliminates the ability for underwriters to exercise their overallotment option in time for it to settle concurrently with the base offering on the T+1 settlement date, increasing transaction costs for issuers because a single settlement combining both the base offering and the exercise of the overallotment option is not possible. Practically speaking, going to T+1 would mean many more deals would be forced to have two closings, which places additional costs on the issuer.
- Foreign Issuers – In many cases, the sale of shares by non-U.S. issuers and shareholders requires additional approvals and processes, often involving parties whose regular business hours seldom coincide with U.S. business hours. Additionally, these parties can raise unexpected, non-negotiable requirements at the last minute, leaving very little time for a response. For example, in certain European markets (including Switzerland, Denmark, France and Germany) banks have to pre-fund the nominal amount/par value (in local currency) to the company in order for the company to then register the share capital increase with the local register. The register (or a judge in Germany for example) then approves the share capital increase. And only when the share capital increase is registered, can the company close the offering. By eliminating a business day from the settlement cycle, any hiccup in that process could lead to a delayed (and potentially failed) settlement.

Debt Offerings

Due to the non-standard nature of many debt offerings and the documentation involved, they frequently rely on the exception in Rule 15c6-1(d) noted above. Set forth below of some of the reasons why debt offerings historically have needed, and will continue to need, this exception if the standard settlement cycle is moved to T+1.

- Debt offerings are very document-intensive and typically have more documentation than equity offerings. This documentation includes indentures, guarantees and collateral documentation, all of which are individually negotiated and very often unique to the transaction. As a result, a substantial percentage of debt offerings (including, for example, a majority of non-investment grade debt issuances) currently settle on a period longer than T+3.
- Debt offerings can involve the sequencing of transactions in a manner to allow issuers to reduce or eliminate the double payment of interest, including in transactions where an issuer is redeeming or repurchasing outstanding securities or repaying loans, or using the proceeds of a debt offering to finance an acquisition. This sequencing may also require the releasing of existing security interests in the collateral which secures outstanding debt, as well as making the requisite filings to perfect security interests in the collateral securing the newly issued securities.
- Extended settlement allows issuers to access the market at the most opportune time and reduces market risk. Requiring issuers to make all the requisite closing documentation execution-ready prior to launch of an offering that settles T+1 would delay the launch and pricing of offerings.

Recommendations

Based on discussions held to-date, the IWG recommends the following:

- Retain the exception in Rule 15c6-1(c) but shorten the applicable period to T+2. The Commission could also solicit comment on the possibility of (a) eliminating the exception and/or (b) shortening the applicable period to T+2 but eliminating the "priced after 4:30 pm ET" requirement. Due to complex documentation, operational, and transactional features of equity offerings such as overallotment options, we believe that the settlement of certain offerings on a T+2 basis (instead of the T+1 timeline) will be far less disruptive to the market than "busted trades" resulting from the inadvertent, but likely inevitable, failure to complete them on T+1 basis.
    - In making this recommendation, we recognize that paragraph (d) provides an exception from T+2 settlement for firm commitment offerings if the managing underwriter and issuer agree to an alternative date for settlement for all securities sold pursuant to an offering. We believe that paragraph (d) adequately covers offerings (as a practical matter limited to debt offerings) in which the managing underwriter and issuer reach an agreement prior to, or at the time of, the pricing of an offering regarding an extended settlement time beyond T+2. Paragraph (d) does not, however, address situations in which T+2 was contemplated at the time of pricing, but unexpected issues subsequently arose that delayed settlement

  - In contrast, paragraph (c) provides a "fallback" mechanism whereby settlement can, without explicit agreement at the time of pricing, nevertheless occur after T+2 so long as it occurs within T+4. While we believe paragraph (c) is currently rarely used in the context of a default T+2 settlement period, we believe that utilization of paragraph (c) will be required with increasing frequency if T+1 becomes the default settlement period

- Retain the exception in Rule 15c6-1(d) to allow debt and other offerings to have the ability to opt for extended settlement.

10. Regulatory impacts

Background and next steps

Ahead of the adoption of the T+1 settlement cycle, the regulatory community should review the current rule sets that establish the current T+2 settlement cycle and amend to conform to a T+1 settlement cycle. The following are the preliminary rules identified:

Rule Name	High-Level Rule Description
SEC Rule 15c6-1(a)	A broker or dealer shall not affect or enter into a contract for the purchase or sale of a security that provides for payment of funds and delivery of securities later than the second business day after the date of the contract, subject to certain exceptions.
SEC Rule 15c6-1(c)	SEC Rule 15c6-1(a) shall not apply to contracts for the sale for cash of securities that are priced after 4:30 p.m. Eastern time on the date such securities are priced and that are sold by an issuer to an underwriter pursuant to a firm commitment underwritten offering registered under the Securities Act of 1933 or sold to an initial purchaser by a broker-dealer participating in such offering provided that a broker or dealer shall not effect or enter into a contract for the purchase or sale of such securities that provides for payment of funds and delivery of securities later than the fourth business day after the date of the contract unless otherwise expressly agreed to by the parties at the time of the transaction
MSRB Rule G-12(b)(ii)(B), G-15(b)(ii)(B)	Settlement dates shall be as follows: (B) for "regular way" transactions, the second business day following the trade date
MSRB Rule G-32(a)(i) et. al.	“No broker, dealer or municipal securities dealer shall sell any offered municipal securities to a customers unless such broker, dealer or municipal securities deliver delivers to the customer by no later than the settlement of the transaction a copy of the official statement”
FINRA Rule 11320(b)	In connection with a transaction “regular way,” delivery shall be made at the office of the purchaser on, but not before, the second business day following the date of the transaction
NYSE Rule 64(a)	Bids and offers in securities of the United States Government admitted to dealings on an "issued" basis shall be made only as the "regular way" for that security i.e., for delivery on the business day following the day of the trade
NASDAQ Rule 11320(b), 11140(b)(1) ,11150(a)	In connection with a transaction "regular way," delivery shall be made at the office of the purchaser on, but not before, the second business day following the date of the transaction
OCC Regulation, Part 12.9(a)	All contracts effected or entered into by a national bank for the purchase or sale of a security shall provide for completion of the transaction within the number of business days in the standard settlement cycle followed by registered broker dealers in the United States

Rule Name	High-Level Rule Description
FDIC Rules and Regulations, Part 344.7(a)	All contracts effected or entered into by an FDIC-supervised institution that provide for the purchase or sale of a security shall provide for completion of the transaction within the number of business days in the standard settlement cycle
FINRA Rule 11860(a)(4), 11140(b)(1),11150(a)	No member shall accept an order from a customer pursuant to an arrangement whereby payment for securities purchased or delivery of securities sold is to be made to or by an agent of the customer unless a certain set of procedures are followed
NYSE Rule 235, 236	Transactions in stocks except those made for "cash" as prescribed in Rule 14, shall be ex-dividend or ex-rights on the second business day preceding the record date fixed by the corporation or the date of the closing of transfer books
MSRB G-12(b)(ii)(C), (D), G-15(b)(ii)(C)	Outlines uniform practices for the processing and settlement of municipal securities
SEC 1994 Prime Brokerage No Action Letter	Principally, describes the prime brokerage arrangement, confirms that a securities trades executed by a customer with an executing broker for give-up to a prime broker does not violate the “free-rider” rule in Regulation T, as well as setting forth the division of responsibilities, rights and obligations among a prime broker, an executing broker and their mutual customer
SEC Rule 10b-10 (Confirmation delivery requirements)	Requires broker-dealers to send customers a written confirmation on or before the completion of a transaction
Reg SHO	Rules establishes order marking, "locate" and "close-out" requirements aimed at curtailing naked short selling and other abusive practices
Federal Reserve Board Regulation T	Governs cash accounts, as well as the amount of credit that broker-dealers can extend to investors for the purchase of securities
SEC Rule 15c3-3 (Customer Protection)	The rule dictates the amount of cash and securities that broker-dealer firms must segregate in specially protected accounts on behalf of their clients
SEC Rule 15c2-8(b)	Requires such broker or dealer to “deliver a copy of the preliminary prospectus to any person who is expected to receive a confirmation of sale at least 48 hours prior to the sending of such confirmation.”

Conclusion

Based on the discussions held to date, the ISC and IWG recommend that the Industry pursue a move to a T+1 settlement cycle in Q1/Q2 2024.

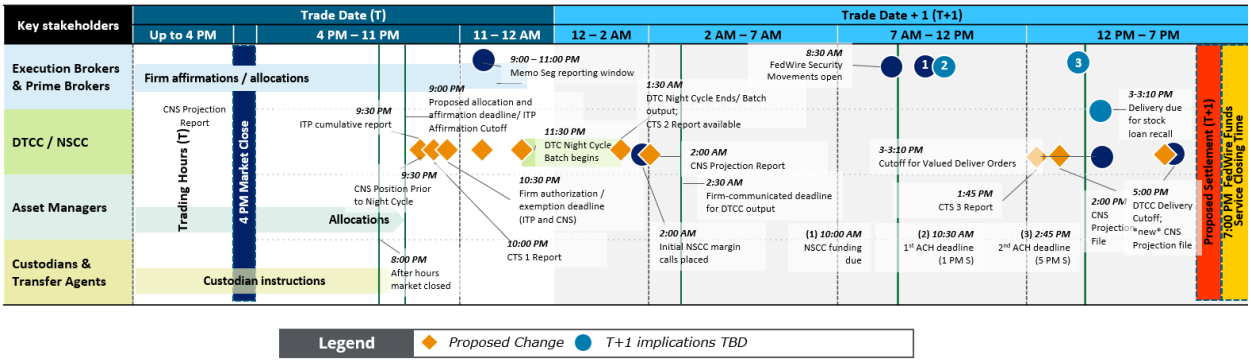
While numerous recommendations and considerations are noted throughout this paper, a successful migration to T+1 is also based on organizations taking the information noted here and developing their own internal migration plans. There also must be an industry effort to collaborate with regulators to achieve necessary rule changes, develop an industry-wide implementation plan, and conduct vigorous testing.

The ISC and IWG will continue to partner closely with organizations to promote awareness and understanding of the proposed T+1 migration timeline, industry-level requirements, industry considerations, leading best-practices, and industry-wide testing. The recommendations outlined in this paper provide the industry with a foundation to facilitate the necessary changes. As the industry moves through the multiple phases of the T+1 migration, the ISC will continue to engage with regulators on progress and next steps. Organizations should leverage the information provided in this paper and engage with the ISC to ensure their firms' preparedness as the industry migrates to T+1 settlement in the U.S. by the proposed implementation date in Q1/Q2 2024.

Appendix

Illustrative T+1 Trade Processing Flow Chart[30]

The following figure demonstrate the activities and timing of the various processing workstreams that will occur during the 24-hour settlement period. The diagram can be used to understand data drops by the various processing units, deadlines for submission of data and the coordination times across the ecosystem.



T+1 Trade Processing Comparison Chart[31]

The following chart lists the critical trade processing and settlement activities and deadlines identified by the IWG that will be impacted by T+1, either directly or indirectly, and involve one or more market participants. Rows highlighted in blue indicate a proposed change from the current-state (T+2) and are the proposed IWG recommendations for the future-state (T+1) processing timelines and deadlines.

Activity #	Activity Name	Current State Time	Future State Target[32] Time	ITP. DTC and NSCC Technical Names & Job Numbers	Dependencies
1	NAV Calculation Processing	6:00PM on T	6:00PM on T	N/A	
2	CTS 1 Report	9:00PM on T	10:00PM on T	CTS MACHINE READABLE OUTPUT MRO Autoroute#- 02042339- MRO CTS COMMA SEPERATED VALUES CSV Autoroute#- 02042340- CSV	• Firm trade submissions in NSCC
3	CTS 2 Report	11:59PM on T	1:30AM on T+1	CTS MACHINE READABLE OUTPUT MRO Autoroute#- 02042339- MRO CTS COMMA SEPERATED VALUES CSV Autoroute#- 02042340- CSV	• Firm trade submissions in NSCC

[30] The activities of the nightly process flow.
[31] The activities highlighted in blue indicate a change between current state and future state target time.
[32] These are the expected Future State Targets times and not the DTC and NSCC SLA proposed times.

4	CNS Projection Report	12:30AM on T+1	2:00AM on T+1	MRO AutoRoute# 02042022 Print Image Autoroute# 02040009	
5	Fedwire Funds Opens	9:00PM on T	9:00PM on T	N/A	
6	Fedwire Funds Closing Time	7:00PM on T+1[33]	7:00PM on T+1	N/A	
7	1st ACH Deadline (1 PM S)	10:30AM on T+1	10:30AM on T+1	N/A	
8	ITP Affirmation Cutoff	11:30AM on T+1	9:00PM on T	N/A	• Form 1 Schedule A
9	CTS 3 Report	11:45AM on T+1	1:45PM on T+1	CTS MACHINE READABLE OUTPUT MRO Autoroute#- 02042339- MRO CTS COMMA SEPERATED VALUES CSV Autoroute#- 02042340- CSV	• Firm trade submissions in NSCC
10	ITP Cumulative Report	12:00PM on T+1	9:30PM on T	Technical file name=Cumeter	
11	CNS Midday Projection File	12:00PM on T+1	2:00PM on T+1	CNS Midday Projection File (MRO Autoroute# 02042358)(Print Image Autoroute# 02042366)	
12	2nd ACH Deadline (5 PM S)	2:45 PM on T+1	2:45PM on T+1	N/A	
13	Prime Broker Disaffirmation	5:00PM on T+1	Subject to further review	Input- TRADESUITE ID™ ADVICE OF CANCELLATION OR CORRECTION MESSAGE SPECIFICATION- AOT1 (MQ) or AOT5 (FTP and NDM) and the output messages are placed in a CDSC mailbox. Message Type on the message header is AOCCNF. Output- TRADESUITE ID Confirm Trade OutPut Message Specification- Input for Trade Confirmations is TRAM (MQ) or TRAC (FTP and NDM) and the output messages are placed in a CDSC mailbox. Message Type on the message header is CONFRM. Trade Cancellations and Attempt to Cancel records are confirms	

[33] https://www.newyorkfed.org/aboutthefed/fedpoint/fed43.html

				with updated status codes and would also be Message Type CONFRM.	
14	Authorizations and Exemptions for ID, ID Net and CNS transactions	6:30PM on T+1	10:30PM on T	ID ANE	
15	CNS Position Prior to Night Cycle	7:30PM on T+1	9:30PM on T	MRO AutoRoute# 02040951 Print Image Autoroute# 02040950	
16	CNS Position Prior to the Day Cycle	12:30AM on T+1	2:00AM on T+1	MRO 02040949 Report 02040950	
17	DTC Night Cycle Batch Process Begins	8:30PM on T+1	11:30PM on T	N/A	• Deliver Orders
18	DTC Night Cycle Batch Process Completed	10:30PM on T+1	1:30AM on T+1	N/A	
19	DTC Night Cycle Output	10:30PM on T+1	1:30AM on T+1	Technical file name=DTCPDQ Output = DTFPDQ	
20	Initial NSCC Margin Calls Placed	2:00AM on T+1	2:00AM on T+1	N/A	• NSCC Margin Calculations
21	Fedwire Securities movement opens	8:30AM on T+2	8:30AM on T+1	N/A	• N/A
22	NSCC Funding Due	10:00AM on T+1	10:00AM on T+1	N/A	
23	DTC Delivery Cutoff for Valued Transactions	3:00PM on T+2 3:10PM on T+2 (recycle cutoff)	3:00PM on T+1 3:10PM on T+1 (recycle cutoff)	N/A	
24	DTC Delivery Cutoff for Free Deliveries	6:15PM on T+2	6:15PM on T+1	N/A	
25	Close of Business Settlement	3:45PM on T+2	3:45PM on T+1	N/A	

26	*NEW* CNS Midday Projection File	N/A	5:00PM on T	Autoroute# to be determined	
27	Memo Seg	24x5 (Typically, 3AM-8AM)	24x5 Best Practice: 9PM -11PM	Output File MEMOSG (4.06): Memo Segregation Activity DTFMEM (4.05): Memo Segregation Balances MQ SEG (20.06): SEG and MEMOSEG (Output) Input File SEG1/5 (4.08): Segregation/Memo Segregation/Investment ID Input File ISO Input ISO 15022 Message Layouts - Segregation/Seg Release/Memo Segregation/Investment ID/Investment ID Release Input ISO Output- ISO MSEG output is the standard long form MT548 Best practice for Memo Seg between 9pm and 11pm should be used to make adjustments to existing MS positions or add new ones.	
28	CNS Night Miscellaneous File	12:30AM on T+2	2:00AM on T+1	MRO Autoroute#02042008 MRO Extended Record ID Net Autoroute#02040343 Print Image Report Autoroute#02040001	
29	CNS Day Miscellaneous File	3:30PM on T+2	3:30PM on T+1	MRO Autoroute#02040331 Print Image Report#02041235 MRO Extended Record ID Net Autoroute#02040331	
30	CNS Accounting Summary	3:30PM on T+2	3:30PM on T+1	MRO Autoroute #02042024 Print Image Autoroute 02040012	

Other Guidance

Guidance Name	High Level Guidance Description
SIFMA MSLA (Master Service Level Agreement) standardization	Designed to provide a basic contractual framework for forward and other delayed-delivery transactions involving mortgage backed and asset-backed securities.

Form 150 and accompanying Form 1 Schedule A (Prime brokerage agreement standardization)[34]	Agreement between Prime Broker and Executing Broker and accompanying list of customers.
Rule 204	Rule 204 requires that a clearing broker, if it fails to deliver on a sale trade on the settlement date, and that fail continues for a specified number of days after the settlement date (or, in some cases, the trade date), it must closeout its fail by buying or borrowing the relevant security a specified number of days later prior to the opening of the regular trading session on that day.

Revision History

Version	Publish Date	Description
1.0	12/01/2021	Initial Publication

[34] https://www.sifma.org/wp-content/uploads/2017/08/Prime-Brokerage-_Prime-Brokerage-Agreement-Form-150.pdf

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