

DEVELOPMENT AGENDA

NEW AND ONGOING BUSINESS INITIATIVES FOR DTCC'S SIFMU BUSINESSES

2016-2017

DTCC's Development Agenda is intended to provide clients with a summary of key ongoing and new initiatives. Please contact your DTCC Relationship Manager with inquiries.

DTCC

Securing Today. Shaping Tomorrow.®

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New and Ongoing Business Initiatives

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This Development Agenda describes initiatives that are in varying stages of development. Therefore, initiatives and their milestone targets are subject to change, particularly where regulatory approval is required.

FIXED INCOME CLEARING CORPORATION (FICC)

Key FICC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>GSD Centrally Cleared Institutional Tri-Party Repo Service™ (CCIT™)</p> <p>Impact: Government Securities (New, Optional Service for Institutional Cash Lenders)</p> <p>This initiative would allow for the clearing of Institutional Tri-Party Repo transactions between buy-side firms and existing GSD clients. As a part of the proposed rule change, FICC plans to create a new limited-service membership category for Tri-Party Repo Transactions where the buy-side firm is the cash lender. Limited membership for Registered Investment Company (RIC) and non-RIC cash lenders will be the subject of separate regulatory filings.</p>	<p>Regulatory Filings to be Submitted – Implementation Subject to Regulatory Approval</p>	<p><u>2017</u></p> <ul style="list-style-type: none">Implementation, Q1 <i>Subject to Regulatory Approval</i>	<p>Laura Klimpel Executive Director Clearing Agency Services lklimpel@dtcc.com 212-855-5230</p> <p>Sean Delap Executive Director FICC Product Management sdelap@dtcc.com 212-855-7627</p>

Key FICC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>GSD Sponsored DVP (Delivery-versus-Payment) Membership Expansion</p> <p>Impact: Government Securities (<i>Expansion of Existing, Optional DVP Service for “Qualified Institutional Buyer” (QIB) Clients of GSD Bank Netting Member Sponsors</i>)</p> <p>Since 2005, GSD has offered a Sponsored Membership Program that allows well-capitalized Bank Netting Members, which have at least \$5 billion in equity capital, to act as sponsors for purposes of sponsoring into GSD’s DVP Service overnight reverse repo activity with their Registered Investment Company (RIC) clients that are also QIBs. The expanded service would be available to all QIB clients of Bank Netting Member sponsors and would permit the submission of two-directional overnight and term repo activity, as well as outright purchases and sales of eligible securities.</p>	<p>Regulatory Filing to be Submitted – Implementation Subject to Regulatory Approval</p>	<p>2017</p> <ul style="list-style-type: none"> Implementation, Q1 <i>Subject to Regulatory Approval</i> 	<p>Laura Klimpel Executive Director Clearing Agency Services lklimpel@dtcc.com 212-855-5230</p> <p>Sean Delap Executive Director FICC Product Management sdelap@dtcc.com 212-855-7627</p>
<p>GSD Risk Sensitivities Value-at-Risk (VaR) Model</p> <p>Impact: Government Securities (<i>Mandatory for Clients of GSD</i>)</p> <p>FICC will introduce a new VaR model:</p> <ul style="list-style-type: none"> The new model will be based on a portfolio’s risk sensitivities (i.e., the impact of changes in interest rates and other key risk factors on the market value of the portfolio). The Margin Requirement Differential (MRD) and Coverage Component (CC) portions of GSD Clearing Fund calculation will be eliminated. 	<p>Feasibility Study Initiated</p> <p>Vendor Negotiations Initiated</p>	<p>2016</p> <ul style="list-style-type: none"> Completed Proof of Concept, Q3 <p>2017</p> <ul style="list-style-type: none"> Complete Business Requirements, Q2 Establish Vendor Data Feeds, Q2 Begin Technology Development, Q4 <p>2018</p> <ul style="list-style-type: none"> Implementation, Pending Regulatory Approval 	<p>Tom Granelli Executive Director Financial Risk Management tgranelli@dtcc.com 212-855-5075</p>

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<p>Capped Contingency Liquidity Facility® (CCLF®) for GSD Impact: Government Securities (Mandatory for Clients of GSD)</p> <p>DTCC considers liquidity risk management to be an integral component of timely settlement and reducing potential systemic risk. Throughout 2015 and 2016, Financial Risk Management outlined its liquidity initiatives aimed at maintaining sufficient financial resources to withstand, at a minimum, a default by the member-family to which it has the largest exposure, in extreme, but plausible market conditions, as promulgated under the SEC's Covered Clearing Agency Standards ("Cover 1 Requirement"). This includes establishing a Capped Contingency Liquidity Facility ("CCLF") to cover GSD's liquidity demands in the event that the repo market is not available.</p>	<p>Client Engagement Completed</p> <p>Impact Analysis Shared with Clients</p> <p>Discussion with Regulators Ongoing</p>	<p>2016</p> <ul style="list-style-type: none"> • Submit Proposed Rule Change for Regulatory Approval, Expected Q4 <p>2017</p> <ul style="list-style-type: none"> • Phase-in Period for Members to Monitor and Adjust Their Exposure, Planned for Q2 <p>2018</p> <ul style="list-style-type: none"> • Formal Implementation, Pending Regulatory Approval, Q1 	<p>Tom Granelli Executive Director Financial Risk Management tgranelli@dtcc.com 212-855-5075</p>
<p>MBS Operational Novation Impact: Mortgage-Backed Securities (Mandatory for Clients of the MBS Clearing Service)</p> <p>This initiative is a conversion to operational novation and a simplification of the netting and settlement process that will enable MBSD to retire inefficient processing, such as Notification of Settlement (NOS). Trades will be novated upon comparison and clearing members will be the allocation and settlement counterparty to FICC. This change is intended to ease the operational burden on clients by reducing the number of allocation and settlement events.</p>	<p>Client Testing</p>	<p>2015</p> <ul style="list-style-type: none"> • Began Technology Development, Q3 <p>2016</p> <ul style="list-style-type: none"> • Completed Technology Development, Q2 • DTCC Internal Testing, Q2-Q4 • Began Client Testing, Q4 <p>2017</p> <ul style="list-style-type: none"> • Submit Proposed Rule Change for Regulatory Approval, Q1 • Complete Client Testing, Q2 • Implementation, Q3 	<p>Nick Botta Executive Director FICC Product Management nbotta@dtcc.com 212-855-7636</p> <p>Vance Howard Director FICC Product Management vhoward@dtcc.com 212-855-7605</p> <p>Novation Page on DTCC.com</p>

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<p>MBSD Risk Sensitivities Value-at-Risk (VaR) Model Impact: Mortgage-Backed Securities (Mandatory for Clients of the MBS Clearing Service)</p> <p>FICC will introduce a new VaR model:</p> <ul style="list-style-type: none"> The new model will be based on a portfolio's risk sensitivities (i.e., the impact of changes in interest rates and other key risk factors on the market value of the portfolio). The Margin Requirement Differential (MRD) and Coverage Component (CC) portions of the MBSD Clearing Fund requirements will be eliminated. 	<p>Technology Development Complete</p> <p>Regulatory Filings have been Formally Filed</p>	<p>2016</p> <ul style="list-style-type: none"> Implementation, Q4 Subject to Regulatory Approval 	<p>Tom Granelli Executive Director Financial Risk Management tgranelli@dtcc.com 212-855-5075</p>

NATIONAL SECURITIES CLEARING CORPORATION (NSCC)

Key NSCC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Bulk Customer Transfer Initiative Impact: Equities (Mandatory for Clients of Equities Clearing)</p> <p>This initiative will address industry concerns related to customer account transfers when a broker may be in distress and is liquidating its business in a compressed timeframe. The project will create a standard format for the customer name and address file that brokers exchange before transferring customer accounts in bulk through the Account Information Transmission (AIT) Service.</p>	<p>Published Concept Paper</p> <p>SIFMA Customer Account Transfer Section</p> <p>Bulk Transfer Advisory Group</p>	<p>2015</p> <ul style="list-style-type: none"> Published Name/ Address File Layout, Q3 <p>2016</p> <ul style="list-style-type: none"> Created Test Files, Q2 Defined Additional Files Eligible for Bulk Transfer, Q3 <p>2017</p> <ul style="list-style-type: none"> Publish New Project Plan, Based Upon Updated Regulatory Timeline 	<p>Craig Gurien Director NSCC Product Management cgurien@dtcc.com 212-855-5649</p> <p>Bulk Customer Account Transfer Initiative Concept Paper</p>

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<p>Automated Customer Account Transfer Service (ACATS) Enhancements 2016 / Shortened ACATS Cycle Phase 1</p> <p>Impact: ACATS (Mandatory for Clients of ACATS)</p> <p>This initiative was done at the request of the industry. Three new enhancements to ACATS were implemented, including updates to the asset categories codes list, removal of the rescind reason code for Reclaim transactions and a new functionality that enables the receiver to delete mutual fund assets for partial transfers.</p>	<p>Post-Implementation</p> <p>SIFMA Customer Account Transfer Section</p>	<p>2016</p> <ul style="list-style-type: none"> • First Important Notice Distributed, Q1 • Client Testing, Q3-Q4 • Implemented, November 4 	<p>Craig Gurien Director NSCC Product Management cgurien@dtcc.com 212-855-5649</p>
<p>Shortened ACATS Cycle Phase 2</p> <p>Impact: ACATS (Mandatory for Clients of ACATS)</p> <p>These enhancements are being done at the request of the industry and will focus on creating more flexibility around cycle times, adjusting input deadlines and implementing new controls on current actions that can delay a transfer.</p> <p>The enhancements in this release include:</p> <ol style="list-style-type: none"> 1. Increasing the number of multi-cycles throughout the day from five to eleven. 2. Changing the “Days in Status” field to more accurately reflect the status on the business day of the transfer. 3. Adjusting the input deadlines for certain transfer types. 4. Adding new controls on changes once a transfer is accelerated. 5. Providing more flexibility in the ACATS-Fund/SERV process by allowing fund companies to receive fund registrations (018 ACATS records) earlier in the day and with greater frequency. 6. Enhancing the Position Transfer Fund (PTF) functionality by allowing fund registration (FR) records to be sent at the same time as the Transfer Initiation (TI) record and Asset Transfer (AT) record, eliminating a step in the process. 	<p>Functional Analysis</p> <p>SIFMA Customer Account Transfer Section</p>	<p>2016</p> <ul style="list-style-type: none"> • Distribute Important Notice, Q4 <p>2017</p> <ul style="list-style-type: none"> • Complete Internal Testing, Q3 • Begin Client Testing, Q4 <p>2018</p> <ul style="list-style-type: none"> • Implementation, Q1 	<p>Craig Gurien Director NSCC Product Management cgurien@dtcc.com 212-855-5649</p>

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<p>Universal Transaction Identifier Impact: Universal Trade Capture</p> <p>Industry participants spend significant time and resources to complete post-trade processing, such as trade reconciliation. A Universal Trade Identifier structure has been created, at the request of the industry, to help improve automation of these processes and functions.</p>	<p>Industry Adoption</p> <p>UTC Best Practices Working Group</p>	<p>2016</p> <ul style="list-style-type: none"> • Defined Industry Requirements, Q2 • Distributed Request to Migrate to Industry Standard, Q2 	<p>Tim Garrett Director NSCC Product Management tgarrett@dtcc.com 212-855-2262</p>
<p>Consolidated Trade Summary (CTS) Rewrite Impact: Equities Clearing (Mandatory for Clients of Equities Clearing)</p> <p>This initiative will rewrite the legacy CTS to expand certain fields and introduce new fields and codes. New file formats and AutoRoute Products will replace legacy output. The print image version of the CTS will be discontinued.</p> <p>A new CTS web front end will also be introduced to allow clients to query and download CTS data.</p>	<p>Technology Development</p> <p>CTS Working Group</p> <p>SIFMA Security Operations Section of the Regulations and Clearance Committee</p> <p>Financial Information Forum Back Office Committee</p>	<p>2015</p> <ul style="list-style-type: none"> • Customer Requirements Defined, Q1 • File Formats Published, Q3 • Canned Data Made Available for Client Testing, Q4 <p>2016</p> <ul style="list-style-type: none"> • Monthly CTS Industry Calls, Q1-Q4 • Submit Proposed Rule Filing, Q4 • Complete Technology Development, Q4 • Begin Client Testing, Q4 <p>2017</p> <ul style="list-style-type: none"> • Complete Client Testing, Q2 • Implementation, Q2 	<p>Tim Garrett Director NSCC Product Management tgarrett@dtcc.com 212-855-2262</p> <p>Equities Clearance Learning Center</p>

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<p>Clearance Dashboard Impact: Equities Clearing (Mandatory for Clients of Equities Clearing) New web portal that will provide clients access to multiple Clearing Services/Products:</p> <ul style="list-style-type: none"> • UTC COR –Supports entry of Correspondent Clearing Trades • UTC TMT- Transaction Management Tool for Clients to Upload Test Data • CTS – Consolidated Trade Summary Data for Clients to View and Query • CNS – Continuous Net Settlement Screens • ECB – Equity Commission Billing 	<p>DTCC Internal Testing</p> <p>CTS Working Group</p> <p>T+2 Industry Working Group</p>	<p>2016</p> <ul style="list-style-type: none"> • Complete Technology Development, Q3 • DTCC Internal Testing, Q3-Q4 • Client Testing, Q4 <p>2017</p> <ul style="list-style-type: none"> • Client Testing, Q1-Q2 • Implementation, Q2 	<p>Korosh Major NSCC Product Management kmajor@dtcc.com 813-470-1867</p> <p>Equities Clearance Learning Center</p>
<p>DTCC Limit Monitoring Phase 3 Impact: Equities Clearing (Mandatory for Clients of Equities Clearing) The purpose of this initiative is to further improve the functionality of the Limit Monitoring Tool. Based upon input from clients, the tool will be enhanced to upgrade the alerting mechanism, expand search and export capability and offer additional MRO reporting.</p>	<p>Phase 1 Implemented</p> <p>On Target for Phase 2 Implementation, Q1 2017</p> <p>DTCC Limit Monitoring Industry Working Group</p>	<p>2015</p> <ul style="list-style-type: none"> • Determined Proposed New Functionalities, Q4 <p>2016</p> <ul style="list-style-type: none"> • DTCC Limit Monitoring Industry Working Group Calls, Q1-Q4 • Phase 1 Rule Filing Approved, Q2 • Phase 1 Implemented, Q3 <p>2017</p> <ul style="list-style-type: none"> • DTCC Internal Testing, Q1 • Phase 2 Implementation, Q1 	<p>Pawel Pieczara Director NSCC Product Management ppieczara@dtcc.com 212-855-5697</p>
<p>ETF Near Real-time Create/Redeem Enhancements & Controls Impact: Equities Clearing (Mandatory for Clients of the ETF Service) This initiative will introduce near real-time input and processing capabilities for ETF Create/Redeem primary market transactions received from ETF Agents intraday on trade date. Upon receipt of as-of transactions or corrections, the ETF Application will process and feed Create/Redeem orders to UTC (Universal Trade Capture) for clearance.</p>	<p>Functional Analysis</p> <p>DTCC ETF Industry Working Group</p>	<p>2016</p> <ul style="list-style-type: none"> • Technology Development, Q1-Q2 • Submit Rule Filing, Q4 2016-Q1 2017 <p>2017</p> <ul style="list-style-type: none"> • Client Testing, Q3 • Implementation, Subject to Regulatory Approval 	<p>Kelly Kilroy Product Manager NSCC Product Management kkilroy@dtcc.com 813-470-1033</p> <p>Equities Clearance Learning Center</p>

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<p>NSCC Client Clearing Fund Calculator Impact: Equities Clearing (<i>Optional for Clients of Equities Clearing</i>) This initiative will introduce a tool for clients to estimate their NSCC Clearing Fund requirements.</p>	<p>Proof of Concept Business Requirements</p>	<p><u>2017</u> • Implementation, TBD</p>	<p>Greg Kalina Executive Director Financial Risk Management gkalina@dtcc.com 212-855-5763</p>
<p>NSCC Value-at-Risk (VaR) Model Enhancements Impact: Equities Clearing (<i>Mandatory for Clients of Equities Clearing</i>) This initiative will enhance NSCC's VaR Model to prepare for the Accelerated Trade Guaranty (ATG), inclusive of the additional testing and model performance monitoring, which will be required under the ATG. This initiative will also address various model validation and audit findings.</p>	<p>Requirements Definition</p>	<p><u>2017</u> • Prioritization of Projects to Achieve Timely Completion of Initiative</p>	<p>Tim Hulse Executive Director Financial Risk Management thulse@dtcc.com 212-855-5641</p>
<p>NSCC/OCC Accord Impact: Equities Clearing (<i>Mandatory for Clients of Equities Clearing Having OCC Options Positions</i>) This initiative will eliminate the cross-guaranty between The Options Clearing Corporation (OCC) and NSCC and the bifurcated risk management of Exercise and Assignment (E&A) transactions between the two clearing agencies. The initiative will also delineate a single point in time at which OCC's guaranty of E&A transactions ceases and NSCC's guaranty begins.</p>	<p>Technology Development</p>	<p><u>2017</u> • Client Outreach and Coordination with OCC. • Submit Rule Filings to the SEC, Q1 • Implementation, Late Q2/Early Q3</p>	<p>Tim Hulse Executive Director Financial Risk Management thulse@dtcc.com 212-855-5641</p>

WEALTH MANAGEMENT SERVICES

Key Alternative Investment Products (AIP) Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>AIP Document Transfer</p> <p>Impact: Wealth Management Services Alternative Investment Products (New, Optional Service for Clients of the AIP Service)</p> <p>This initiative will allow the transmission of documents, such as subscription documentation, in conjunction with order transactions, to replace the need to mail, fax or e-mail documents. The service is expected to support direct mainframe connections and be available on the AIP Web Platform.</p>	<p>Conceptual</p> <p>AIP Roundtable</p>	<p><u>2016</u></p> <ul style="list-style-type: none"> Define Business Requirements, Q3–Q4 <p><u>2017</u></p> <ul style="list-style-type: none"> Implementation, Q2 	<p>Justin Schwartz Executive Director AIP Product Management jaschwartz@dtcc.com 212-855-4157</p>
<p>AIP Enhancements 2017</p> <p>Impact: Wealth Management Services Alternative Investment Products (Mandatory for Clients of the AIP Service)</p> <p>Several industry participants have requested enhancements to AIP to support the standardization and streamlining of their business processes. This initiative will provide operational efficiencies and enhance the growth of AIP. Enhancements are expected to include changes to support redemption and holdback processing and other miscellaneous updates.</p>	<p>Conceptual</p> <p>AIP Roundtable</p> <p>AIP Sub-Committees</p>	<p><u>2017</u></p> <ul style="list-style-type: none"> Define Business Requirements, Q1 Implementation, Q2 	<p>Justin Schwartz Executive Director AIP Product Management jaschwartz@dtcc.com 212-855-4157</p>

WEALTH MANAGEMENT SERVICES

Key Mutual Fund Services Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Mutual Fund Profile Service II - Security Enhancements</p> <p>Impact: Wealth Management Services Mutual Funds (<i>Mandatory for Clients of Mutual Fund Profile Service II – Security Database</i>)</p> <p>This initiative will provide the Mutual Fund market with a modernized web interface to the Mutual Fund Profile Service II - Security database.</p>	<p>Technology Development</p> <p>Broker Dealer Advisory Committee (BDAC)</p> <p>Bank and Trust Advisory Committee (BTRAC)</p>	<p>2016</p> <ul style="list-style-type: none"> • Defined Requirements, Q3 • Technology Development, Q4 <p>2017</p> <ul style="list-style-type: none"> • Issue an Important Notice with a 90 Day Notice to the Industry, Q1 • User Acceptance Testing, Q1-Q2 • Implementation, Q2 	<p>Sharon Wilner Director WMS Mutual Funds Product Management swilner@dtcc.com (212)855-4872</p>
<p>Department of Labor (DOL) Fiduciary Rule Enhancements</p> <p>Impact: Wealth Management Services Mutual Funds (<i>Mandatory for Clients of Services Impacted by DOL Fiduciary Rule Regulations</i>)</p> <p>This initiative will provide the Mutual Fund retirement market with enhancements to existing services to support the DOL Fiduciary Rule regulations that will become effective on April 10, 2017.</p>	<p>Functional Analysis</p> <p>Broker Dealer Advisory Committee (BDAC)</p> <p>Bank and Trust Advisory Committee (BTRAC)</p>	<p>2016</p> <ul style="list-style-type: none"> • Drafted Concept Paper and Reviewed it with Industry Committees, Q3 • Defined Requirements, Q3 • Issue an Important Notice with a 90 Day Notice to the Industry, Q4 <p>2017</p> <ul style="list-style-type: none"> • Implementation, Q1 	<p>Yana Granovskiy Director WMS Mutual Funds Product Management tgranovskiy@dtcc.com (212)855-1684</p>

Key Insurance & Retirement Services (I&RS) Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Department of Labor (DOL) – Fiduciary Rule Disclosures</p> <p>Impact: Insurance & Retirement Services (<i>New, Optional Service for Clients of I&RS</i>)</p> <p>The initiative will provide a centralized, automated and standardized solution to facilitate the satisfaction of disclosure requirements, including direct and indirect expenses and an initial generic transaction disclosure for upfront fees and expenses. In addition, the solution will support the exchange of data between insurance carriers and distributors, for reporting ongoing fees and expenses for on demand and website disclosures conducted via data files or through the DTCC Web Portal.</p>	<p>Technology Development</p> <p>DTCC DOL Fiduciary Rule Work Task Force</p>	<p>2016</p> <ul style="list-style-type: none"> Completed Business Requirements, July Completed Functional & Technical Design, August Technology Development, Q4 <p>2017</p> <ul style="list-style-type: none"> Client Testing, February Implementation, April 	<p>Jeanann Smith Director Insurance and Retirement Services jsmith@dtcc.com 212-855-3346 I&RS Release Documentation</p>
<p>I&RS Enhancement Releases</p> <p>Impact: Insurance & Retirement Services (<i>Includes Mandatory and Optional Enhancements for Clients of I&RS</i>)</p> <p>I&RS supports twice annual enhancement releases that address multiple enhancements requests mandated by the I&RS Review Board and the sub-committees they represent to upgrade the Insurance & Retirement Services suite of products. The enhancements include additional informational fields and codes to support clients in reporting new product features for insurance and annuity products.</p> <p>Enhancements in 2017 will include modifications in support of traditional life insurance (term life), including life premium settlement, post issue data exchange and new business submission.</p>	<p>Requirements Definition</p> <p>I&RS Review Board</p> <p>Financial Institution Information Standards Group (FIIS)</p>	<p>2016</p> <ul style="list-style-type: none"> Finalize Requirements, Q4 <p>2017</p> <ul style="list-style-type: none"> Implementations, Q1 and Q3 Client Adoption, Q2 and Q4 <p><i>In Line with Implementations</i></p>	<p>Cory Stark Director Insurance and Retirement Services cstark@dtcc.com 212-855-1683</p> <p>I&RS Release Documentation</p>

THE DEPOSITORY TRUST COMPANY (DTC)

Key DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Corporate Actions Transformation: ISO 20022 Messaging – Announcements and Lifecycle</p> <p>Impact: Corporate Actions (Mandatory for Clients of Corporate Actions Processing)</p> <p>This initiative will modernize Corporate Actions announcement and processing messaging by utilizing the industry standard ISO 20022 framework and making the following messages available in production:</p> <ul style="list-style-type: none"> • Announcements for Distributions, Redemptions and Reorganizations • Lifecycle (allocation/entitlement messages) for Distributions and Redemptions • Elective Dividend Service (EDS) Instruction messages for Distributions 	<p>Production Parallel Testing</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • ISITC CAWG (Corporate Actions Working Group) • SIFMA CAS (Corporate Actions Section) • BDUG (Bank Depository User Group) • ASAB (Asset Services Advisory Board) 	<p>2016</p> <ul style="list-style-type: none"> • Client Parallel Testing of ISO 20022 Announcements for All Event Groups and Lifecycle Messages for Distributions and Redemptions, Q1-Q4 <p>2017</p> <ul style="list-style-type: none"> • Retirement of Redemptions Announcements Files, June 30 <p>2018</p> <ul style="list-style-type: none"> • Effective January 1, Firms Incur Fees if Using Redemptions and Distributions Lifecycle CCF Files 	<p>catransformation@dtcc.com</p> <p>DTC's Corporate Actions Transformation Initiative</p>
<p>Corporate Actions Transformation: CA Web</p> <p>Impact: Corporate Actions (Mandatory for Clients of Corporate Actions Processing)</p> <p>This initiative will modernize the customer interface for Corporate Actions announcements and processing by replacing legacy functionality within PTS and PBS with a web-based browser.</p> <p>In 2014-2015 PTS/PBS functions: ADJI, BOOK, DAWN, DIVA, DPAL, DUEB, EDS, PIAR, SDAR (Dept D) and TAXI were retired. DTC will continue to build out and enhance the CA Web.</p>	<p>Client Testing</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • ISITC CAWG (Corporate Actions Working Group) • SIFMA CAS (Corporate Actions Section) • BDUG (Bank Depository User Group) • ASAB (Asset Services Advisory Board) 	<p>2016</p> <ul style="list-style-type: none"> • Client Testing of Redemptions Functionality on CA Web Begins, October 27 <p>2017</p> <ul style="list-style-type: none"> • Retire PTS/PBS Functions: RIPS, SDAR®, and ADJI; Clients Use CA Web Exclusively for All Redemptions Lifecycle Processing, Q1 	<p>catransformation@dtcc.com</p> <p>DTC's Corporate Actions Transformation Initiative</p>

Key DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Corporate Actions Transformation: Reorganization Events – Lifecycle</p> <p>Impact: Corporate Actions (Mandatory for Clients of Corporate Actions Processing)</p> <p>This initiative will enhance CA Web and ISO 20022 messages for Reorganization events and will result in:</p> <ul style="list-style-type: none"> • Added functionality in CA Web • Lifecycle messages for Reorganization events 	<p>Requirements Definition</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • ISITC CAWG (Corporate Actions Working Group) • SIFMA CAS (Corporate Actions Section) • BDUG (Bank Depository User Group) • ASAB (Asset Services Advisory Board) 	<p>2016</p> <ul style="list-style-type: none"> • Reorg (Phase 5) Industry Working Group Meetings, Q1-Q4 <p>2017</p> <ul style="list-style-type: none"> • Client Parallel Testing of ISO 20022 Messaging for Reorg Entitlements and Allocations Begins, Q2 <p>2018</p> <ul style="list-style-type: none"> • Implementation, Q4 	<p>catransformation@dtcc.com</p> <p>DTC's Corporate Actions Transformation Initiative</p>
<p>Increase Client Memo Segregation Position on Corporate Action Activity in Real-time</p> <p>Impact: Corporate Actions (Enhancement to Existing Corporate Actions Processing to Address a Client Pain Point; No Client Development is Required)</p> <p>This initiative will enable DTC to update clients' Memo Seg positions in real-time, when their positions increase or decrease as the result of a Corporate Action. This will protect clients' fully-paid-for shares, preventing them from being utilized to fill deliver orders, and keeping DTC's clients free of trading violations.</p>	<p>Finalizing Internal Business Requirements</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • SIFMA CAS Sub-Committee: Memo Seg • SFIMA CAS & Settlement Cross Functional WG • BDUG (Bank Depository User Group) • ASAB (Asset Services Advisory Board) 	<p>2017</p> <ul style="list-style-type: none"> • Define Business Requirements with Industry Working Groups • Implementation, Q1 	<p>Christopher Scotto Director DTC Product Management cscotto@dtcc.com 813-470-1233</p>

Key DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>ISO 2022 Messaging Scheduled Standards Releases (SR 2016 and SR 2017)</p> <p>Impact: Corporate Actions (Mandatory for all Clients Adopted to ISO 2022 Messaging)</p> <p>DTC will implement changes to the ISO 2022 message standard, based on change requests submitted and approved by the US industry and global maintenance group in 2016 and 2017, respectively..</p>	<p>On Target for November 20 Implementation of SR 2016</p> <p>SR 2017: Requirements Definition</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • ISITC CAWG (Corporate Actions Working Group) • Securities Evaluation Group (SEG) • SWIFT Global Maintenance Working Group (MWG) • Securities Market Practice Group (SMPG) 	<p>2016</p> <ul style="list-style-type: none"> • Define Requirements for SR 2017, Q4 <p>2017</p> <ul style="list-style-type: none"> • SR 2017 Implementation, November 	<p>catransformation@dtcc.com</p> <p>DTC's Corporate Actions Transformation Initiative</p>
<p>MMI Finality Through Optimization</p> <p>Impact: Money Market Instruments (Mandatory for Clients of Money Market Instrument Transaction Processing)</p> <p>DTC plans to implement structural changes to settlement processing at DTC for MMIs (Money Market Instruments). The proposed MMI Settlement model will effect changes to DTC's RTP (Refusal to Pay) procedures and to the current market practices for investors, issuers, custodians, placement agent dealers and IPAs (Issuing and Paying Agents). These changes will allow transactions to be processed intraday for end-of-day net funds settlement, without the risk of reversal prior to settlement. The model will require achieving certainty of funding by the issuer to the IPA and by the IPA to DTC and/or the IPA prior to DTC processing transactions for that acronym.</p>	<p>Client and Internal Testing</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • SIFMA Money Market Committee • SIFMA MMI Blue Sky Taskforce • Commercial Paper Issuers Working Group (CPIWG) • DTC Settlement Advisory Board 	<p>2015</p> <ul style="list-style-type: none"> • Submitted Draft Rule Filing to the SEC, Q4 <p>2016</p> <ul style="list-style-type: none"> • Client Testing, Q3-Q4 • Rule Filed. Published in Federal Register on October 11. Comment Period Closed, November 2 • SEC Regulatory Review Period of Advance Notice Extended to January 21, 2017 <p>2017</p> <ul style="list-style-type: none"> • Client Testing, Q1 • Begin Phased-In Implementation, Q1 • Complete Phased-In Implementation, Q3 	<p>Bob Cavallo Director DTC Product Management rcavallo@dtcc.com 212-855-1483</p> <p>Kimberly Oquindo Analyst DTC Product Management koquindo@dtcc.com 813-470-1017</p> <p>Leon King DTC Relationship Management lking@dtcc.com 212-855-4166</p> <p>Money Market Instrument Finality through Optimization</p> <p>Important Notice MMI Finality Through Optimization - User Testing</p>

Key DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Settlement Web Reengineering</p> <p>Impact: Settlement (Mandatory for Clients of DTC Settlement)</p> <p>This multi-year effort will create a re-engineered settlement framework to replace the Participant Terminal System (PTS) and the Participant Browser System (PBS) user interfaces.</p>	<p>Production Parallel Testing</p> <p>DTC Settlement Advisory Board</p>	<p>2016</p> <ul style="list-style-type: none"> Retired Participant Settlement Statements (SETP) and Settling Bank Statements (SETB) in PTS, Q3 Retired Participant Settlement Statements, Settling Bank Statements and Affiliated Bank Statements in PBS, Q3 <p>2017</p> <ul style="list-style-type: none"> Retire Activity Research Tool (ART) and Position Inquiry (POS) in PTS, Q1 Retire Activity Research Tool (ART) and Position Inquiry (POS) in PBS, Q1 Implement Participant Activity Research Tool (PART) in the Settlement Web, Q4 	<p>Chris Nolan Director DTC Product Management cnolan@dtcc.com 212-855-2352</p>
<p>Dematerialization</p> <p>Impact: Securities Processing (Mandatory for Clients of Securities Processing)</p> <p>In conjunction with industry stakeholders, DTC continues to work with the NYSE, NASDAQ and BATS to advance their rule filings for mandating participation in the Direct Registration System (DRS) Statement Only Form for newly listed issues.</p>	<p>Engaged with:</p> <ul style="list-style-type: none"> Dematerialization Cross Stakeholder Forum Securities Transfer Association (STA) Leadership Team 	<p>2015</p> <ul style="list-style-type: none"> Exchanges Submitted Draft Rule Filings to the SEC for Feedback, Q4 <p>2016</p> <ul style="list-style-type: none"> SEC Provided Feedback to Exchanges on Draft Rule Filings, Q2 <p>2017</p> <ul style="list-style-type: none"> Exchanges Formally Submit Their Rule Filings to the SEC, Q1 	<p>Jon Ciciola Director DTC Product Management jciciola@dtcc.com 212-855-4628</p>

Key DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Custody Eligibility Enhancement</p> <p>Impact: Underwriting and Securities Processing (Mandatory for Clients of Underwriting and Securities Processing)</p> <p>Replace the current legacy mainframe Underwriting custody eligibility function with a new web-based offering for both internal and external users.</p> <p>Key Features Include:</p> <ul style="list-style-type: none"> • New inquiry, update and modification capabilities. • Ability to search the DTC master file on demand, by issuer description and other criteria, to locate and determine if a particular CUSIP is already DTC-eligible • Functionality to upload spreadsheets for large-volume submissions and custody conversions. • A new real-time submission function to request a user CUSIP. 	<p>On Target for Q4 2016 Implementation</p> <p>Engaged with:</p> <ul style="list-style-type: none"> • Securities Processing Advisory Board • Underwriting Client Forums 	<p>2016</p> <ul style="list-style-type: none"> • Client Testing, Q3 • Implementation, Q4 	<p>Dan Lachaga Product Manager DTC Underwriting dlachaga@dtcc.com 813-470-1209</p>

Key NSCC/DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Shortened Settlement Cycle (T+2)</p> <p>Impact: Mandatory for Clients of Settlement for Equities and CMUs (Corporate and Municipal Debt and UITs)</p> <p>The Depository Trust & Clearing Corporation (DTCC), in collaboration with the U.S. financial service industry, is working on an industry initiative to reduce the settlement window for Equities, Corporate and Municipal debt and Unit Investment Trust (UIT) securities from the current three-day (T+3) to a two-day cycle (T+2).</p>	<p>On Target for September 5, 2017 Implementation</p> <p>T+2 Working Groups Include:</p> <p>Industry Steering Committee (ISC)</p> <p>Industry Working Group (IWG)</p>	<p>2015</p> <ul style="list-style-type: none"> • Published Industry Requirements, Q2 • Identified DTCC's Preliminary Rule Changes, Q4 • Completed High-level Industry Implementation Plan, Q4 • Engaged Regulators 	<p>John Abel Executive Director DTC Product Management jabel@dtcc.com 212-855-8434</p> <p>http://www.ust2.com/</p> <p>T+2 Industry Implementation Playbook</p>

Key NSCC/DTC Initiatives	Status & Working Groups	Milestone Targets*	Contacts & Links
<p>Shortened Settlement Cycle (T+2) <i>Continued</i></p>	<p>Legal and Regulatory Working Group</p> <p>T+2 Command Center and Deloitte Working Groups</p>	<p>2016</p> <ul style="list-style-type: none"> • Continued Engagement with Regulators, Q1-Q4 • Published DTCC's T+2 Functional Changes, Q1 • Published T+2 High-Level Testing Plan, Q1 • Hosted DTCC's T+2 Functional Changes Webinars, Q2 • Published T+2 Detailed Testing Framework, Q3 • Internal Technology Development, Q1-Q4 • Published FAQs, Q4 • Hosted Implementation Readiness Forum, Q4 • Clients Connect to PSE U (T+2) Test Environment, as needed, Q3-Q4 • Clients Connect to PSE A (T+3) Test Environment, as needed, Q4 • Client Testing in PSE A (T+3) Environment Begins, December 12 • Submitted DTC & NSCC's Proposed Rule Changes, Q4 <p>2017</p> <ul style="list-style-type: none"> • Client Testing in PSE U (T+2) Environment Begins, February 13 • Industry Testing, Q1-Q3 • Implementation, September 5 	<p>T+2 Test Approach: DTCC's High-Level Testing Framework</p> <p>Shortened Settlement (T+2) DTC, NSCC and Omgeo Functional Changes</p> <p>T+2 Test Approach Detailed Testing Framework</p> <p>Submit Testing-Related Questions to: T2testing@dtcc.com</p> <p>Submit All Other Questions through UST2.com</p>

* Implementation Target Dates could be subject to regulatory filing approval.

About DTCC

With over 40 years of experience, DTCC is the premier post-trade market infrastructure for the global financial services industry. From operating facilities, data centers and offices in 16 countries, DTCC, through its subsidiaries, automates, centralizes, and standardizes the post-trade processing of financial transactions, mitigating risk, increasing transparency and driving efficiency for thousands of broker/dealers, custodian banks and asset managers worldwide. User owned and industry governed, the firm simplifies the complexities of clearing, settlement, asset servicing, data management and information services across asset classes, bringing increased security and soundness to the financial markets. In 2014, DTCC's subsidiaries processed securities transactions valued at approximately US\$1.6 quadrillion. Its depository provides custody and asset servicing for securities issues from over 130 countries and territories valued at US\$64 trillion. DTCC's global trade repository maintains approximately 40 million open OTC positions and processes roughly 280 million messages a week.