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JUNE 2018

CONCEPT PAPER: A VISION FOR THE FUTURE OF ACATS

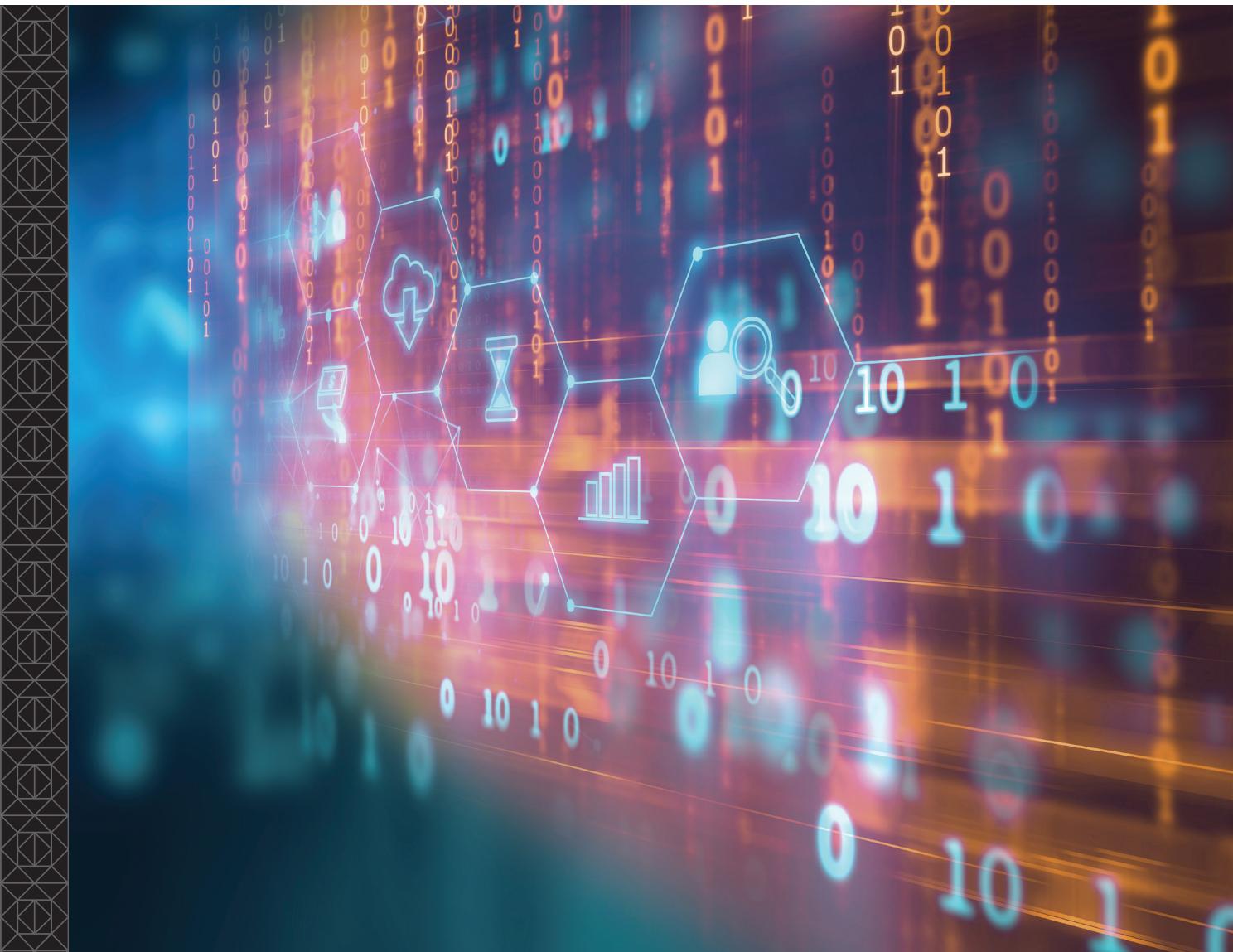


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EXECUTIVE SUMMARY

The financial industry has continually sought new ways to reduce the time it takes to process transactions and improve the client experience. The industry's implementation of T+2 in 2017 – shortening the settlement cycle to trade-date plus two days – is the latest example of further squeezing this transaction window, reducing risk and system inefficiencies, and enhancing the resiliency of our capital markets.

It is against this backdrop of instantaneous information and high-speed transaction processing that the account transfer process must also make plans for the future, taking the necessary steps to modernize infrastructure and improve operational efficiency.

Introduction of ACATS

The **Automated Customer Account Transfer Service (ACATS)**, offered by the National Securities Clearing Corporation (NSCC), provides for the automated and systemic transfer of client accounts between brokerage firms and banks.

Since its inception in 1985, ACATS has enabled the industry to significantly reduce the time required to transfer client accounts from what used to take 30 days to process a full account transfer, in the beginning years, to its current state of between four or five days.

However, the industry has already begun to take steps to shorten this window even further. Some of the initiatives underway include increasing the number of intraday cycles to promote greater intraday processing; more stringent restrictions to prevent the adjustments that can prolong the transfer cycle; and a look at removing time within the overnight settlement cycle, which would remove a day from the process. In addition, NSCC has also begun its own series of initiatives to modernize the ACATS system, to position this service for future industry needs for growth and operational efficiency.



- *The financial instruments handled by the ACATS system includes equities, corporate and municipal bonds, unit investment trusts, mutual funds, options, annuities, cash, and other investment products.*

As the industry prepares to implement these myriad deliverables, a parallel exercise was undertaken to take a fresh look at ACATS, from top to bottom:

- What would the design of the ACATS service look like if there were an opportunity to reengineer?
- What would the technology look like?

- How quickly could an account transfer really be processed?
- What obstacles and changes should be analyzed?

ACATS of the Future

The industry has proposed transforming the transfer process by introducing a real-time transactional ACATS system that would promote a next-day settlement of assets (Transfer Initiation+1 or TI+1) scenario. This structure would allow for all pre-settlement activities to occur in just one day, reducing the time the investor is not able trade assets and bringing ACATS more in line with other industry financial transaction processing activities.

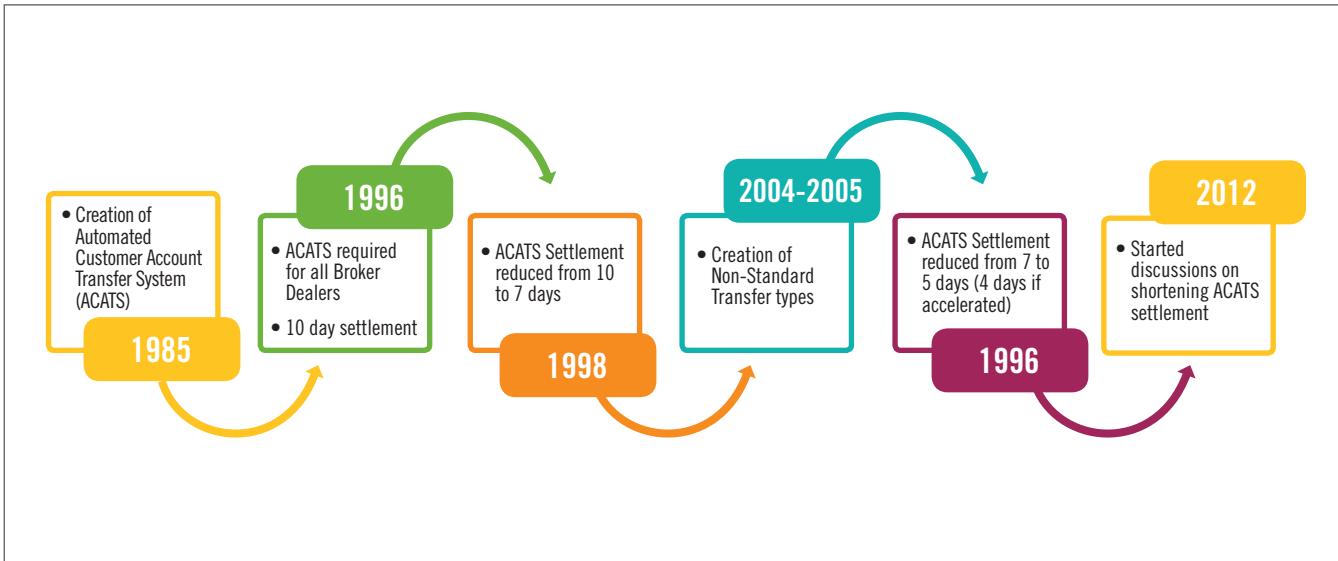
In this concept paper, The Depository Trust & Clearing Corporation (DTCC) and the Customer Account Transfer Group of SIFMA have come together to further explore the possibilities of this future vision. The results of this collaboration includes describing the current ACATS process, the problems faced in the account transfer space and additional rationale for changing, and a more detailed look at the proposed concept.

Soliciting Feedback

While the paper also aims to address next steps on the plan to move this forward, any solutions and conclusions in this paper are strictly proposals aimed at generating further engagement from the transfer industry and the regulators.

DTCC is collecting feedback on these proposals through various channels such as industry outreach at conferences and events, and direct client participation on Working Groups. Comments and questions on this paper should be addressed to the **SIFMA Customer Account Transfer Section** (SIFMA-Societies@sifma.org) or your DTCC Relationship Manager.

HISTORY OF ACATS



The 1980s

Prior to the development of ACATS, the transfer of customer assets from one broker to another was neither quick nor streamlined. Delays were common, and a transfer could even take upward of 30 days, limiting customer access to accounts and assets during that extended period. The root of the delays was the manual process itself: the lack of standardization, and the resulting inconsistent, incomplete or incorrect data.

During the 1980's, the U.S. Securities and Exchange Commission (SEC) began to field thousands of customer complaints related to the transfer process, and the SEC exerted great pressure on the NYSE, AMEX and the NASD to address these complaints.

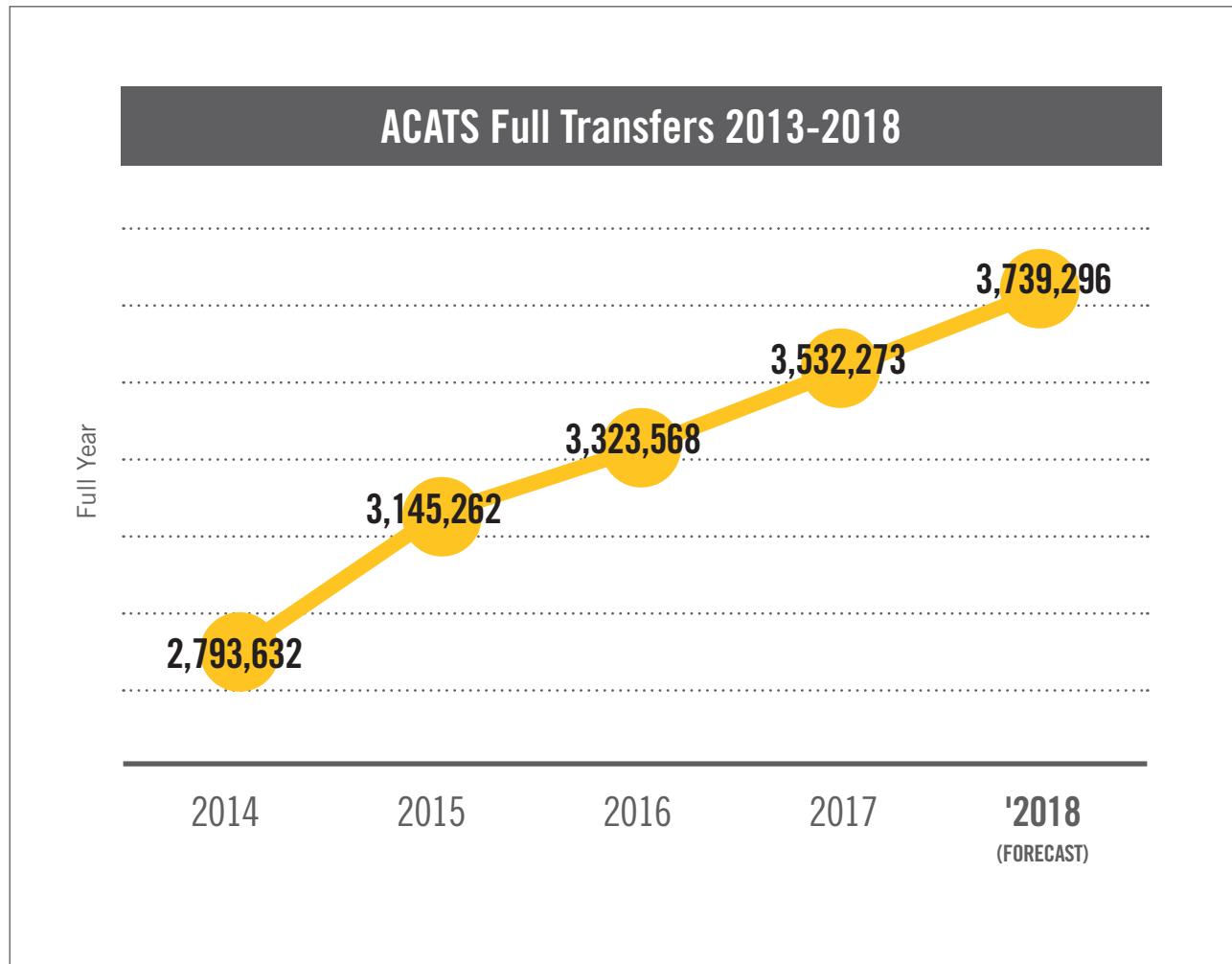
In 1985, regulators commissioned NSCC to develop a solution to expedite account transfers between brokerage firms, a process which soon became known as the **Automated Customer Account Transfer Service (ACATS)**.

The 1990s

In 1998, the industry pursued an enhancement to reduce the cycle time for ACATS transfers, from 10 days to seven (six days if accelerated). At that time, only full transfers were possible.

The 2000s

In 2004 and 2005, DTCC introduced a series of enhancements to improve the efficiency of ACATS. Several of these included allowing for Non-Standard Transfer Types such as partial transfers, residuals reclaims and fail management type transactions. In addition, in 2007, ACATS further reduced the transfer cycle from seven days to its current five day process.



THE CURRENT ACCOUNT TRANSFER PROCESS

Currently, ACATS is a multi-batch input and output system that processes transactions multiple times per day. ACATS is used by broker/dealers and banks and connects with mutual fund and insurance companies. For broker/dealers, ACATS is mandated service under FINRA Rule 11870.

A full account transfer generally completes in five business days or, if accelerated, four business days. Non-standard transfers, used to process partial transfers, fail transactions, residuals and reclaims, can occur in as little as two days.

Most firms will process ACATS via file transmissions using either fixed or variable length file formats, however, a web front-end is available for manual input of data if needed. Full ACATS begins with a transfer initiation by the receiving firm.

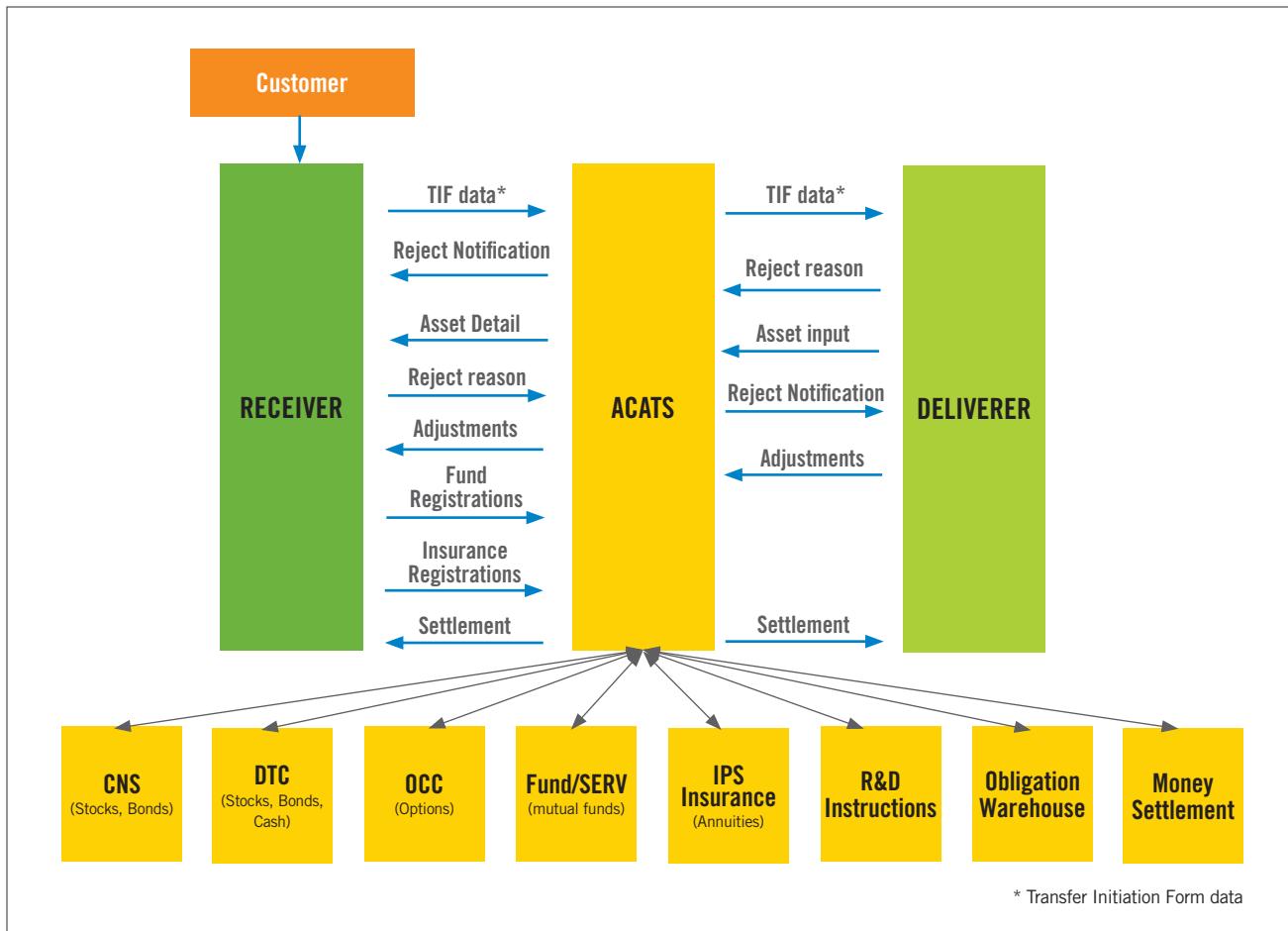
The delivering firm, after review of the transfer initiation can either reject or respond with the assets that are in the account. The receiving firm, after review of the asset list, can either reject the transfer, delete certain assets, or accept the transfer as-is. This is considered the review period. Once the review period is complete, the transfer moves to a settle prep status for an additional day, and then onto settle close. During the settle prep period, ACATS will send the asset information to the appropriate settlement location (for example, Continuous Net Settlement (CNS) for equities, bonds and other CNS eligible securities, Fund/SERV for mutual funds, The Options Clearing Corporation (OCC) for options and Insurance Processing Service (IPS) for annuities). As indicated by the name, the settle prep period also allows the counter parties in the transfer to prepare assets for settlement. The day following the move to settle close is settlement day, which is when assets move from firm-to-firm.

54% of full ACATS take **4** days

44% of full ACATS take **5** days

2% of full ACATS take more than **5**
or less than **4** days

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Current State – Good Order ACATS Transfer (five day process)

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Request <ul style="list-style-type: none"> Receiver transmits Transfer Initiation via ACATS to the Delivering Firm. 	Review <ul style="list-style-type: none"> Delivering firm submits Assets into ACATS. Transfer changes from Request Status to Review (Day 1) Status. 	Review <ul style="list-style-type: none"> Receiving firm can reject transfer, make adjustments or add fund registrations or insurance registrations. Transfer will change from Review status to Sett Prep at the end of Day 3. 	Settle Prep <ul style="list-style-type: none"> NSCC generates a settlement report that lists all securities scheduled to settle NSCC generates a file of mutual funds re-registration instructions for eligible Fund/SERV assets and Fund/SERV is sent re-registration instructions Transfer will change the status from Sett Prep to Sett Close at the end of Day 4. 	Settle Close <ul style="list-style-type: none"> NSCC settles the transfer and generates all necessary reports, instructions, and files

RATIONALE FOR REVIEWING CURRENT PROCESS

Recent changes to the financial services industry continue to modernize processes and streamline settlement. In 2017, the industry took a forward leap with regard to shortening the window for the trade settlement process, moving from a T+3 environment to T+2. This change led to a number of benefits for both firms and clients.

Condensing the Transfer Timeline

Reducing the amount of time it takes to transfer a client account from firm to firm would realize a number of similar benefits.

As an industry, we constantly seek opportunities to reduce cost and risk to firms and to clients. Time out of market is a risk for organizations and for investors. By condensing the transfer timeline, the likelihood of losses being incurred for time that a client is unable to trade or access assets is reduced. In addition, shortening the transfer cycle would reduce the risk of counterparty failure during the transfer cycle.

Shortening the transfer timeline also reduces the number of operational events that could occur while the transfer is in process. Income and corporate action events occur on a regular basis. By reducing the number of days in the transfer cycle, we lessen the possibility of a record date occurring at the prior firm while a transfer is in flight. Operationally, these events require research, claims, correction processing and follow up. From a servicing standpoint, fewer operational events and shorter transfer timeline would minimize

the number of transfer-related service inquiries requiring support. For banks, the ability to use assets for securing loans could be impacted by the timeliness of asset transfers as outlined under the Office of the Comptroller of the Currency (OCC) Rule 12 section 9.5. Additionally, Uniform Commercial Code (UCC) Article 8 encourages timely transfers for banks and brokers.

In this day and age, clients expect activities that influence their lives to be completed easier and faster, which includes moving their account from one firm to another. It is important to seek opportunities to streamline and modernize account transfer processes, keeping in step with other industry processes and meeting the increasingly demanding needs of clients.

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- of losses is reduced.

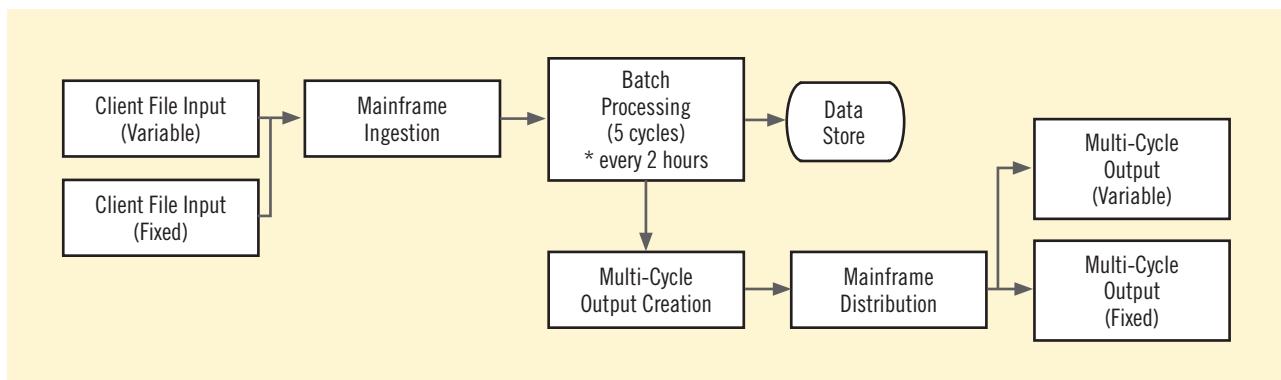
TECHNOLOGY CHALLENGES AND SAME-DAY ACATS

As discussed in the previous section, the rationale for evaluating the current ACATS process provides sound reason for the industry to work on reducing the settlement timeframe for ACATS transfers. In order to evaluate the optimal end state the question must be asked: is a same day ACATS transfer possible?

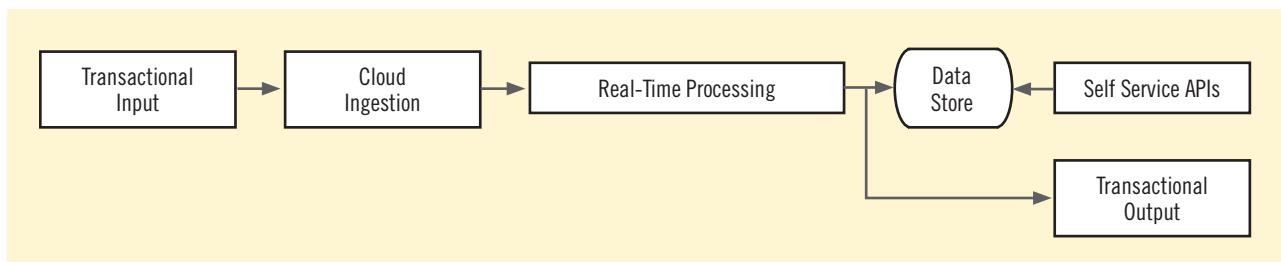
Technology Challenges

DTCC is transitioning many processes – including ACATS – from legacy technology to a Cloud-based/API infrastructure, allowing contra-firms to interact in real time in the future. This technology change eliminates the constraint faced today, in which firms are limited to batch processing and cannot interact in real time.

Current



Future



The Challenge of a Same-Day Transfer

With one of the biggest constraints – technology – resolved, what other constraints exist within the workflow that would preclude the industry from moving to a same day ACATS transfer process?

In the ACATS process there are two phases a transfer must complete to fully settle: initiation/pre-matching and settlement. The initial phase is the initiation or pre-matching phase. In this phase of the transfer the contra-firms agree that the transfer is authorized, communicate position and balance details, contractually agree to settle the transfer. In the second phase, the assets are instructed for settlement between contra firms and assets are transferred.

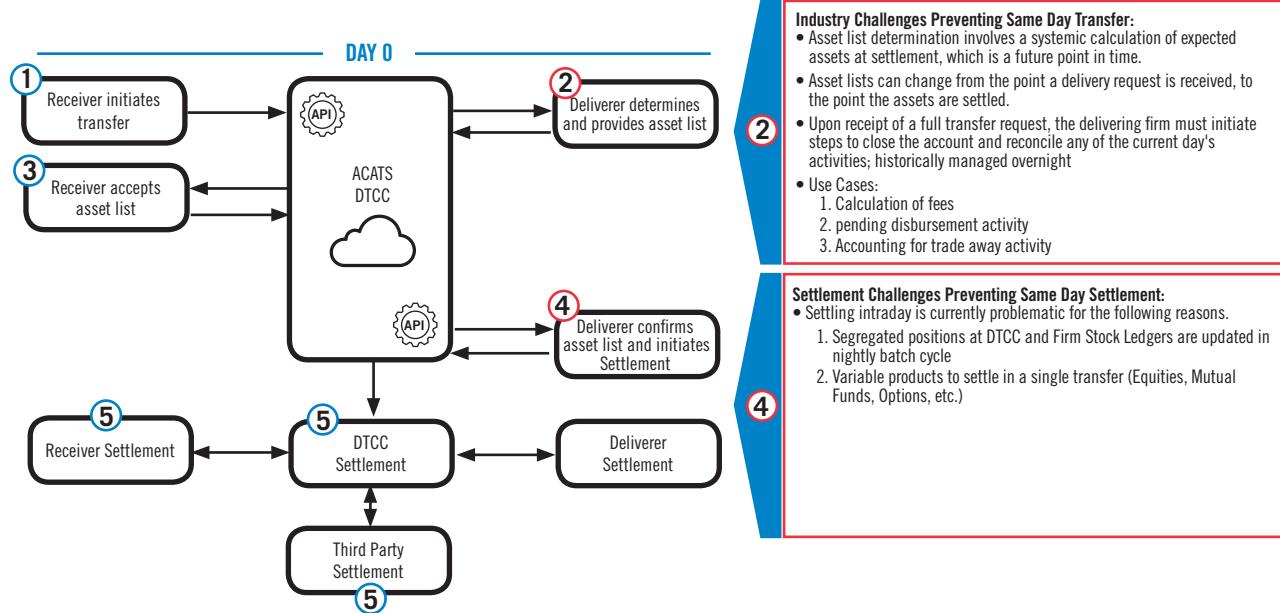
Both phases are separate and distinct, with their unique constraints/limitations that may prevent an ACATS from settling same day. Additionally in each phase, firms have multiple interaction with other areas within their firm. Examples of these stakeholders include but are not limited to; Internal Risk Management, Lending Services, External Money Managers, Money Market Funds, Compliance, Account Opening, Client Asset Protection, Books and Records. Each of these stakeholders plays a vital role in the timeliness of settling an ACAT transfer.

Same Day Transfer Initiation and Settlement T1+0

Settlement of an ACATS transfer where both phases of the transfer are completed in one day and assets are moved between contra firms.

Same Day Settlement (T1+0)

- to achieve a same day transfer we must solve for separate, dependent processes that are currently designed around an overnight cycle.



Challenge for Members Firms Preventing Same Day Transfer:

While DTCC currently supports same-day settlement (T+0) or next-day (T+1) settlement of trading activity, the industry has identified a number of market structure challenges to initiating and moving assets on the same day making a T1+0 ACAT difficult to accomplish.

- **Settlement timing** – the current window to settle trades is trade date plus 2 business days (T+2). Options and government assets currently settle T+1.
- **Cash liquidations** – Firms would need to determine how to liquidate real time for cash to be available for transfers to settle. Cash is often in a money market account. Money markets would need to be liquidated intraday. This may be difficult since money market redemptions have different time frames. In addition, if cash moves same day and a firm misses a liquidation cutoff, the firm may have to carry a debit overnight.
- **Possession & Control / stock record calculations** – Firms would need to operate real time in order to provide excess/available inventory. Currently this process is done end of day. For 15c3-3 obligations, each firm needs to calculate its seg requirements at least once a day and most firms calculate in the overnight and then go through a process to release securities for delivery in that process. If ACATS were to settle same day, this would require firms to develop and intra day process to override existing seg calculations to make security positions available for delivery.
- **Review of Margin Positions** – As a receiving firm, the review and approval process to receive in positions that are liabilities (shorts/debits/options) can be a timely process to ensure incoming positions meet firm/account margin requirements. In a T+0 environment it may be difficult for firms to review the positions with sufficient time to settle same day.
- **Intraday activity** – Firms would need to operate in a real time environment versus end of day/nightly batch processing.
- **Fee challenges** – Firms would need to determine the various fees that are applied to an outgoing transfer and post intra-day. Those fees would be included with the list of assets/cash settling with the receiving firm.
- **Options with OCC** – OCC (Option Clearing Corporation) is the clearing agency for options. In the current ACATS process, the window to settle options is trade date plus 1 business day (T+1). Options have the ability to move same day, but as a manual process outside of ACATS. Firms would need to operate real time, ACATS would need to provide asset information to the OCC same day as the transfer initiation, and the OCC would need to move the option same day as receipt from ACATS.
- **Mutual Funds** – For transfers that contain mutual fund assets, ACATS links with the Fund/SERV system to expedite the re-registration of fund positions with the mutual fund company. Based on current industry standards and capabilities, the mutual fund process is not a same day process. Mutual Fund related acknowledgment of transfers are generally handled next day. A move to same day acknowledgment would need to be considered.
- **Checking account closure / Debit card charges** – For outgoing transfer accounts that have checking

account/debit card features, firm will need to identify same day activity to take appropriate action. Checks and debit cards must be accepted in any case today because there are rules about how long merchants have to post that are not related to the ACATS process. Claims may increase in this space.

- **Managed accounts** – Notification for accounts that have external money managers would be required same day to ensure trading activity/transactions does not occur. Notifying a money manager that a transfer was received intra-day may be too late. A money manager would typically purchase thousands of shares throughout the day that would be allocated across any number of accounts. The allocation file is booked at the end of day but even booking a single account would leave exposure on the bulk trade. Many of these are for rebalancing purposes that involve buying and selling dozens of securities.
- **Trade away activity** – For clients with portfolio managers where they choose to settle a trade at firm A, but custody asset at firm B, this is settled T+2. These trades could not settle same day. Executions can occur all day on T until market close and confirmation is then sent to the custody firm for settlement. If ACATS are being validated on the same day trades are executed away, it will continue to add risk. Firms would need a total real time system that allows away executions to feed through ID confirm process to custodian for real time balance updates.
- **Foreign assets** – For transfers that contain foreign assets, firms are faced with foreign depositories having different time zones and cut offs to complete transactions. Nearly all assets would result in a fail.

Industry Assessment of Feasibility for TI+0:

DTCC ACATS infrastructure will allow and support the same day settlement of an ACATS transfer, however, firm processes outside of ACATS will prevent the large majority of transfers from moving to a same day settlement environment.

The above listed constraints that are driven by stakeholders outside the ACATS process will prevent the large majority of transfers from moving to a same day settlement, due to dependency on limitations outlined above. In order for all contra-firms to move to a same day ACATS, investment in other industry infrastructure would be required.

Some firms may have the capability to complete transactions in a TI+0 timeframe. These account transfers would include accounts that contain cash-only with no money market fund redemptions or external money manager notifications required. Contra firms would be required to complete all internal reviews, validate the transfer and accelerate the transfer in a short window (12 hours) for the transfer to settle same day.

Although same day would be the optimal solution, it may take the industry a longer time period to get there. For this reason, it would be prudent to take an interim step towards industry risk reduction. This is the focus of the next section, a look at TI+1 and TI+2.

POTENTIAL TRANSFER CYCLE TIMEFRAMES AND LIMITATIONS: T_I+1 AND T_I+2

First Step: Settlement Optimization Initiative

DTCC is exploring several ways to modernize the U.S. settlement system to achieve additional operational and capital efficiencies. DTCC has put forth two innovative proposals — settlement optimization and accelerated settlement — which would enable members of NSCC and participants of The Depository Trust Company (DTC) to improve workflows, optimize capital and reduce risk, further reducing settlement processing inefficiencies through automation¹. If both are implemented, clients could get to a settlement cycle of less than T+2 — potentially to T0-and-a-half — while still maintaining the significant benefits of centralized netting and risk management.

Night Cycle Reengineering is designed to maximize DTC transaction throughput by optimizing member available position and controlling the order in which transactions are processed. Currently, the DTC Inventory Management System (IMS) prioritizes by transaction type and timestamp at the individual transaction level, which limits the amount of transactions that can be completed during the night cycle. About 40% of transactions are completed during the current night cycle, which means the other 60% have to wait until later to settle. The time between when a trade is executed and when it is settled exposes both parties in the trade to credit, counterparty, and operational risk, and requires both parties to tie up capital to fulfill margin requirements — not to mention firms are exposed to additional risk in the event of a default.

There are two parts to night cycle re-engineering; while they are separate efforts, they are interdependent. The first development effort would be to create a more dynamic and intelligent processing environment, with new algorithms to match and process transactions without regard to position limitations or risk management controls. This is where the second aspect, changing the night cycle cut-off time, becomes important. Pushing back the cut-off time from 8:00 p.m. to 3:00 a.m., there will be a greater number of transactions to complete the most amount of deliveries. Implementing these two elements to the night cycle would be a key driver in optimizing settlement and increase the rate of night cycle settlement from 40% up to 90% — or perhaps greater.

Today, ACATS has a 1-day settlement prep transfer status for full transfers and for partial transfers that involve mutual funds or options. This 1 day transfer status allows firms to prepare the agreed upon assets for settlement and specifically for the delivering firm of the assets, any necessary system calculations that ensure these asset deliveries do not have them violate SEC Rule 15c3-3; otherwise known as the customer

¹ “Modernizing The US Equity Markets Post-Trade Infrastructure,” January 2018, available online at <http://www.dtcc.com/~/media/Files/pdfs/T2/Equities-Structure-Whitepaper-Jan2018.pdf>.

protection rule. Removal of settle prep and the move to next day settlement (without settlement optimization), would limit the time allowed for the delivering firm of the assets to calculate and prepare its instructions for SEC 15c3-3. It would change their preparation time from a full day to approximately 3 hours to get their assets ready for settlement in the current night cycle. Under this scenario, time to calculate segregation requirements, inventory and stock record calculation is insufficient and could increase the number of assets that go in the day cycle.

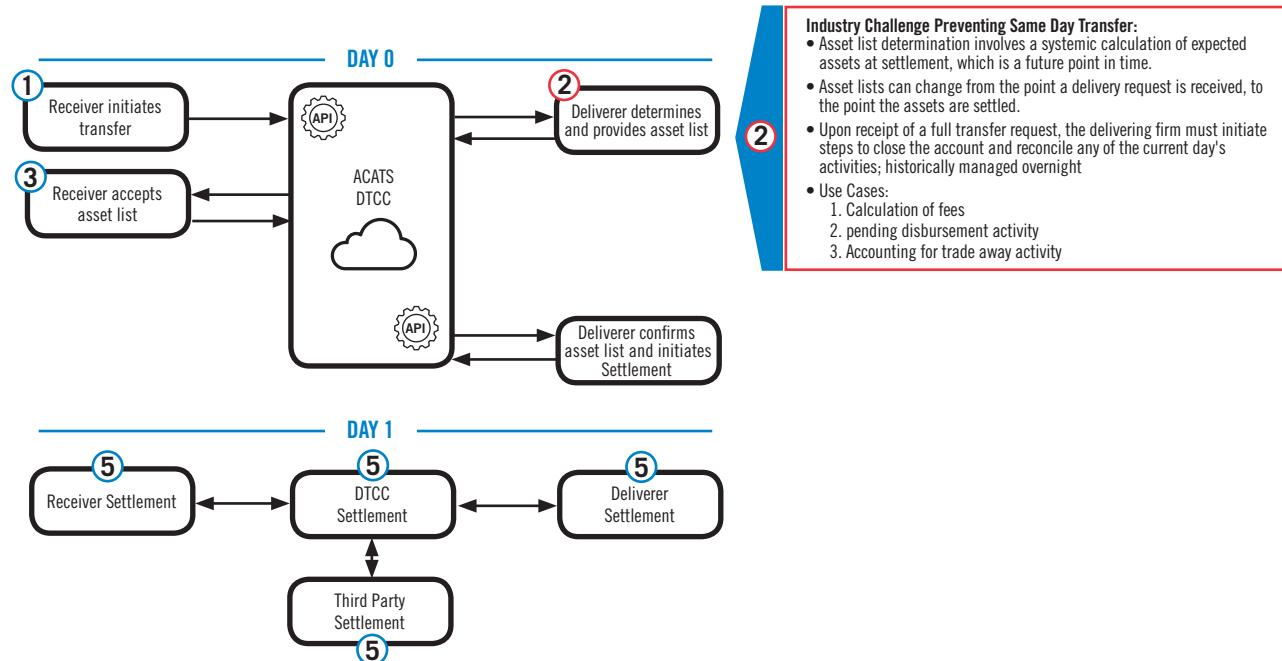
With Settlement Optimization, the night cycle potentially moves from 8 p.m. to 3 a.m., providing firms an additional seven hours of 15c3-3 prep time to include assets in the night cycle. This was considered sufficient time from an industry standpoint.

Transfer Initiation Scenario: T1+1

Settlement of an ACATS transfer in two days, with initiation/pre-match completion on day one and settlement completed on day two.

Next Day Settlement (T1+1)

- Some constraints are resolved when settling next day but firms will still face limitations to a same day ACATS in providing asset lists.



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Next Day Settlement eliminates some constraints regarding settlement described in TI+0. This assumes settlement optimization is in place.

ACATS Limitations	TI+0	TI+1	
Cash Liquidations	✓	✓	
Intraday Activity	✓	✓	
Fee Challenges	✓	✓	
Mutual Funds	✓	✓	
Checking Account Closure/Debit Card Charges	✓	✓	
Managed Accounts	✓	✓	
Trade Away Activity	✓	✓	
Settlement Timing	✓		
Possession and Control /Stock Record Calculations	✓		
Review of Margin Positions	✓		
Foreign Assets	✓		
Options w/ OCC	✓		

Industry Assessment of Feasibility for TI+1:

Moving to a next day settlement model would be an attainable scenario with the introduction of settlement optimization and commitment from the industry to address the constraints noted.

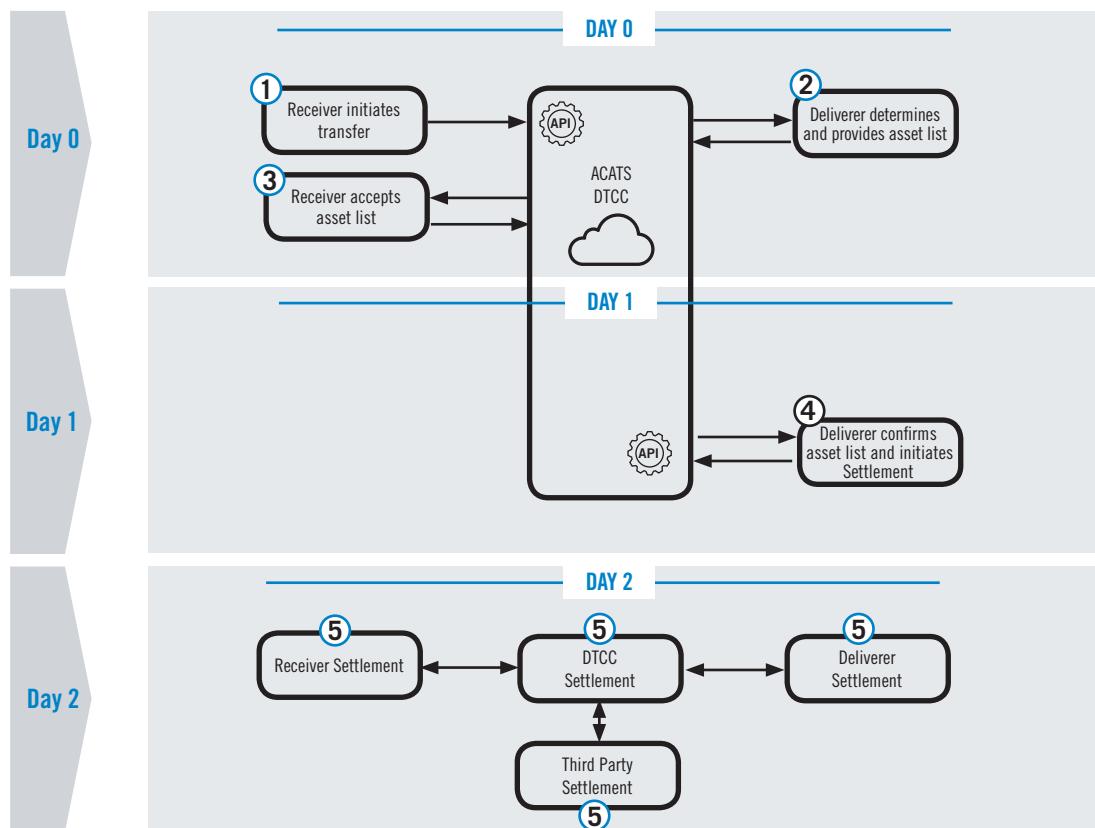
Similar to TI+0, firms may have the capability to transfer assets on a TI+1 for certain transfer types. These transfer types may include cash and CNS-eligible equities. Contra firms would be required to perform all internal controls and validate positions on day one for a next day settlement to complete.

Transfer Initiation Scenario: TI+2

Settlement of an ACATS transfer in three days, with initiation/pre-match completion on day two and settlement completed on day three.

Two Day Settlement (TI+2)

- No constraints



Limitations to a TI+2 ACATS:

Eliminating the constraints of completing the transfer initiation in one day, firms will be given sufficient time to prepare the account for transfer prior to settlement.

ACATS Limitations	TI+0	TI+1	TI+2
Cash Liquidations	✓	✓	
Intraday Activity	✓	✓	
Fee Challenges	✓	✓	
Mutual Funds	✓	✓	
Checking Account Closure/Debit Card Charges	✓	✓	
Managed Accounts	✓	✓	
Trade Away Activity	✓	✓	
Settlement Timing	✓		
Possession and Control/Stock Record Calculations	✓		
Review of Margin Positions	✓		
Foreign Assets	✓		
Options w/ OCC	✓		

Industry Assessment of Feasibility for TI+2:

This scenario would be most likely if the industry does not commit to resolving the constraints listed for T+0 and T+1. The limitations faced when attempting to settle an ACATS same day or next day are eliminated and external dependencies are not factor.

Once settlement optimization is in place, all transfers in a future state should be able to settle in a TI+2 timeframe.

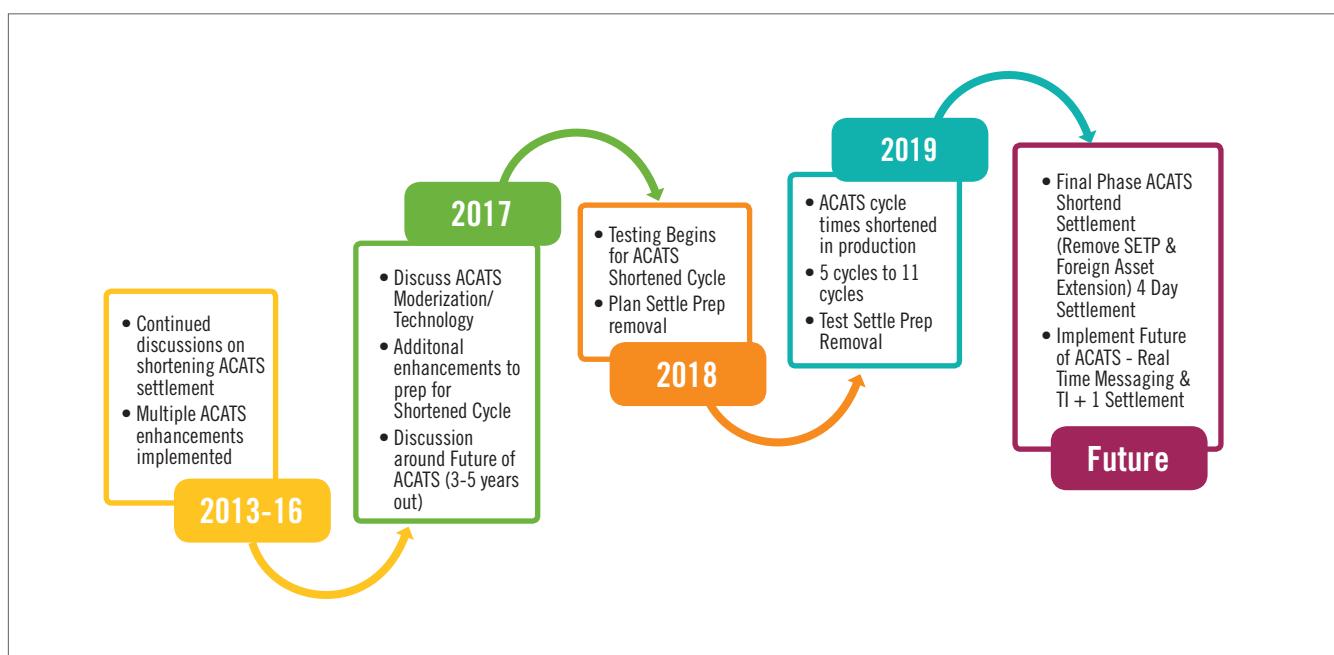
THE ROAD AHEAD

Transfers between firms are a significant method by which assets move through the industry, which makes them very important to all parties involved. As the industry drives forward to create a strategic vision for ACATS, the below timeline outlines the commitment the industry has in creating a better transfer process.

Modernizing our current ACATS system prepares the industry for the enhancements that will create a better client experience and reduce client risk. These enhancements include ACATS shortened cycle, additional intraday cycles for submission, and removing settle prep from ACATS. This phased approach for shortening ACATS settlement will contribute to the long-term goal of creating a more efficient and shorter transfer process.

This paper serves as a starting point in moving ACATS forward. To accomplish this, it will take engagement from both transfers areas and other areas within firms that interact with ACATS.

As noted, there are activities outside of ACATS that must be addressed to achieve a shorter ACATS initiation process and ultimately a shorter overall transfer cycle. New ACATS infrastructure will allow for settlement of an ACATS transfer same day, but given the current constraints that exist within other industry infrastructure, a large percentage of transfer types would be excluded from a same day process. The recommendation is for the industry to minimally explore moving to a 3 day ACATS (TI+2). This requires next day settlement, which



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will be enabled with the settlement optimization initiative. At the same time, the industry should begin addressing the constraints that prevent the transfer initiation to complete in one day and ultimately get to a 2 day ACATS (Tl+1). Working together, the industry can drive towards a modern architecture for this process that will improve client experience, reduce risk, and increase efficiency for the industry.



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