T2 SETTLEMENT

SHORTENING THE SETTLEMENT CYCLE: THE MOVE TO T+2

INDUSTRY STEERING COMMITTEE: PARTICIPATING INDUSTRY ASSOCIATIONS

The Industry Steering Committee consists of the following industry associations:
The Association of Global Custodians (AGC)
The Association of Institutional INVESTORS (AII)
Investment Company Institute (ICI)
The Securities Transfer Association, Inc. (STA)
The Securities Industry and Financial Markets Association (SIFMA)
The Depository Trust& Clearing Corporation

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EXECUTIVE SUMMARY

Following the 2008 financial crisis, the industry has increased its focus on reducing risk, achieving greater transparency, and improving efficiency in order to establish a safer market environment. The crisis led to a host of regulations and initiatives impacting markets, products, and participants.

Shortening the settlement cycle, while not a regulatory mandate in the United States, is an industry effort that is expected to yield important benefits including reduced counterparty risk, decreased clearing capital requirements, reduced pro-cyclical margin and liquidity demands, and increased global settlement harmonization. Major markets across the globe either are examining a move to a two-day settlement period (T+2) (Canada and Japan), are currently moving to T+2 (Australia), or have already completed a move to T+2 (European Union, Hong Kong, and South Korea).

In early 2012, the Boston Consulting Group (BCG) conducted an independent study, commissioned by The Depository Trust & Clearing Corporation (DTCC), to analyze the costs, benefits, opportunities, and challenges associated with shortening the settlement cycle in the U.S. market to T+1 or T+2. This study confirmed the risk reduction benefits, operational efficiencies, and feasibility of a move to T+2 settlement for equities, corporate bonds, municipal bonds, and unit investment trusts. Following the 2012 study, the industry, led by various associations including the Investment Company Institute (ICI), the Association of Global Custodians (AGC), the Association of Institutional INVESTORS (AII), and the Securities Industry and Financial Markets Association (SIFMA), expressed support for a move to T+2.

As an initial step in the migration to T+2, the U.S. financial services industry formed an Industry Steering Committee (ISC), Industry Working Group (IWG), and Sub-Working Groups (SWGs).

The ISC, which provides oversight and guidance, developed a proposed migration timeline outlining the necessary activities required to complete a move to T+2 by Q3 2017. The 2017 implementation timeframe was established based on industry analysis performed by the ISC and IWG and is contingent upon obtaining regulatory certainty in a timely manner and successfully completing industry-wide testing. Regulatory certainty is critical because some organizations may not be willing or able to commit the resources required to complete a move to T+2. Industry participants also may have diverse views on what denotes regulatory certainty. They may associate this with regulatory support and priority for the industry move to T+2, the publication of proposed rules, or the publication of final rule changes by the regulators.

The ISC considered these perspectives and identified four critical milestones related to the regulatory changes necessary to effectuate the move to T+2:

- **Q2 2015:** ISC recommends rule changes to regulators
- **Q3 2015:** Regulators provide regulatory support and priority for the move to T+2
- **Q4 2015:** Regulators publish proposed rule changes
- **Q2 2016:** Regulators publish final rule changes and implementation dates

The first milestone was completed in the timeframe identified. A delay in achieving the remaining regulatory milestones is likely to impact the targeted Q3 2017 implementation timeframe. Furthermore, successful completion of broad and comprehensive industry-wide testing, planned for Q2 and Q3 of 2017, is vital to the T+2 effort, as organizations will need to ensure their processes and systems function properly in a T+2 environment.

The IWG and SWGs identified and assessed the regulatory changes and industry-level requirements to facilitate a move to T+2 for equities, corporate bonds, municipal bonds, unit investment trusts, and financial instruments comprised of these products. These industry-level requirements are grouped into four areas:

- **TRADE PROCESSING:** Requirements for trade processing activities including reference data setup, real time trade matching, straight-through processing, and the delivery of physical securities
- **ASSET SERVICING:** Requirements related to asset servicing functions that include ex-date and cover/protect period computations for corporate actions
- **DOCUMENTATION:** Requirements related to agreements and procedural documentation
- **REGULATORY CHANGES:** Regulatory rule changes that will be necessary for migration to T+2

The industry-level requirements are meant to provide each organization with a foundation to determine individual impacts, perform due diligence, and develop detailed requirements. It should be noted, however, that the industry-level requirements will impact individual organizations differently and may result in numerous entity-level requirements that are not captured in this document. As the industry moves forward with the T+2 migration effort, additional industry-level requirements also may be identified, which will be communicated to stakeholders by the ISC.

The IWG and SWGs also identified industry considerations, leading practices and other industry initiatives. The industry considerations include failed trade management, securities lending, liquidity and collateral management, processing of multi-listed securities, foreign investment/cross-border transactions, and secondary insurance for municipal bonds. The leading practices focus on trade date match/affirm, automated exchange of standing settlement instructions, electronic funds payment/Automated Clearing House (ACH) processing and early and ongoing stakeholder communication. Other industry initiatives identified include extending digital delivery and use of the summary prospectus delivery option, dematerialization, and Automated Customer Account Transfer Service (ACATS) enhancements. It is recommended that organizations review each of these areas and determine impacts to internal processes and procedures, seek practice improvements, and support other industry initiatives that facilitate operational efficiencies and cost savings for the industry.

The T+2 effort until now has been driven by the ISC, IWG, and SWGs. However, as the effort progresses, involvement of participants, in addition to the continued leadership from the ISC, IWG, and SWGs, will be necessary for a successful migration. Organizations involved in the trade lifecycle of the in-scope products should assess the information presented in this document to conduct an internal impact assessment, and develop organization-level requirements and internal implementation plans. The ISC will continue supporting this effort by engaging with the regulators, providing governance, and monitoring the T+2 migration progress. The IWG will work in conjunction with the ISC to communicate the proposed implementation and testing plan to industry participants. Organizations are encouraged to engage with the ISC to stay well informed of T+2 developments and ensure readiness for T+2 migration by Q3 2017.

SHORTENING THE SETTLEMENT CYCLE

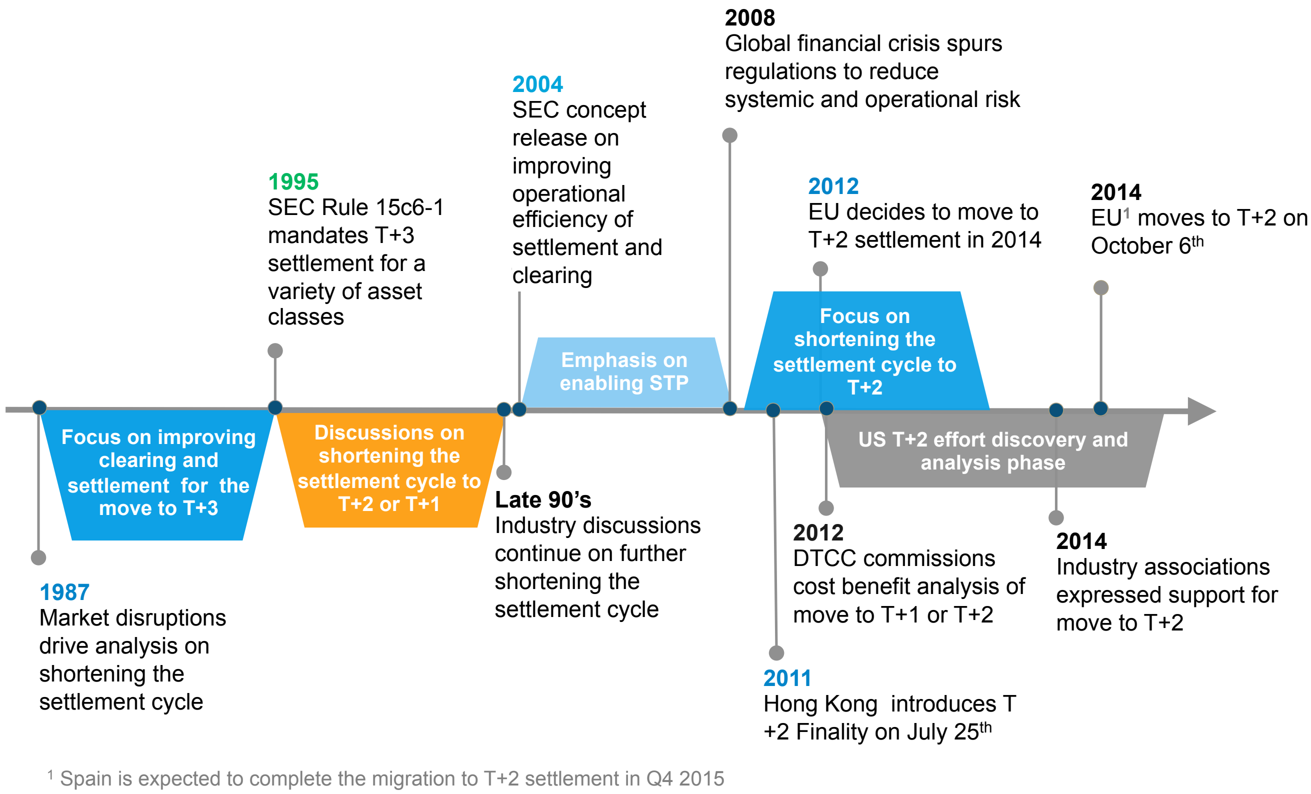

Figure 1: History of Shortening the Settlement Cycle in the U.S.

A Brief History

Since "Black Monday"[1] in 1987, the industry has been seeking to reduce risk (credit, market, and liquidity risk) by shortening the settlement cycle. In 1995, the Securities and Exchange Commission (SEC or Commission) adopted Rule 15c6-1 under the Securities Exchange Act of 1934, which resulted in the migration from T+5 to T+3 settlement for a variety of asset classes. Following the introduction of T+3 settlement, regulators and industry participants continued to discuss further shortening the settlement cycle.

The financial crisis of 2008 prompted a host of global regulations and recommendations such as the Dodd–Frank Act[2], EMIR[3], MiFID,[4] and BCBS IOSCO[5] to address and mitigate systemic risk. The response also included the European Commission's 2012 decision to harmonize settlement cycles in Europe and move to T+2 settlement.[6] Correspondingly, DTCC issued a white paper in 2012 titled "The Role of DTCC in Mitigating Systemic Risk,"[7] which recommended a cost benefit study to assess the impact of a shortened settlement cycle (SSC). The study, conducted by BCG, revealed broad

1 "Black Monday" refers to Monday, October 19, 1987, when global stock markets experienced significant declines.
2 Dodd-Frank Wall Street Reform and Customer Protection Act promotes the financial stability of the United States by improving accountability and transparency in the financial system.
3 EMIR (European Market Infrastructure Regulation) is an EU regulation designed to increase the stability of the over-the-counter (OTC) derivative markets throughout the EU member states.
4 MiFID (Markets in Financial Instruments Directive) establishes a regulatory framework for the provision of investment services in financial instruments.
5 BCBS (Basel Committee on Banking Supervision) IOSCO (International Organization of Securities Commissions) framework addresses margin requirements for uncleared OTC derivatives transactions.
6 On Oct 6, 2014, most markets in the E.U. migrated to T+2 standard settlement.
7 To view the full white paper, please see: DTCC's "The Role of DTCC in Mitigating Systemic Risk."

industry support for a shortened settlement cycle and concluded that a move to T+2 settlement would provide significant industry risk reduction while requiring considerable, yet manageable investments that would align settlement in the U.S. market with a number of other major global markets. It also concluded that migration to T+1 would require significant investments in infrastructure changes and a greater degree of Straight-Through Processing (STP) to support near real time processing; and that a move to T+0 was "unattractive" and "infeasible."

Why T+2

The migration to T+2 settlement is expected to provide immediate benefits. These benefits include a mitigation of counterparty risk, a decrease in margin requirements for National Securities Clearing Corporation's (NSCC)[8] clearing members, a reduction in pro-cyclical margin and liquidity demands especially during periods of market volatility, and an increase in global settlement harmonization.

Counterparty risk exists during the time between trade execution and settlement. On the sell-side, NSCC [9] and the clearing member assume the risk of counterparty default and the clearing member is responsible for maintaining capital with NSCC, in the form of risk-based margin requirements to be held in a clearing fund, to protect both NSCC and its membership from this risk. According to the BCG study, the average clearing fund requirement for clearing members is expected to decrease by 15 - 24% [10] as a result of a move to T+2. Additionally, both the institutional and retail investors have broker-dealer default exposure. By shortening the time between trade execution and settlement by one business day, the risk of counterparty default and the capital required to mitigate this risk is reduced. The decrease in counterparty risk also results in a reduction in liquidity requirements for NSCC [11] and its participants. Furthermore, the move to T+2 advances settlement harmonization in global markets by aligning the U.S. market with other major markets, such as the European Union. (Please see Figure 2, page 9: Equity Settlement Cycle for Top 10 Exchanges by Market Capitalization, which depicts global settlement harmonization for equities pre- and post-migration to T+2.)

The move to T+2 requires process, technology, behavioral (business and client), and regulatory changes in order to migrate to the shortened settlement cycle, achieve efficiencies, and realize the aforementioned benefits. Several of these changes can be accomplished by modifying existing processes and the supporting technology. In comparison, migration to T+1 would require changes that are significantly more complex and costly, requiring end-to-end process redesign and substantial technology investments and enhancements to support near real-time processing capabilities, and necessitating an extended migration timeline. For example, significant changes would be required to enable real-time notifications for securities lending and to facilitate the funding of cross-border trades, both of which could dramatically alter current practices and impact market participants.

Thus, based on the analysis conducted as summarized above, which included the benefits and considerations of shortening the settlement cycle, industry stakeholders reached consensus and support the migration to T+2. [12]

[8] Organized in 1976, NSCC provides clearing, settlement, risk management, and central counterparty (CCP) services for broker-to-broker trades involving equities, corporate and municipal debt, exchange-traded funds (ETFs) and unit investment trusts (UITs) in the United States. NSCC is (i) a business corporation under New York law, (ii) a registered clearing agency and self-regulatory organization , subject to regulation by the SEC, and (iii) a designated financial market utility under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank).

[9] There is no anticipated impact to risk controls of NSCC's affiliate, The Depository Trust Company (DTC): namely the net debit cap and the collateral monitor controls. These controls are employed by DTC to protect the DTC settlement system in the event of a DTC participant default. The DTC net debit cap limits the size of a participant's net debit so it does not exceed DTC's available liquidity resources (the DTC participants fund and the committed line of credit from a consortium of lenders). The DTC collateral monitor requires settlement obligations, as they accrue intraday, to be fully collateralized. Created in 1973, DTC provides depository and book-entry services pursuant to its rules and procedures. DTC maintains an interface with NSCC for book-entry movement of securities to settle CNS transactions. DTC is: (i) a limited purpose trust company under the Banking Law of the State of New York, subject to the regulation of the New York Department of Financial Services, (ii) a state member bank of the Federal Reserve System, subject to regulation by the Federal Reserve Board (FRB) and supervised by the Federal Reserve Bank of New York under delegated authority from the FRB, (iii) a registered clearing corporation and self-regulatory organization, subject to regulation by the SEC, and (iv) a designated financial market utility under Dodd-Frank.

[10] For additional information regarding decrease in NSCC's clearing fund requirements, see: BCG's "Cost benefit analysis of shortening the settlement cycle."

[11] The reduction in cost of NSCC liquidity is expected to be passed back to NSCC members as direct savings.

[12] Expressions of support for move to T+2 were received from various organizations and industry groups, including ICI, AGC, AII, and SIFMA. DTCC press release from April 23, 2014: "DTCC to Partner with Industry to Implement T+2 Settlement Cycle in U.S. Financial Markets."

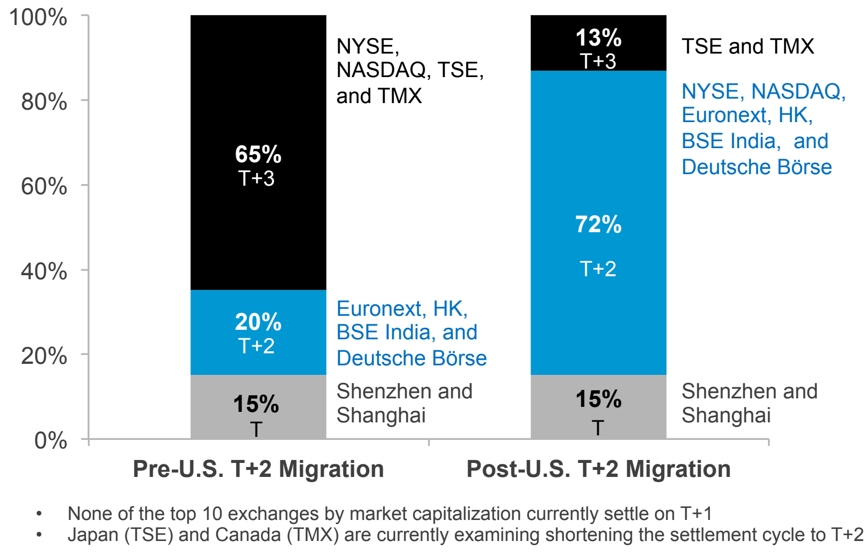

Figure 2: Equity Settlement Cycle for Top 10 Exchanges by Market Capitalization[13]

Industry Action

In 2014, DTCC, in collaboration with representatives from the financial services industry, including SIFMA and the ICI, established an Industry Steering Committee (ISC) comprised of approximately 20 participants across key market segments. The ISC was tasked with providing governance, direction, and support for the effort to migrate to a T+2 settlement cycle. The ISC, in turn, identified nearly 75 industry experts across market segments and formed an Industry Working Group (IWG). The IWG was formed to support the ISC by identifying and assessing the industry-level requirements, rule changes, and proposed plan for a move to T+2.

Together, the ISC and IWG identified 17 industry workstreams, across 12 market segments. [14] The workstreams were grouped into five Sub-Working Groups (SWGs) named Teams Alpha, Bravo, Charlie, Delta, and Lima. Team Alpha focused on identifying the in-scope products for the migration to T+2 and corresponding industry-level requirements; Team Bravo on the buy-side industry-level requirements; Team Charlie on industry-level requirements for operational processes including asset servicing; Team Delta on sell-side and DTC/NSCC industry-level requirements; and Team Lima on identifying regulatory changes. Figure 3: T+2 Organizational Structure depicts the relationship between the ISC, IWG, SWGs, and the various workstreams.

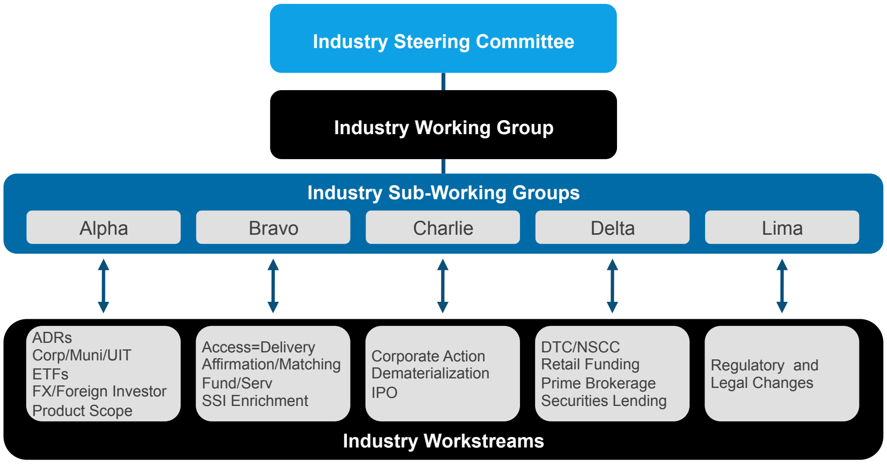

Figure 3: T+2 Organizational Structure

[13] Percentages are sourced from The World Federation of Exchanges Ltd. as of March 2015
[14] Twelve market segments include: Asset Managers for 40 Act funds, Asset Managers for non-40 Act funds, Global Custodians, Institutional Broker-Dealers, Retail Broker-Dealers, Transfer Agents, Exchanges, DTC and NSCC, Omgeo, OCC, Service Bureaus, and Issuers.

The SWGs consisted of approximately 600 industry subject matter experts who met on a regular basis for several months beginning in November 2014. The SWGs reviewed the applicable workstreams and identified and categorized industry-level requirements, regulatory changes, industry considerations, leading practices and other industry initiatives. The industry-level requirements and regulatory changes are items necessary for migration to T+2, the industry considerations are processes that are likely to be affected by migration to T+2, and the leading practices and other industry initiatives are recommendations that promote operational efficiencies, settlement finality, [15] and a reduction in settlement fails.

[15] Settlement finality is the point where a trade is settled and irrevocable.

PROPOSED T+2 MIGRATION TIMELINE

After identifying and analyzing the changes required to facilitate an industry move to T+2 (presented in the section "Migrating to T+2"), members of the ISC and IWG, including buy- and sell-side firms, custodians, exchanges, service bureaus, and other industry stakeholders completed an extensive survey, that was conducted by DTCC, in Q1 2015 to determine their organization's ability to complete the necessary changes to support the industry's move to T+2.

The majority of the questions asked respondents to comment on the requirements identified by the SWGs and the anticipated duration to implement each requirement. Survey responses indicated that organizations have varying levels of capacity to complete the necessary changes for migrating to T+2. The common theme from the survey responses included a need for regulatory certainty and robust industry-wide testing as critical dependencies for a successful migration to T+2. Several organizations also indicated their reliance on the readiness of market infrastructures (DTC, NSCC, Omgeo [16]) and service providers to migrate to T+2. The ISC evaluated the responses and critical dependencies (regulatory certainty and industry-wide testing) and determined Q3 2017 to be an achievable migration timeframe. The key phases and milestones for the proposed move are depicted in Figure 4: Timeline for Migration to T+2.

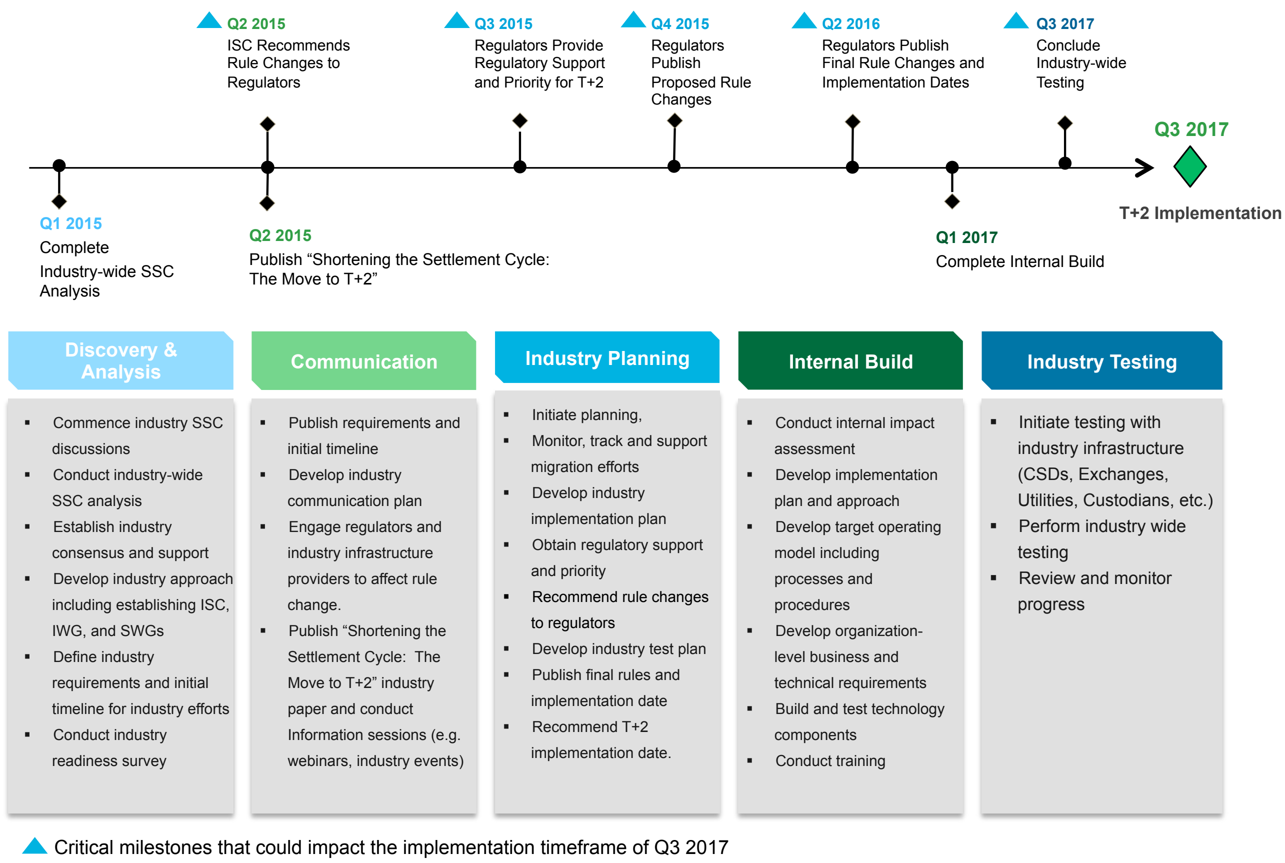

Figure 4: **Timeline for Migration to T+2**

[16] Omgeo, a subsidiary of DTCC, provides services to automate post-trade life cycle events including routing of affirmed trades to DTC settlement systems. Other vendors, such as Bloomberg, may pursue regulatory approval to provide similar services.

While it is necessary to complete all milestones as specified in the above timeline, regulatory certainty and successful execution of industry-wide testing are on the critical path for achieving the Q3 2017 implementation timeframe as they affect an organization's ability to plan and execute the migration to T+2.

REGULATORY CERTAINTY: Regulatory certainty is critical to all market participants. However, organizations may have different interpretations of this certainty. Some may associate this with regulatory support and priority for the industry move to T+2. Others may view this as the publication of proposed rules, or the publication of final rule changes by the regulator. In order to meet the planned timeline, it is critical for regulators and SROs to publish proposed rule changes by Q4 2015, and final rule changes by Q2 2016, as many organizations may not be able to commit resources towards this effort without clear direction. As a first step towards achieving regulatory certainty, SIFMA and ICI submitted a letter, to the Commission and other impacted regulators that expressed support for the move to T+2, identified specific rules, and suggested amendments that regulators may reference to address the necessary rule changes. The ISC has committed significant resources towards this effort and expects to have more detailed information on regulatory progress as the industry executes the Communication and Industry Planning phases. In order to encourage organizations to initiate planning, the ISC will request confirmation of regulatory support and priority by Q3 2015 for the move to T+2. Failure to have the final rule changes by Q2 2016 will likely impact the Q3 2017 implementation timeframe.

INDUSTRY-WIDE TESTING: The ISC recognizes the complexity and coordination required to ensure a seamless migration to T+2. The ISC and industry organizations will develop a robust industry-wide testing plan and ensure they have the adequate resources and infrastructure in place to coordinate rigorous testing in order to mitigate operational and implementation risk. As an example, organizations may need to build additional test environments to facilitate industry-wide testing. The ISC, in collaboration with industry organizations across market segments, will be responsible for the development of an industry-wide testing approach that will be shared with participants in early 2016. The proposed timeline assumes a six month industry-wide test period based on the industry-level requirements currently identified. If during the planning phase the ISC identifies that additional test time is required, the Q3 2017 implementation timeframe will likely be impacted.

Product Scope

Products [17] that settle at the DTC on a T+3 settlement cycle are considered in-scope for the move to T+2. These products include: equities, corporate bonds, municipal bonds, and unit investment trusts (UITs).

Financial instruments that are comprised of these and other products that settle on a T+3 settlement cycle also are in-scope. Examples of such financial instruments include: mutual funds, exchange-traded funds (ETFs[18]), exchange-traded products (ETPs), American depositary receipts (ADRs), options (exercise and assignment), rights, and warrants. Following the migration to T+2, regular way/standard settlement for in-scope products will be defined as T+2. Financial instruments that settle at the discretion of the distributor and have extended or shortened settlement timeframes in today's environment will not be impacted by the T+2 migration. Counterparties trading these financial instruments and in-scope products will continue to have the ability to transact on extended [19] or shortened settlement [20] timeframes as agreed at the time of the transaction.

The following sections document the industry-level requirements, regulatory changes, industry considerations, and leading practices and other industry initiatives that are relevant for the T+2 migration.

Industry-Level Requirements

The five SWGs across 17 workstreams identified a series of industry-level requirements focused on secondary market activity (primary market requirements are being analyzed separately and are not included below) to facilitate the migration to T+2. These high-level industry-level requirements will enable individual organizations to analyze, document, and implement the numerous and more extensive operational, technology, and behavioral (business and client) changes applicable to their organizations that are necessary for the move to T+2. As the T+2 migration effort progresses, additional high-level requirements may be identified and will be communicated to industry stakeholders by the ISC.

The industry-level requirements span several business and operational areas and the resulting impacts may vary based on each organization's technology and operating model. To ensure all of the requirements are represented and understood in the appropriate business context, they have been grouped into four sections with corresponding unique identifiers: Trade Processing (TP), Asset Servicing (AS), Documentation (DC), and Regulatory Changes (RC). [21] The requirements in each section provide the industry-level changes that various organizations must address for the migration to T+2.

The **TRADE PROCESSING (TP)** section identifies requirements impacting trade execution through settlement. There are four primary requirements that address the following:

- TP1 – Reference data and system configuration,
- TP2 – New cut-off time for Real Time Trade Matching (RTTM),
- TP3 – New cut-off times for straight-through processing, and
- TP4 – Delivery of physical securities

[17] Settlement timeframe for transactions (e.g. stock borrow/loan, financing trades, etc.) that currently settle at DTC in a settlement cycle less than T+3 will not be impacted by a migration to T+2.

[18] In today's environment, closed-end mutual funds settle at DTC typically on a T+3 basis, while open-end mutual funds settle through NSCC generally on a T+1 basis (excluding certain retail trades which typically settle on T+3).

[19] Extended settlement refers to settlements that currently settle on a cycle longer than T+3. In a T+2 environment, extended settlements will refer to settlements that occur on a cycle longer than T+2.

[20] Shortened settlement refers to settlements that currently occur on T+1 or T+2. In a T+2 environment, shortened settlements will refer to settlements occurring on T+1.

[21] The unique identifiers categorize industry-level requirements for reference purposes throughout this document.

Many of the requirements in the Trade Processing section were established in response to a change in cut-off times to enable trades to settle on T+2. *Figure 5: Summary of Trade Processing Cut-Off Times* summarizes many of these changes, which are described in further detail in the Trade Processing section.

Figure 5: Summary of Trade Processing Cut-Off Times

The **ASSET SERVICING (AS)** section identifies requirements impacting asset servicing functions. There are two primary requirements related to corporate actions processing: the first requirement, AS1, applies to regular-way and irregular ex-date [22] rulings; and the second requirement, AS2, addresses cover/protect [23] expiration date calculations.

The **DOCUMENTATION (DC)** section identifies required updates to agreements and procedural documentation. There are two primary requirements: the first requirement, DC1, addresses updates to agreements, official statements, prospectuses, statements of additional information, and subscription documentation, the second requirement, DC2, refers to procedural documentation and training material updates.

The **REGULATORY CHANGES (RC)** section summarizes efforts to identify rule changes that will be necessary for the migration to T+2.

The industry-level requirements are further described in the Requirements Catalog (a list of the industry-level requirements), and additional context is provided in the Trade Processing, Asset Servicing, Documentation, and Regulatory sections below.

Organizations should leverage this information to develop their functional and technical requirements and implementation plans. In addition, organizations are also encouraged to establish a communication strategy to engage their customers and staff in order to promote awareness and initiate applicable behavioral changes for the migration to T+2.

[22] The date on or after which a security is traded without a previously declared dividend or distribution.
[23] When an investor does not have a settled position in their general/free/un-pledged account due to shares out on loan, failed trades, or trades pending settlement, the investor would "protect" those shares on or prior to the offer's expiration date. Upon receipt of the shares into their account, the investor would then "cover" that protect.

Requirements Catalog

The Requirements Catalog[24] summarizes the primary and sub-requirements presented in the Trade Processing, Asset Servicing, and Documentation sections of this document. The primary requirements group general process changes for T+2 migration, while the sub-requirements identify the specific areas that should be addressed.

Primary Requirement		Sub-Requirement
Trade Processing (TP)		
TP1	Reference data and trade processing systems must be configured for T+2 as standard settlement	Trade processing systems that support the lifecycle of a trade and are currently configured for T+3 settlement must be updated to support T+2 settlement as regular way/standard settlement.
		Organizations that send Universal Trade Capture (UTC) messages to NSCC must be aware that regular way/standard settlement will be interpreted as T+2.
		Organizations must update reference data, as it relates to settlement.
		Mutual funds with a settlement date of T+3 within Fund/SERV must coordinate with DTCC to revise the settlement date.
		NSCC's create and redeem process for ETFs must be adjusted to define regular way/standard settlement as T+2 and shortened/non-standard settlement as T+1.
		Organizations must review payment mechanisms used to move money in anticipation of trade settlement to ensure good/cleared funds are available for settlement on T+2.
TP2	Trades must be matched in Real Time Trade Matching (RTTM) by 11:30am on T+2	Trades must be matched by 11:30am on T+2 in order to be assigned a T+2 settlement date.
TP3	Affirmed trades must be submitted to Omgeo by 12pm on T+1 for straight-through processing	NSCC's Continuous Net Settlement system (CNS), ID Net (a joint service of DTC and NSCC), and all other related DTC, NSCC, Omgeo systems must be adjusted to support the 12pm on T+1 cut-off for affirmed trades.
		Organizations must submit affirmed institutional trades (non-ID Net eligible) to Omgeo by 12pm on T+1 in order to be sent to DTC for settlement.
		Organizations must submit affirmed institutional trades to Omgeo by 12pm on T+1 for ID Net processing.
		Organizations must submit affirmed prime broker trades to Omgeo by 12pm on T+1 to be sent to DTC or NSCC's CNS system for clearing and settlement.
		The CNS Projection Report must be updated to only include trades received by NSCC on trade date prior to 9pm.
TP4	Processing of physical securities must support T+2 settlement	Platforms designed to support the delivery of physical securities must be enhanced to support T+2 settlement.
		The delivering member must send the physical securities no later than T+2 for NSCC's Envelope Settlement Services (ESS) processing.
Asset Servicing (AS)		
AS1	Organizations must adjust the ex-date period for regular-way ex-date calculations and modify the due bills period calculation for regular-way and irregular ex-dates	Regular-way ex-date calculations must be shortened by one business day.

[24] The requirements catalog may be updated (in future versions of this paper) to account for any additional industry-level requirements identified.

	Primary Requirement	Sub-Requirement
Asset Servicing (AS)		
AS1		The due bills redemption period (for both regular-way and irregular ex-dates) must be shortened by one business day.
		Organizations that derive the ex-date from internal trade processing systems must modify those systems to account for the shortening of the ex-date period and address the downstream processing of that information.
		In order to properly process regular-way ex-date notifications and irregular ex-date notifications, DTC, and other impacted organizations, must make changes to their announcement systems.
		DTC must modify the DTC Interim Accounting process to account for the shortened period.
AS2	Cover/Protect expiration date must be calculated as two business days instead of three business days after the offer expiration date	DTC needs to review its reorganization announcement platform as well as platforms supporting the Participant Tender Offer Program (PTOP) and the Participant Subscription Offer Program (PSOP) in order to ensure that the cover/protect expiration date (last day to cover protects) is offer expiration date plus two business days.
		NSCC will also require modifications to its voluntary reorganization processing application within its CNS system to accommodate this change.
		Organizations that internally derive the cover/protect expiration date must ensure that their systems are updated to calculate cover/protect expiration date as offer expiration date plus two business days.
		Organizations that trade around voluntary reorganization expiration dates must review their processes prior to moving to T+2 in order to claim failed deliveries, recall securities, and track trades pending settlement.
Documentation (DC)		
DC1	Agreements, official statements, prospectuses, statements of additional information, and subscription documentation must be updated to accommodate the move to T+2	Agreements, official statements, prospectuses, statements of additional information, and subscription documentation that support the trade processing infrastructure and include references to standard settlement as T+3 must be updated to reference T+2.
		The DTC and NSCC fee guides must be reviewed to determine the impact of the move to T+2.
DC2	Procedure documentation and training materials must be updated to specify T+2 as standard settlement	Organizations will need to adjust their operating procedures and internal training materials.
		Organizations must educate customers and staff on how the shortened settlement window impacts their behaviors and related processes.

Trade Processing

The reduction in time between execution and settlement in a T+2 environment will have an impact on the trade processing workflow. Organizations must align their internal processes and technology capabilities to settle on T+2. The requirements in this section focus on reference data and trade processing from trade execution through settlement. Figure 6: T+2 Trade Processing Workflow depicts a potential T+2 trade processing lifecycle and is intended to provide context for the requirements detailed below. The typical T+3 trade processing workflow is also captured for reference purposes in Figure 8: T+3 Trade Processing Workflow in the Appendix of this document.

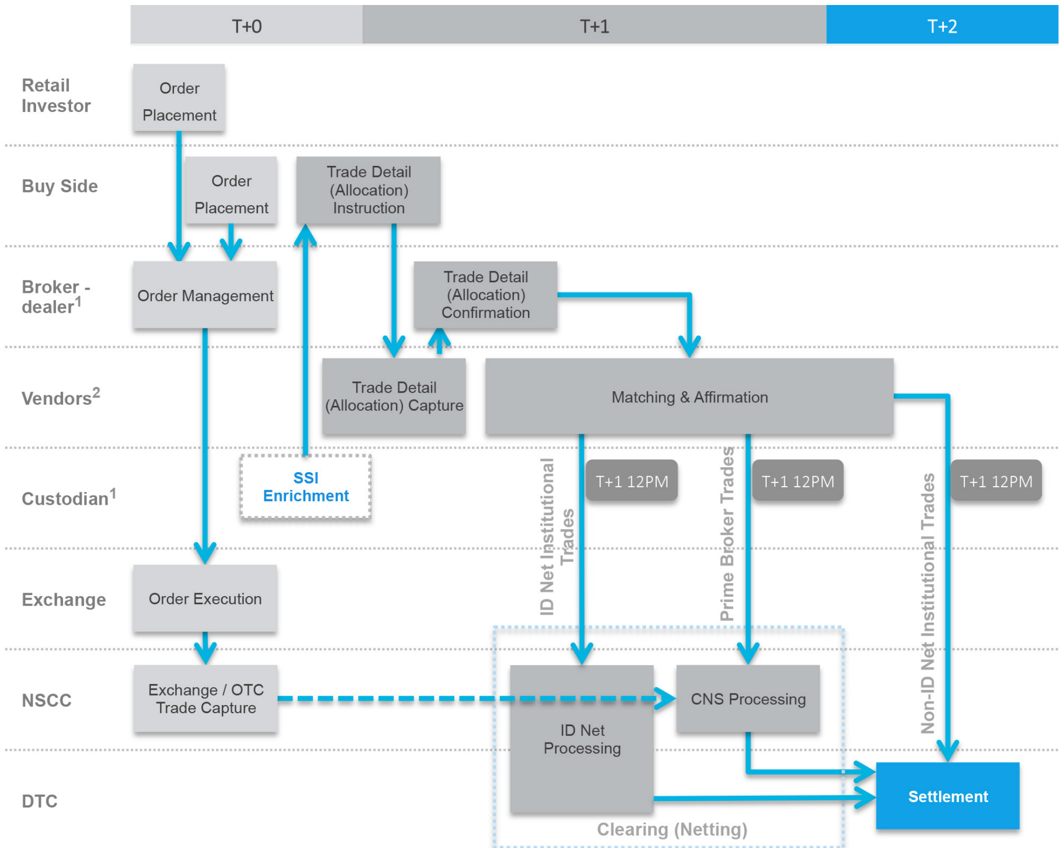

Figure 6: T+2 Trade Processing Workflow

TP1	Reference data and trade processing systems must be configured for T+2 as standard settlement

Trade processing systems that support the lifecycle of a trade and are currently configured for T+3 must be updated to support T+2 as regular way/standard settlement. Specifically, trade processing systems must allow for manual selection or automatic generation of a T+2 settlement date for new trades and "as-of" transactions (error correction transactions). To support "as-of" transactions, organizations may want to consider automating T+1 intraday processing.

Organizations that send Universal Trade Capture (UTC)[25] messages to NSCC must be aware that regular way/standard settlement will be interpreted as T+2. For example, OCC[26] exercises and assignments on equity options will settle on a T+2 settlement cycle.

[25] Universal Trade Capture (UTC) is a service that validates and reports equity transactions that are submitted to NSCC by an exchange or by Qualified Special Representatives (QSRs) that have an agreement with broker-dealers to directly clear trades and route them to NSCC.
[26] OCC, earlier known as Options Clearing Corporation, is an equity derivatives clearing organization.

Organizations must update reference data, as it relates to settlement. For example, relevant records in the DTCC master security file for mutual funds must be updated to reflect T+2 settlement. Although most mutual funds utilizing Fund/SERV[27] settle on T+1, those with a settlement date of T+3 must engage with DTCC to revise the settlement date. DTCC will develop a communication plan to coordinate the review of approximately 33,000 security IDs to facilitate the necessary changes. Organizations that maintain and update their own internal security master files to store settlement date related information also must update their records accordingly. For those mutual funds that currently rely on shortened or extended settlement, the security master file should not require any changes.

In addition to the above requirements, the SWGs discussed and analyzed the following processes for migration to T+2:

CREATE AND REDEEM PROCESS: NSCC's create and redeem process for ETFs must be adjusted to define regular way/standard settlement as T+2 and shortened/non-standard settlement as T+1. However, the create and redeem process for ADRs should be minimally impacted as it is largely same-day processing.

TRADE FUNDING: Organizations must review payment mechanisms used to move money in anticipation of trade settlement to ensure good/cleared funds are available for settlement on T+2. For example, organizations with customers that fund their trade settlements using checks and ACH payments may need to update the policies and processes and educate customers to ensure good/cleared funds are available for T+2 settlement. Although there was no impact identified to the spot FX market, organizations are encouraged to review their funding and FX practices, as well as the geographic location of their FX settlements, to address challenges that may arise with the U.S. migrating to T+2 settlement.

"WHEN ISSUED" SETTLEMENTS: While the regular settlement for equity, corporate bond, municipal bond, and UIT trades will become T+2, analysis concluded that "When Issued" settlements do not require adjustments. "When Issued" refers to a trade that is made conditionally because a security has been authorized, but not yet issued (e.g. stock splits and new issues). These trades will continue to have settlement dates that are days, weeks, or months in the future.

The below table is a summary of the TP1 requirements.

	Primary Requirement	Sub-Requirement
TP1	Reference data and trade processing systems must be configured for T+2 as standard settlement	Trade processing systems that support the lifecycle of a trade and are currently configured for T+3 settlement must be updated to support T+2 settlement as regular way/standard settlement.
		Organizations that send Universal Trade Capture (UTC) messages to NSCC must be aware that regular way/standard settlement will be interpreted as T+2.
		Organizations must update reference data, as it relates to settlement.
		Mutual funds with a settlement date of T+3 within Fund/SERV must coordinate with DTCC to revise the settlement date.
		NSCC's create and redeem process for ETFs must be adjusted to define regular way/standard settlement as T+2 and shortened/non-standard settlement as T+1.
		Organizations must review payment mechanisms used to move money in anticipation of trade settlement to ensure good/cleared funds are available for settlement on T+2.

[27] Fund/SERV is the U.S. industry standard for processing and settling mutual fund, bank collective fund and other pooled investment product transactions between fund companies and distributors.

TP2	Trades must be matched in Real Time Trade Matching (RTTM) by 11:30am on T+2

NSCC's RTTM system provides a common electronic platform for collecting and matching trade data, enabling organizations to monitor and manage the status of their trade activity in real time. Through RTTM, organizations can match trade details and track a transaction from trade entry through to clearance and regulatory reporting. Fixed income securities, such as corporate bonds, municipal bonds, or UITs, are the only products eligible for RTTM.

Currently, trades must be matched in RTTM by 11:30am on T+3 in order to be assigned a T+3 settlement date. In a T+2 environment, trades must be matched by 11:30am on T+2 in order to be assigned a T+2 settlement date.

The below table is a summary of the TP2 requirements.

Primary Requirement		Sub-Requirement
TP2	Trades must be matched in Real Time Trade Matching (RTTM) by 11:30am on T+2	Trades must be matched by 11:30am on T+2 in order to be assigned a T+2 settlement date.

TP3	Affirmed trades must be submitted1 to Omgeo by 12pm on T+1 for straight-through processing

The confirmation and affirmation process is an important component of trade processing and varies depending on whether a trade is executed on behalf of an institution or a prime broker. In both instances, after a trade is executed, it is allocated, confirmed and affirmed,[28] and is sent for clearing and settlement.

While there are several service providers supporting post trade processes, including trade allocation, matching, and confirmation/affirmation, benefits of downstream STP can currently be achieved by submitting affirmed trades to Omgeo.[29] Once received, Omgeo sends affirmed institutional trades directly to DTC and NSCC (if ID Net[30] eligible) for settlement, while sending affirmed prime broker trades to NSCC for cash clearing and netting (via CNS[31]) and ultimately sending to DTC for securities settlement. Trades not received by Omgeo by the designated cut-off time can be sent by the broker-dealer, and/or custodian, directly to DTC as Deliver Orders (DOs).[32] However, DO processing as it relates to institutional trades may be an indication that the trade was not affirmed or an exception took place. As a result, DO trades typically carry additional operational overhead and processing costs. Figure 7: Institutional and Prime Broker Trade Flow highlights the matching and affirmation process and is intended to provide context for the applicable requirements.

[28] It should be noted that some trades are settled without receiving allocation instructions or trade affirmations.
[29] Other qualified vendors may offer a link to DTC settlement system in the future.
[30] ID Net is a service that allows broker-dealer to net their affirmed institutional equity trades with other trades in CNS.
[31] Continuous Net Settlement (CNS) is NSCC's core accounting and securities settlement system, where compared and recorded transactions in eligible securities are netted.
[32] A Deliver Order (DO) is an instruction for the book-entry transfer of a security from one DTC participant to another. Cut-off time for DOs will continue to be 3:20 pm on settlement date.

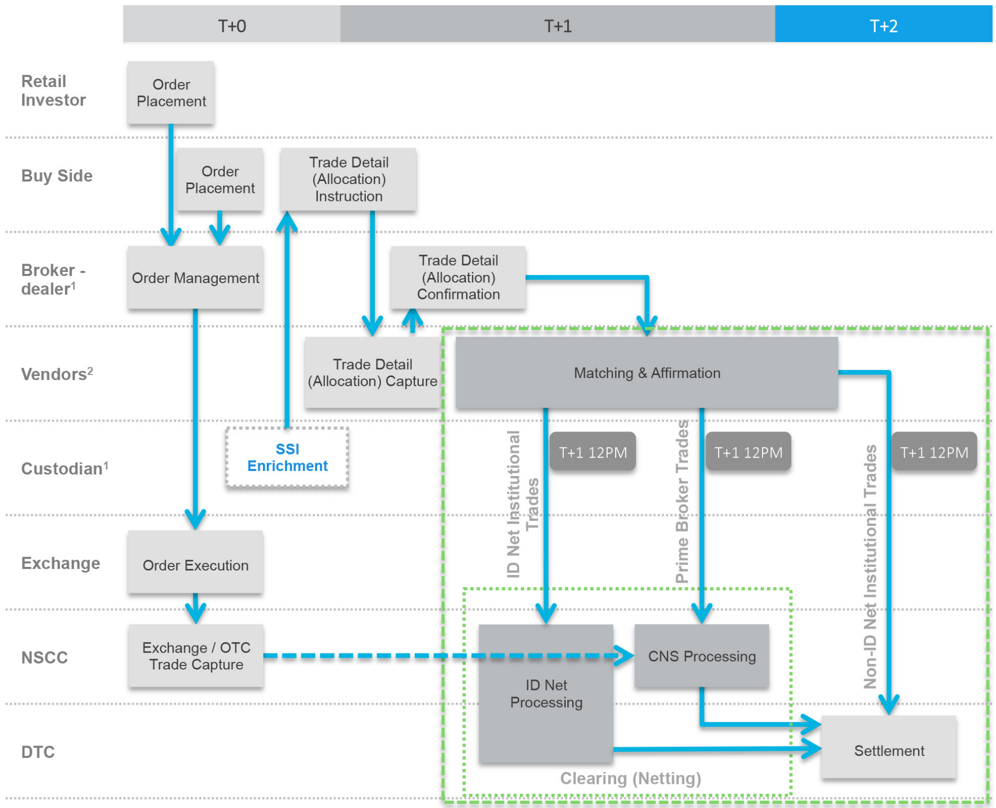

Figure 7: Institutional and Prime Broker Trade Flow

The cut-off time to send affirmed trades to Omgeo will be moved from 12pm on T+2 to 12pm on T+1. CNS, ID Net, and all other related DTC, NSCC, Omgeo systems must be adjusted to support the 12pm on T+1 cut-off for affirmed trades. Organizations must also adjust their systems and review processes to account for the new cut-off of 12pm on T+1.

ID NET INSTITUTIONAL TRADES: ID Net allows the broker-dealers to net their affirmed institutional equity and UIT trades with their other trades in CNS. Institutional trades where the broker-dealer and custodian have elected to participate in ID Net Service for equity or UIT securities that have been marked as eligible may be submitted for ID Net processing. The current cut-off time for submitting affirmed ID Net eligible trades to Omgeo is 9pm on T+1, while the new cut-off time will be 12pm on T+1. Organizations must submit affirmed institutional trades to Omgeo by 12pm on T+1 for ID Net processing.

NON-ID NET INSTITUTIONAL TRADES: The current cut-off time for submitting affirmed institutional trades to Omgeo for straight-through processing is 12pm on T+2 while the new cut-off time will be 12pm on T+1. Organizations must submit affirmed institutional trades (non-ID Net eligible) to Omgeo by 12pm on T+1 in order to be sent to DTC for settlement.

The shift in cut-off times also will impact the trade processing workflow prior to affirmation for institutional clients and broker-dealers. Broker-dealers should work with their institutional clients to determine the appropriate cut-off times for receiving trade files (including allocation details).

PRIME BROKER TRADES: The current cut-off time for submitting affirmed prime broker trades in Omgeo for straight-through processing is 12pm on T+2 while the new cut-off time will be 12pm on T+1. Organizations must submit affirmed prime broker trades to Omgeo by 12pm on T+1 to be sent to DTC or NSCC's CNS system for clearing and settlement.

CNS allows NSCC members to net their affirmed prime broker trades with their other trades within CNS. NSCC takes the role of central counterparty to these transactions and provides members with final settlement instructions.

SYSTEM OUTPUTS: The new cut-off time, in conjunction with the reduced time between trade execution and affirmation, impacts files produced ("outputs") for participants, including NSCC's CNS Projection Report and Consolidated Trade Summary.

The CNS Projection Report, distributed by NSCC each morning, includes trades received on trade date and T+1 by 9pm. The output shows positions still open after the nightly cycle for the current settlement date netted with trades due to settle the next business day, as well as stock dividends and other miscellaneous activity due to settle the next business day. As the industry moves to a T+2 settlement cycle, the CNS Projection Report must be updated to only include trades received by NSCC on trade date prior to 9pm.[33]

Currently, NSCC's Consolidated Trade Summary (CTS) lists market totals per security for all trades in CNS due to settle the following day and reports net positions by security and net U.S. dollar values. Today, trades compared[34] on T+2 are reported on the one day settlement section of the CTS. As the industry moves to a T+2 settlement cycle, trades compared on T+1 (instead of T+2) will now be reported on the one day settlement section of the CTS.

The table below summarizes the TP3 requirements.

	Primary Requirement	Sub-Requirement
TP3	Affirmed trades must be submitted to Omgeo by 12pm on T+1 for straight-through processing	NSCC's Continuous Net Settlement system (CNS), ID Net (a joint service of DTC and NSCC), and all other related DTC, NSCC, Omgeo systems must be adjusted to support the 12pm on T+1 cut-off for affirmed trades.
		Organizations must submit affirmed institutional trades (non-ID Net eligible) to Omgeo by 12pm on T+1 in order to be sent to DTC for settlement.
		Organizations must submit affirmed institutional trades to Omgeo by 12pm on T+1 for ID Net processing.
		Organizations must submit affirmed prime broker trades to Omgeo by 12pm on T+1 to be sent to DTC or NSCC's CNS system for clearing and settlement.
		The CNS Projection Report must be updated to only include trades received by NSCC on trade date prior to 9pm.

TP4	Processing of physical securities must support T+2 settlement

While small in number, physical securities that require delivery to enable trade settlement still exist. Platforms designed to support the delivery of physical securities must be enhanced to support T+2 settlement.

NSCC Envelope Settlement Services (ESS), for example, is a platform designed to facilitate the settlement of physical securities. Currently, a delivering member must send physical securities to the NSCC's ESS facility no later than T+3 for settlement between NSCC members. Following the migration to T+2, the delivering member must send the physical securities no later than T+2 for NSCC's ESS processing.

[33] This includes ID Net trades which are reported in the CNS Projection Report as miscellaneous activity.
[34] The matching process through which the two parties to a brokerage transaction agree on the key components of the securities transaction.

The table below summarizes the TP4 requirements.

Primary Requirement		Sub-Requirement
TP4	Processing of physical securities must support T+2 settlement	Platforms designed to support the delivery of physical securities must be enhanced to support T+2 settlement.
		The delivering member must send the physical securities no later than T+2 for NSCC's Envelope Settlement Services (ESS) processing.

Asset Servicing

The migration to T+2 also impacts asset servicing functions that support asset ownership and include: corporate actions processing, reconciliation, compliance, and performance management. The requirements in the asset servicing section are primarily focused on corporate actions processing. This includes ex-date calculations and cover/protect expiration dates for certain voluntary reorganization events. Dividend Reinvestment Plans (DRIPs) may also be impacted by the move to T+2 and any organization that offers a DRIP program should review their systems, processes and procedures. It is recommended that each organization review their internal systems and processes for these areas to identify organization specific requirements.

AS1	Organizations must adjust the ex-date period for regular-way ex-date calculations and modify the due bills period calculation for regular-way and irregular ex-dates

The record date is the date fixed by an issuer for the purpose of determining the security holders who are eligible to receive an entitlement, right, or obligation relating to a security. The ex-date period is the period preceding the record date during which any trade executed will not be settled in time for the purchaser's name to be registered as the holder of the securities on the record date.

In today's T+3 environment, regular-way ex-date is considered to be two business days prior to the record date, whereas any ex-date that does not occur two days prior to the record date is considered an irregular ex-date. As the industry moves to T+2, regular-way ex-date calculations must be shortened by one business day and the due bills[35] redemption period[36] (for both regular-way and irregular ex-dates) must be shortened by one business day.

As the industry migrates to T+2, organizations that derive the ex-date from internal trade processing systems must modify those systems to account for the shortening of the ex-date period and address the downstream processing of that information. In order to properly process regular-way ex-date notifications and irregular ex-date notifications, DTC, and other impacted organizations, must make changes to their announcement systems.

Specifically, DTC must review and modify the Interim Accounting process to account for the shortened period and verify that interest/principal entitlements and all income tracking processes (due bill fail tracking, stock loan income tracking and repo income tracking) are functioning properly. Similarly, organizations should review their interest/principal entitlement capture and income allocation processing systems.

[35] A financial instrument used to document and identify a stock seller's obligation to deliver a pending dividend to the stock's buyer.
[36] The period during which remittances are due to investors.

The below table is a summary of the AS1 requirements.

Primary Requirement		Sub-Requirement
AS1	Organizations must adjust the ex-date period for regular-way ex-date calculations and modify the due bills period calculation for regular-way and irregular ex-dates	Regular-way ex-date calculations must be shortened by one business day.
		The due bills redemption period (for both regular-way and irregular ex-dates) must be shortened by one business day.
		Organizations that derive the ex-date from internal trade processing systems must modify those systems to account for the shortening of the ex-date period and address the downstream processing of that information.
		In order to properly process regular-way ex-date notifications and irregular ex-date notifications, DTC, and other impacted organizations, must make changes to their announcement systems.
		DTC must modify the DTC Interim Accounting process to account for the shortened period.

AS2	Cover/Protect expiration date must be calculated as two business days instead of three business days after the offer expiration date

Certain voluntary reorganizations such as voluntary tender offers, voluntary exchange offers and rights subscription offers have a feature in the respective offering materials (e.g. prospectus, letter of transmittal, etc.) called a Guaranteed Delivery. The premise of a Guaranteed Delivery is to allow an investor to participate in a voluntary offer even though they do not hold the securities in their account at the time of the offer's expiration date.

Guaranteed Delivery is also known as a Cover/Protect period. When an investor does not have an available settled position in their account due to shares out on loan, failed trades, or trades pending settlement, the investor would "protect" those shares on or prior to the offer's expiration date. Upon receipt of the shares into their account, the investor would then "cover" that protect. In today's T+3 environment, the normal Cover/Protect period is offer expiration date plus three business days. After the move to T+2, the Cover/Protect period must be calculated as offer expiration date plus two business days.

DTC needs to review its reorganization announcement platform as well as platforms supporting the Participant Tender Offer Program (PTOP)[37] and the Participant Subscription Offer Program (PSOP)[38] in order to verify that the cover/protect expiration date (last day to cover protects) is offer expiration date plus two business days. This may also lead to changes in the agent-facing Automated Tender Offer Program (ATOP)[39] and Automated Subscription Offer Program (ASOP).[40] Transfer Agents will need to test this functionality if they are users of the ATOP/ ASOP systems.

The NSCC will also require modifications to its voluntary reorganization processing application within its CNS system to accommodate this change.

Organizations that internally derive the cover/protect expiration date must ensure that their systems are updated to calculate cover/protect expiration date as offer expiration date plus two business days. Organizations that trade around voluntary reorganization expiration dates must review their processes prior to moving to T+2 in order to claim failed deliveries, recall securities, and track trades pending settlement. Additionally, organizations engaged in securities lending that need to recall securities due to certain voluntary reorganization events, will have one less business day to recall securities on loan to cover a protect.

[37] DTC's PTOP processor allows participants to process information regarding tender and exchange offers.
[38] DTC's PSOP processor allows participants to process information regarding rights offerings including subscriptions.
[39] DTC's ATOP is an agent application offered by DTC that displays participant tender instruction details.
[40] DTC's ASOP is an agent application offered by DTC that displays participant rights subscription instruction details.

The below table is a summary of the AS2 requirements.

Primary Requirement		Sub-Requirement
AS2	Cover/Protect expiration date must be calculated as two business days instead of three business days after the offer expiration date	DTC needs to review its reorganization announcement platform as well as platforms supporting the Participant Tender Offer Program (PTOP) and the Participant Subscription Offer Program (PSOP) in order to ensure that the cover/protect expiration date (last day to cover protects) is offer expiration date plus two business days.
		NSCC will also require modifications to its voluntary reorganization processing application within its CNS system to accommodate this change.
		Organizations that internally derive the cover/protect expiration date must ensure that their systems are updated to calculate cover/protect expiration date as offer expiration date plus two business days.
		Organizations that trade around voluntary reorganization expiration dates must review their processes prior to moving to T+2 in order to claim failed deliveries, recall securities, and track trades pending settlement.

Documentation

The settlement cycle is often referenced in documents that support the life cycle of a trade. Agreements and procedural documentation used by organizations as part of trading, investor/client communication, and training will need to be updated to reflect the settlement cycle as T+2 instead of T+3.

DC1	Agreements, official statements, prospectuses, statements of additional information, and subscription documentation must be updated to accommodate the move to T+2

Agreements, official statements, prospectuses, statements of additional information, and subscription documentation that support the trade processing infrastructure and include references to standard settlement as T+3 must be updated to reference T+2. As an example, ETF trading relationship agreements that reference settlement date as T+3 must be revised at the distributor level and official statements and prospectuses must reference T+2 as standard settlement. Organizations may need to increase their reliance on electronic delivery of prospectuses due to a shortened timeframe between execution and settlement.

Furthermore, the DTC and NSCC must review its fee guides to determine the impact of the move to T+2. DTC and NSCC will make necessary adjustments and publish revisions (if required) to ensure that industry participants are aware of the changes. These guides include fee schedules for services such as, Envelope Settlement Services, Continuous Net Settlement (CNS) processing, and ID Net processing.

The below table is a summary of the DC1 requirements.

Primary Requirement		Sub-Requirement
DC1	Agreements, official statements, prospectuses, statements of additional information, and subscription documentation must be updated to accommodate the move to T+2	Agreements, official statements, prospectuses, statements of additional information, and subscription documentation that support the trade processing infrastructure and include references to standard settlement as T+3 must be updated to reference T+2.
		The DTC and NSCC fee guides must be reviewed to determine the impact of the move to T+2.

DC2	Procedure documentation and training materials must be updated to specify T+2 as standard settlement

Organizations will need to adjust their operating procedures and internal training materials. Organizations must educate customers and staff on how the shortened settlement window impacts their behaviors and related processes. For example, organizations should educate staff on handling entitlement inquiries with respect to cash and stock distribution events.

The below table is a summary of the DC2 requirements.

Primary Requirement		Sub-Requirement
DC2	Procedure documentation and training materials must be updated to specify T+2 as standard settlement	Organizations will need to adjust their operating procedures and internal training materials.
		Organizations must educate customers and internal staff on how the shortened settlement window impacts their behaviors and related processes.

Regulatory Changes

A mosaic of regulations govern the settlement cycle and related processes. A number of these regulations require amendment for a T+2 migration. While the move to T+2 is an industry initiated effort, it is essential that the appropriate regulators review and amend impacted rules for securities settlement. Timely regulatory changes are a key dependency for the industry to accomplish a migration to T+2 and meet the targeted implementation timeframe of Q3 2017. Specifically, the industry requires regulatory certainty with significant lead time to address the necessary technology and compliance infrastructure changes for a move to T+2.

Concurrent with the development of this document, outside counsel was retained to catalog required regulatory changes and develop recommendations for inclusion in a comprehensive letter (SSC Letter) to the Commission and other regulators. The SSC Letter expresses support for the move to T+2 and identifies the specific rules and suggested amendments regulators may reference to address the necessary changes. For purposes of the letter, the rules have been organized into three categories: (1) rules that specifically establish or reference a T+3 settlement cycle, (2) rules that do not specifically reference T+3 as the standard settlement cycle, but establish time frames based on the settlement date of a trade, and require one or more parties to act prior to settlement taking place, and (3) rules that establish time frames based on settlement date, but do not require action before settlement occurs. The first category includes most prominently SEC Rule 15c6-1(a), which establishes T+3 as regular way settlement cycle. The second category proposes changes to the rules for payment on delivery and collect on delivery transactions, as well as to rules establishing the "ex-dates" associated with corporate actions. The third category addresses various rules associated with cleaning up trades that have, typically for operational reasons, not settled on time, including portions of Regulation T, SEC Rule 15c3-3(m) and Regulation SHO close out periods. The SSC Letter captures proposed amendments to the rule sets where appropriate.

SIFMA and the ICI have submitted the SSC Letter to the Commission and will engage in advocacy efforts as appropriate. In addition, ISC members intend to meet with the Commission, other regulators and self-regulatory organizations (SROs) whose rules and processes also may require amendment (e.g. FINRA, NASDAQ, NYSE, MSRB). The clearing agency subsidiaries of DTCC, NSCC and DTC, and any other entity which has been granted an exemption from registration as a clearing agency will also analyze potential impacts and file any necessary rule changes by Q1 2016.

The ISC's goal is to encourage all impacted regulators and SROs to start the amendment process as soon as reasonably possible, as the necessary rule changes are a key dependency in meeting the targeted implementation date.

INDUSTRY CONSIDERATIONS

A shortened settlement cycle will result in a greater focus on efficient fails management and settlement risk mitigation. While an organization's trade processing and asset servicing operations will be impacted, there will also be a corresponding impact on functions that include securities lending as well as liquidity and collateral management. Most organizations need to consider the following impacts:

1. **FAILED TRADE MANAGEMENT:** Failure to deliver securities (seller) and/or funds (buyer) in the appropriate form by settlement date may increase in a shortened settlement cycle. Fails can occur for a variety of reasons, including, but not limited to, inaccurate trade details, inability to obtain funds/securities, and cross-border complexities. An increase in the number of fails due to reduced processing timeframes and cut-off times may cause operational inefficiencies and increase costs for brokers and investors. It is therefore critical for organizations to use automation and industry utilities to minimize fails. Although mandatory fail penalties and mandatory buy-in procedures were discussed by the ISC, no modifications were identified for current U.S. market practices.

2. **SECURITIES LENDING:** Securities lending transactions are executed to avoid delivery failures or to cover/create a short position in a security. Participants in such transactions including security lenders, security borrowers, and service providers should consider the impact of the shortened settlement cycle on their business models and trading strategies. Security lenders may have less time to recall securities on loan. Security borrowers will have to be cognizant of the reduced timeframe between execution and settlement when locating securities, particularly when transacting hard-to-borrow securities. Service providers may have to update their products and services to accurately process such transactions.

3. **LIQUIDITY AND COLLATERAL MANAGEMENT:** Post-trade activities may require modification to liquidity management and cash forecasting as organizations will need to consider shortened settlement timeframes. Retail broker-dealers will need to review the fund collection process to ensure good/cleared funds are available from clients in time for T+2 settlement in order to minimize impacts on liquidity. Organizations may have to consider automating their collateral management processes as manual processing (e.g., processing collateral substitutions) is likely to affect the ability of an organization to meet the settlement deadlines. Managing these impacts will be especially important during the period immediately following the migration to T+2 as organizations will have to manage changes in counterparty behavior.

4. **PROCESSING OF MULTI-LISTED SECURITIES:** There may be minor changes to the processing of financial instruments such as ADRs, and securities listed on multiple international exchanges. For example, the agreement terms of ADR pre-releases, whereby an ADR is issued prior to the deposit of the underlying shares, may require modification. Brokers may increase their reliance on the pre-release functionality as it may be more difficult for them to secure underlying securities within a shortened settlement timeline.

5. **FOREIGN INVESTMENT/CROSS-BORDER TRANSACTIONS:** The ability to transact in a global market remains an important consideration as the industry migrates to T+2. Transacting globally is complicated due to communication lags, structural challenges, currency differences, mismatches in global settlement cycles, and time zone issues. While the U.S. market move to T+2 will align the securities settlement cycle with the settlement cycle of the spot FX market, several of the complexities with foreign investment/cross-border transactions will continue to exist. Organizations will need to review their internal operations and global investment strategies where applicable because the U.S. migration to T+2 will align them with standard settlement in Europe and other T+2 jurisdictions. However, those markets currently settling on T+3 may not migrate in tandem with the U.S. and will become misaligned with the U.S. market.

6. **SECONDARY INSURANCE FOR MUNICIPAL BONDS:** The ability to obtain secondary insurance for municipal bonds within the standard settlement timeframe may become more difficult and result in a greater number of extended settlements. Currently, there are a number of municipal bonds that are not insured thereby exposing the investor to default risk. Institutional and retail clients investing in such bonds may request their broker-dealer to obtain secondary insurance. After executing an order for the uninsured bonds, the broker-dealer works with a secondary insurance provider and security identifier issuer to insure the bonds and issue a new unique security identifier (CUSIP). In today's T+3 environment, this process often requires an extended settlement to enable insurance to be purchased and a new unique security identifier to be issued between execution and settlement. This may become a more common occurrence in a T+2 environment.

LEADING PRACTICES AND OTHER INDUSTRY INITIATIVES

While not on the critical path to migrate to T+2, there are leading practices and other industry initiatives that promote operational efficiencies, settlement finality, and a reduction in settlement fails. Organizations are encouraged to adopt these leading practices to achieve internal processing efficiencies while adapting to the shortened settlement timeframe. Additionally, the financial services industry is encouraged to promote and support other industry initiatives such as dematerialization and shortening the ACATS process to reduce costs and enable straight-through processing. Furthermore, extending digital delivery through Enhanced Broker Internet Platforms (EBIPs) and the use of a Summary Prospectus Delivery option for specific asset classes may reduce costs and create higher levels of investor readership.

1. **TRADE DATE MATCH/AFFIRM:** Trade date match/affirm streamlines the clearance and settlement process, which enables organizations to take advantage of downstream efficiencies. To provide even greater processing efficiencies, organizations should consider matching and affirming trades on trade date. Organizations should consider all tools available when deciding how best to improve trade date affirmation rates. In addition to encouraging organizations to match and affirm trades on trade date, the industry should consider publication of affirmation/settlement rates for the industry and for organizations to enable them to evaluate post-trade performance in relation to the industry and their peers and help identify areas for improvement.

2. **AUTOMATED EXCHANGE OF STANDING SETTLEMENT INSTRUCTIONS:** The automated exchange of standing settlement instructions (SSI) through a central data repository maintained by industry participants reduces manual processes, creates efficiencies, and increases data quality. Current manual processes for maintaining SSI information are disparate and error-prone leaving organizations with less time for corrections in a shortened settlement timeframe. Incomplete/incorrect SSI information is one of the leading causes of settlement fails and reduces processing efficiency. Industry participants can potentially limit the number of settlement fails by leveraging a central repository of SSIs
   that is accessible across market segments in order to automate the enrichment of transactions with accurate SSI information.

3. **ELECTRONIC FUNDS PAYMENT/ACH PROCESSING:** Some organizations and retail investors rely on physical checks to fund trades. To reduce the risks and costs associated with check processing, and to reduce potential broker-dealer liquidity impacts by settling trades at DTCC without cleared/good funds in hand from clients, organizations should encourage their customers to leverage electronic funds payment/ACH to streamline payment processing and reduce exposure. While ACH is an improvement over physical checks, it also has certain limitations including a payee's right to rescind for an extended period of time following the transfer. On January 26, 2015 the Fed released "Strategies for Improving the U.S. Payment System."
   This paper calls for improving the speed, security and efficiency of the U.S. Payment System. A clear synergy exists between shortening the securities settlement cycle and accelerating the payment systems to fund settlements.

4. **EARLY AND ON-GOING STAKEHOLDER COMMUNICATION:** Early and on-going communication on the move to T+2 will assist in effectively managing the changes and modifying behaviors for the new operating environment. Communication is especially important for clients and counterparties to minimize settlement date mismatch when transacting globally. In addition, it is important to ensure that staff are aware of T+2 requirements and are provided the necessary training to mitigate risks and operate efficiently.

5. **EXTENDING DIGITAL DELIVERY AND USE OF THE SUMMARY PROSPECTUS DELIVERY OPTION:** Extending Summary Prospectus delivery to other product types and establishing greater use of EBIPs for pushing documents digitally, the industry can create significant economic benefits and higher levels of investor readership. A Summary Prospectus delivery option for corporate bonds and government securities, would significantly reduce costs for the industry. Additionally, the industry should seek to expand investors' digital delivery options for statutory documents.

6. **DEMATERIALIZATION:** Dematerialization (i.e. replacing physical certificates with book-entry securities) has been an on-going effort in the industry dating as far back as the 1970s. Removing physical securities from the settlement cycle reduces the cost and complexity of settlement, as well as the risks associated with handling physical securities. With the establishment of the Direct Registration System (DRS), investors may elect to hold their assets on the books and records of the issuer's transfer agent in "statement" form, which enables these assets to be converted to electronic book-entry form in a fully automated process. On-going industry efforts to mandate DRS in book-entry "statement only" form will eliminate the issuer's choice of providing certificates, thereby reducing the amount of certificates being handled while maximizing use and efficiencies of electronic book-entry form. Further efforts also are underway to expand the use of DTC's Fast Automated Securities Transfer (FAST) program, which enables book-entry record keeping in lieu of physical certificates between DTC and the transfer agent community. Industry participants that still provide physical certificates should consider issuing and maintaining them in "street-name" or "statement only" form to take full advantage of the book-entry alternatives to paper certificates. These initiatives will further accelerate the dematerialization of the modest number of physical certificates that remain in the marketplace.

7. **ACATS:** NSCC's Automated Customer Account Transfer Service (ACATS) automates and standardizes procedures for the transfer of assets in a customer account from one brokerage firm and/or bank to another, enables the transfer of many different types of assets, including, but not limited to, equities, corporate bonds, municipal bonds, unit investment trusts, mutual funds, options, annuities, and cash. The service typically takes between 3-5 days to complete depending on the type of transfer taking place. The ACATS transfer process will not be impacted by the T+2 migration. As a separate effort, SIFMA's Customer Account Transfer Section is discussing opportunities to shorten the ACATS process.

NEXT STEPS

There are a series of next steps the industry, as well as individual organizations, must execute in order to successfully migrate to T+2 by Q3 2017. The next steps in the migration to T+2 are defined by various milestones that take into account critical dependencies and are contingent upon cooperation and coordination between organizations, the ISC and IWG, and regulators.

INDUSTRY-LEVEL NEXT STEPS: Upon release of this document, the ISC and IWG will shift their focus to regulatory outreach, broader industry communication, planning, and guiding industry-wide implementation and testing. The ISC and IWG will continue to meet on a regular basis to monitor, measure, and report on the T+2 migration progress. The IWG will drive the development of an industry communications plan, implementation plan, testing plan, and will capture any additional industry requirements identified. DTCC will continue to provide project management support for the T+2 effort. As previously stated, regulatory certainty is a necessary precondition to the success of the T+2 initiative. The ISC will engage with regulators to advocate for the regulatory changes and their implementation in a timely manner to assist the industry in meeting T+2 milestones. The ISC will also conduct information sessions with the industry to educate them on T+2 and ensure continued industry-wide engagement. Furthermore, the ISC will collaborate with individual organizations to develop and execute the industry-level implementation plan and testing approach. Additionally, the ISC will recommend a specific implementation date and will consider various factors, such as: transaction volumes (e.g. index rebalancing and historically high volume days), holidays, and corporate action events. Once the ISC determines the specific implementation date, it will communicate this date to industry stakeholders.

ORGANIZATION-LEVEL NEXT STEPS: Individual organizations will need to complete specific steps to ensure preparedness for industry-wide testing by end of Q1 2017 and readiness for T+2 implementation in Q3 2017. Specifically, organizations will need to develop an internal migration plan and approach taking into account the milestones identified in the migration timeline (see Figure 4: Timeline for Migration to T+2), conduct an impact assessment, compare their current state to the trade processing, asset servicing, and documentation requirements, and obtain resources to execute their T+2 migration plan. While the ISC and IWG will establish a governance model, individual organizations have a responsibility to engage and communicate progress and preparedness for industry-wide testing and the targeted implementation date in Q3 2017.

CONCLUSION

This document signifies broad industry commitment to execute the necessary steps to migrate to T+2 and concludes the industry's Discovery & Analysis phase of the T+2 migration effort. While organizations need to develop and execute their own internal plans, a successful migration is also predicated on a collaborative industry effort to affect rule changes, develop an industry implementation plan, and conduct robust industry-wide testing.

The ISC and IWG will continue to partner closely with organizations to promote awareness and understanding of the proposed T+2 migration timeline, industry-level requirements, industry considerations, leading practices and other industry initiatives. The trade processing, asset servicing, documentation, and regulatory requirements outlined in this document provide the industry with a foundation to facilitate the necessary changes. While it is understood that critical dependencies exist regarding regulatory certainty and industry-wide testing, it is recommended that organizations begin preparing for T+2 migration by assessing the required changes and adopting leading practices.

As the industry moves through the phases of the T+2 migration effort, the ISC will continue to engage with regulators and with organizations on the industry's progress and next steps. Organizations should leverage the information provided in this document and engage with the ISC to ensure their firms' preparedness as the industry migrates to T+2 settlement in the U.S. by the proposed implementation date in Q3 2017.

FOR ADDITIONAL INFORMATION PLEASE VISIT

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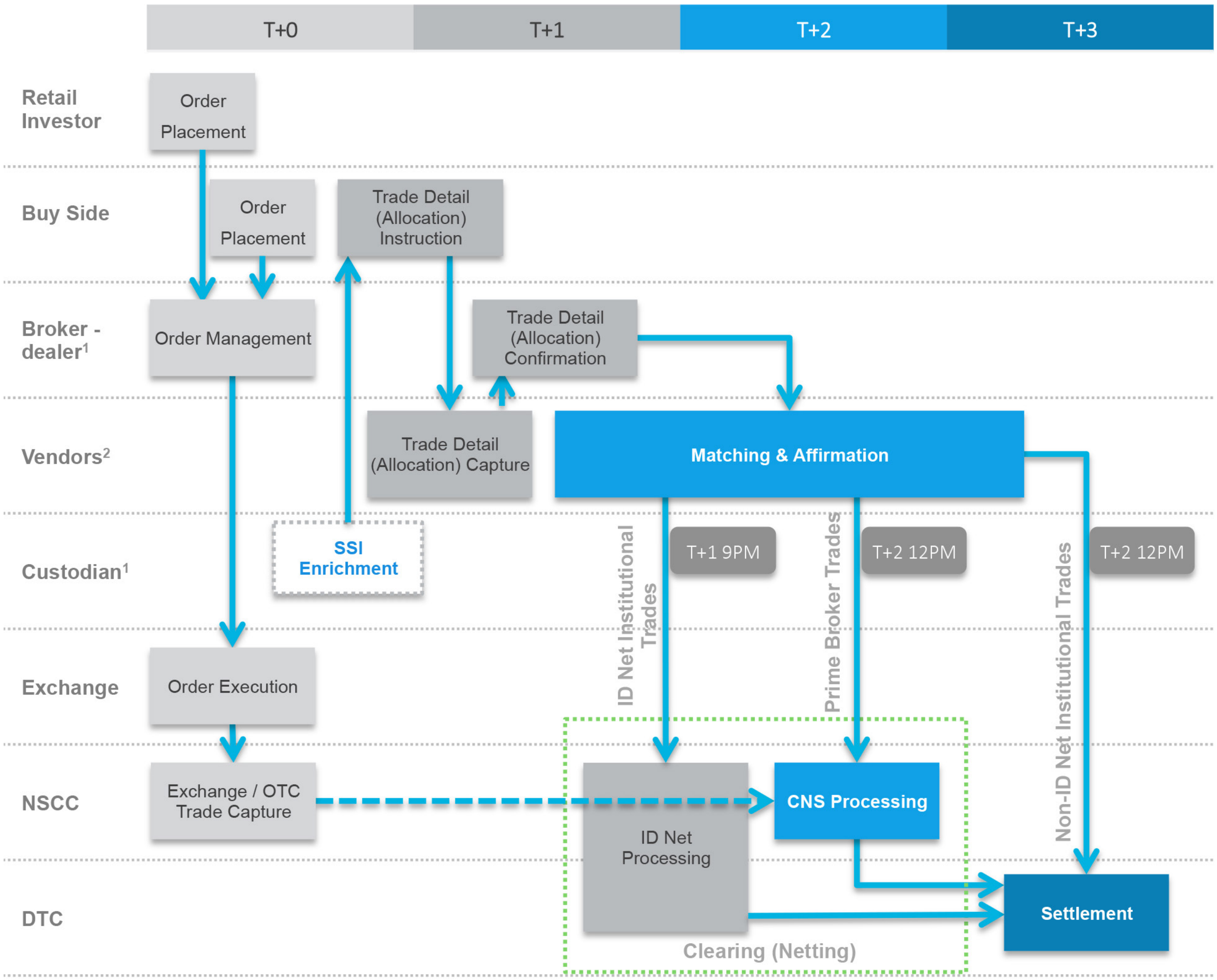
T+3 Trade Processing Workflow

Figure 8: T+3 Trade Processing Workflow depicts the typical trade processing workflow for T+3 settlement.



[1]Trades sent by the custodian or broker-dealer directly to DTC for settlement are treated as DOs and have not been incorporated into this workflow
[2]For ID Net and CNS Processing, trades must be sent to Omgeo

Figure 8: T+3 Trade Processing Workflow

GLOSSARY

Term	Acronym	Description
American Depositary Receipt	ADR	A negotiable security issued by a U.S. bank representing ownership in a foreign stock that is traded on a U.S. exchange.
Automated Subscription Offer Program	ASOP	DTC's ASOP is an agent application offered by DTC that displays participant rights subscription instruction details.
Automated Tender Offer Program	ATOP	DTC's ATOP is an agent application offered by DTC that displays participant tender instruction details.
Buy-side	N/A	Represents the investing institutions including, but not limited to, investment managers, pension funds, mutual funds, and insurance firms.
Capital	N/A	Funds raised by a company through the sale of stock or debt securities and retained earnings.
Continuous Net Settlement	CNS	CNS is NSCC's core accounting and securities settlement system, where compared and recorded transactions in eligible securities are netted.
Corporate bond	N/A	A debt security issued by a corporation and sold to investors.
Counterparty risk	N/A	In order for a trade to occur, two counterparties must agree to the terms. There is, however the possibility that either or both counterparties may not comply with the agreed terms
Custodian	N/A	Financial institution that provides safekeeping of financial securities for an investor, in addition to providing the related accounting and reporting services. Services generally include, but are not limited to: safekeeping of assets, settling securities transactions, receiving dividends and interest from the fund's investments, managing the fund's excess cash, monitoring corporate actions, and tracking loaned securities.
Deliver Order	DO	An instruction for the book-entry transfer of a security from one participant to another; a DO may be free of payment or versus payment (a "DVP"). DTC also processes several other types of DOs (e.g., stock loans, customer account transfers (ACATS)).
Direct Registration System	DRS	DRS enables investors to elect to hold their assets on the books and records of their transfer agent in electronic book-entry form. Through DTC's DRS service, assets can be electronically transferred to and from the transfer agent and broker-dealer.
Dividend Reinvestment Plan	DRIP	A plan offered by a corporation whereby investors' dividends are directly reinvested in the underlying equity on the dividend payment date.
DTC Collateral Monitor	N/A	DTC's collateral monitor is a risk management control for protecting the DTC settlement system in the event of a DTC participant default. The collateral monitor requires participant's settlement obligations, as they accrue intraday, to be fully collateralized.
DTC Net Debit Cap	N/A	DTC's net debit cap is a risk management control for protecting the DTC settlement system in the event of a participant default. The net debit cap limits the size of a participant's net debit so that it does not exceed DTC's available liquidity resources (the DTC participant funds and the committed line of credit from a consortium of lenders).
Equity	N/A	A security or investment representing ownership interest in a company. Often used interchangeably with stock.
Exchange-Traded Fund	ETF	An investment company, typically a mutual fund or unit investment trust, whose shares are traded intraday on stock exchanges at market-determined prices. Investors may buy or sell ETF shares through a broker just as they would the shares of any publicly traded company.
Exchange-Traded Product	ETP	A security that trades intra-day on a national securities exchange and derives its value from another investment instruments such as a commodity, currency, share price or interest rate.
ID Net	N/A	A service that allows broker-dealer to net their affirmed institutional equity trades with other trades in CNS.
Investment Company Institute	ICI	ICI is a leading, global association of regulated funds, 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.

Term	Acronym	Description
Industry participants	N/A	Term used throughout this document to refer to the individuals and/or impacted organizations.
Industry Steering Committee	ISC	The ISC provides guidance, direction, and support for the effort to migrate to a T+2 settlement cycle.
Industry Working Group	IWG	The IWG supports the ISC by identifying the business requirements, rule changes, and recommending next steps for the industry initiative.
Major market	N/A	Term used throughout this document to refer to the G20 markets (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, United States, and the European Union (EU).
Municipal bond	N/A	A debt security issued by a state or local government in the U.S. and sold to investors.
Mutual Fund	N/A	An investment company registered with the SEC that buys a portfolio of securities selected by a profession investment adviser to meet a specified financial goal (investment objective). Mutual funds issue "redeemable securities," meaning the fund stands ready to buy back its shares at their current net asset value (NAV).
National Securities Clearing Corporation	NSCC	NSCC, established in 1976, is a subsidiary of DTCC that provides clearing, settlement, risk management, central counterparty services and a central counterparty guarantee for certain transactions for virtually all broker-to-broker trades involving equities, corporate and municipal debt, American depositary receipts, exchange-traded funds, and unit investment trusts.
Omgeo	N/A	Omgeo was formed in 2001 and is a subsidiary of DTCC. Omgeo is service that automates trade lifecycle events, including allocation, confirmation / affirmation, settlement notification, enrichment, operational analytics and counterparty risk management between trade counterparties.
Option	N/A	Contract which gives the buyer the right to buy or sell an asset at a specified price on or before a specified date.
Organizations	N/A	Term used throughout this document to reference all industry stakeholder organizations impacted by the move to T+2. This includes members from the buy-side, sell-side, utilities, custodians, transfer agents, exchanges, vendors, and issuers.
Participant Subscription Offer Program	PSOP	DTC's PSOP processor allows participants to process information regarding rights offerings including subscriptions.
Participant Tender Offer Program	PTOP	DTC's PTOP processor allows participants to process information regarding tender and exchange offers.
Prime Broker	N/A	A prime broker provides clients with trade consolidation services, where executing brokers are instructed to settle all trades with the prime broker. In addition, the prime broker also provides a number of other useful services, including custody of the securities, loaning of securities for short sales, providing margin financing, and providing back office technology and reporting.
Real Time Trade Matching	RTTM	NSCC's RTTM system enables broker-dealers to automate the processing of fixed income securities traded throughout the trading day.
Right	N/A	Enables existing shareholders of a stock to maintain proportionate ownership by being able to buy newly issued shares before the issuing company offers them to the public.
Securities and Exchange Commission	SEC	The SEC is an agency of the U.S. Federal Government. Its primary mission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.
Sell-side	N/A	Represents the organizations that are responsible for the creation and sale of securities to the buy-side. These organizations include, but are not limited to, Broker-dealers, Investment Banks, and Advisory Services.
Settlement cycle / settlement timeframe	N/A	Period between trade execution and settlement whereby the obligations of two transacting parties are fulfilled. During this period the buyer must provide payment for agreed securities and the seller must deliver the agreed securities.

Term	Acronym	Description
Settlement Finality	N/A	Settlement finality is the point where a trade is settled and irrevocable.
Standing Settlement Instruction	SSI	Settlement instructions governing the delivery of financial instruments between two counterparties.
Straight-through processing	N/A	Enables processes to be conducted electronically without manual intervention.
Sub-Working Group	SWG	The IWG was made up of 5 SWGs named Teams Alpha, Bravo, Charlie, Delta, and Lima. Team Alpha focused on identifying the in-scope products for the migration to T+2, Team Bravo on identifying the buy-side industry requirements, Team Charlie on operational processes including asset servicing, Team Delta on identifying sell-side as well as DTC/ NSCC industry requirements, and Team Lima focused on regulatory changes.
Systemic risk	N/A	Risk that is inherent in the market that is unpredictable
The Association of Global Custodians	AGC	The Association of Global Custodians is a group of financial institutions that provide securities safekeeping services and asset-servicing to institutional investors.
The Association of Institutional INVESTORS	AII	The Association of Institutional INVESTORS is an organization of federally registered investment advisers in the United States.
The Depository Trust Company	DTC	DTC, established in 1973, is a subsidiary of DTCC that reduces costs and provides clearing and settlement efficiencies by immobilizing securities and making "book-entry" changes to ownership of the securities.
The Securities Industry and Financial Markets Association	SIFMA	SIFMA is the voice of the nation's securities industry, bringing together the shared interests of hundreds of broker-dealers, banks and asset managers.
Unit Investment Trust	UIT	A type of fund with some characteristic of mutual funds and some of closed -end funds. Like mutual funds, UITs issue redeemable shares. Like closed-end funds, however, UITs typically issue only a specific, fixed number of shares. A UIT does not actively trade its investment portfolio, instead buying and holding a set of particular investments until a set termination date, at which time the trust is dissolved and proceeds are paid to shareholders.
Warrant	N/A	Similar to an option, a warrant is a derivative security that gives the holder the right to purchase securities from the issuer at a specific price within a certain time frame.

Industry Participants

The ISC and IWG are comprised of representatives from Asset Managers (40 Act and non-40 Act Funds), Global Custodians, Institutional Broker-Dealers, Retail Broker-Dealers, Transfer Agents, Exchanges, DTC and NSCC, Omgeo, OCC, Service Bureaus, and Issuers.

TO VIEW A LIST OF PARTICIPANTS please visit the T2 website: **http://www.ust2.com/about-us.**

T2 SETTLEMENT